Africa gearing up









Foreword



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More than a billion people, 54 countries, a continent bigger than the USA, Europe, China and India combined. Yet Africa is barely present on the map of world trade. The continent still isn't a major source of exports and its consumer markets are tiny in comparison to Asia, Europe or the Americas, despite its enormous size. So Africa seems relatively unimportant for the transportation and logistics industry.

Or is it? There's no doubt that Africa faces huge challenges arguably bigger than any other region. Recent news about growing flows of refugees from Africa to neighbouring continents show us quite plainly how desperate living conditions are for many in their African homeland. Not surprisingly, for many the phrase African logistics currently brings to mind humanitarian logistics.

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But the situation is changing fast. African logistics stands for much more – namely the chance to build tomorrow's markets. And while tomorrow is still uncertain, logistics strategists can't afford to ignore the African market of the future. And the global transportation and logistics industry can play a vital role in Africa's efforts to gear up building its infrastructure, enabling supply chains and distribution networks, providing mobility - and ultimately helping create jobs for its people.

In this report, we focus our discussion on ten selected economies on the African continent. We shed light on their demographic and economic situation, the frameworks in each country for trade and business and their transport infrastructure.

We're hoping that our assessments will help you better analyse these important future markets and understand both relevant market risks and key opportunities.

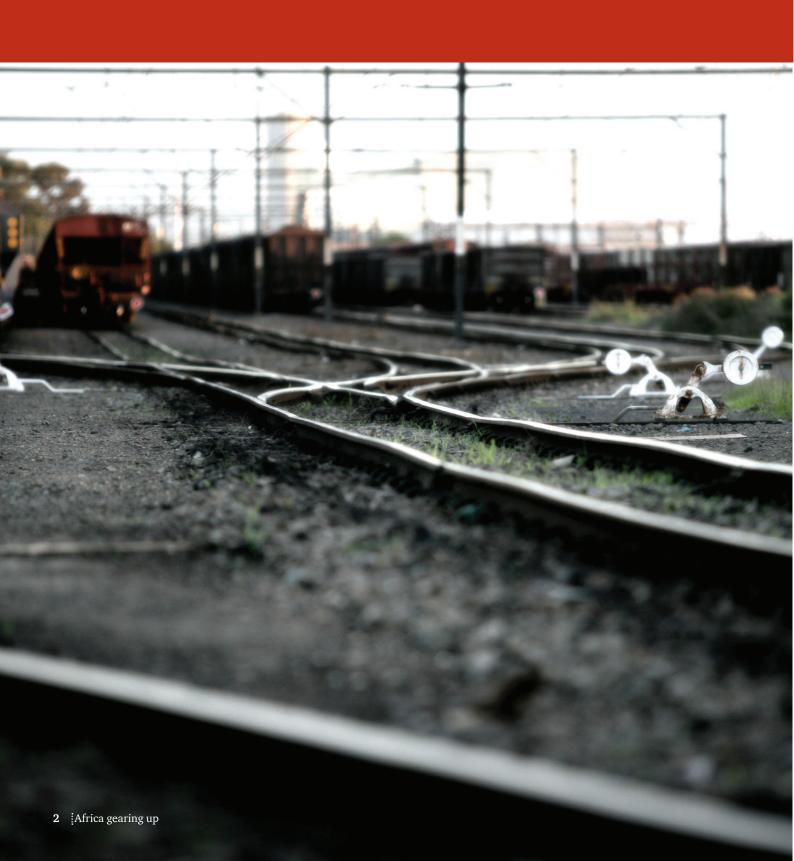
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The bigger picture:

Transportation and logistics across Africa



Africa's growth prospects vary, but there's reason for optimism

In 1960, Africa was stepping out of the shadow of colonialism. The transition wasn't without violence that year the UN Peacekeeping Force was sent to the Congo to maintain order as the country sunk into civil war and chaos. And in South Africa, police killed anti-apartheid demonstrators. But many had high hopes. The World Bank predicted a bright future for sub-Saharan Africa, with GDP projected to increase more than 7% per year.i

40 years of false expectations

That growth failed to materialise; indeed, life got worse for Africa's people, with HIV/AIDS, malaria, and natural disasters plaguing the continent. Forty years later, debt levels were still high, while corruption and civil unrest were rampant. In May 2000 the Economist famously called Africa the "hopeless continent".

Wrong again. Corruption is still a big issue, and areas facing armed conflicts remain. But from 2001 to 2010, six of the world's ten fastestgrowing economies were in Sub-Saharan Africa. That's partly due to natural resources; top-ranking Angola and fourth-ranking Nigeria have both benefitted significantly from oil exports. But other factors are at work, too, especially increasing government stability.

Is the new optimism justified?

In March 2013, the Economist published a new special report on emerging Africa. Their title this time: "Africa rising". Many other observers are also now predicting great things for Africa. In the same month, PwC's own economic intelligence unit predicted that nine African economies would join the '7% growth club', although they also noted that Africa can be a hard place to do business in. ii

What does this mean for transportation and logistics companies? Is Africa the next land of economic opportunity, or will the current bullish predictions turn out to be yet another miscalculation?

More than 50 different answers

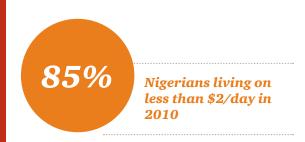
In our view there's no single answer. Africa is one continent, but it's made up of over 50 countries with very low connectivity between them. In 2011, total intra-African trade represented only about 11% of African trade with the world.iii

Levels of development also vary enormously. While South Africa already has a nearly US\$400 billion economy, the Democratic Republic of Congo (DRC), despite significant mineral resources and the fourth largest population in Africa, has an estimated GDP of less than \$18 billion.

With young, growing populations in most countries, the chance for a "demographic dividend" looks good. But a growing population can only drive growth if enough people are above subsistence level. That's a question mark in some countries where the distribution of wealth is still very unequal.

Take Nigeria, Africa's most populous country. According to the World Bank, 84.5% of Nigerians lived below the \$2/day poverty line in 2010, up from 83.1% in 2004. And in Mozambique, only 2.6% of the population is considered part of the "stable middle class" (per capita consumption level of US\$4-20/day). But the situation is already very different in Egypt, where around 30% of the population has made it into the stable middle class.

Africa's terrain also varies widely, from desert to rain forest. That has a big impact on critical transport infrastructure in countries like Algeria and the Democratic Republic of Congo, making it more challenging to build road and rail networks, not to mention much needed bridges and tunnels. But even without extreme geographic conditions, there's a huge range of maturity in terms of infrastructure. Angola has just 4km of roads per 100 square kilometers of land; Ghana's road density is more than 10 times as high, while the leader, South Africa, has 62km of roads per 100 square kilometers. To put this in perspective, Ghana's road density is similar to the level in China, while South Africa comes close to matching the US's road density of 67km of roads per 100 square kilometers.



Smart investing in Africa means you'll need to understand key regions and local markets. Africa is not just huge, it's hugely diverse.

What about the "softer factors" of promoting trade, like customs and trade facilitation? Here, again, South Africa stands out, ranking #1 in Africa in logistics performance and 23rd in the world (out of 155 countries). Egypt scores well too, coming at #57 worldwide. On the downside, the DRC scores among the worst of all nations regarding its logistics performance, ranking 143rd.

These differences in infrastructure and logistics performance translate into real costs for supply chains. According to the World Bank, it takes just 12 days to export a container from Egypt, at a cost of US\$625. The journey lasts four times as long – over a month and a half – to export a container from Angola, at nearly triple the cost. And it can get even trickier if you need to cross borders within Africa. In contrast, at the world's largest ports in Hong Kong and Singapore it takes just five days to export a container at a cost of US\$575 and US\$456 respectively.

Seeing the (rain) forest through the trees, deserts, and savannahs

Clearly, smart investing in Africa means doing your homework. This report aims to give interested investors insight into the key economic regions and countries in Africa. In particular, we've analysed factors that are most relevant to the market potential for transportation and logistics. We've focused on 10 of the most important nations out of the more than 50 countries in Africa to provide a snapshot of the range of business conditions and opportunities. Some countries were chosen based on their significant current GDP, while others are expected to grow strongly. Our list includes all major regions - North

Africa, and the east, west and southern regions of sub-Saharan Africa. We also looked at countries that are particularly relevant for the transportation and logistics sector as potential gateways.

Certainly there are other countries not highlighted in our study which are also critical for Africa's future economic growth. And in some cases our analysis also includes discussion of issues relevant for neighbouring countries too.

Ten African countries profiled



	GDP (US\$ bn)	GDP Growth (y/y '10-'12)	GDP Growth (y/y '12-'17)
Algeria	209,3	3,2%	3,6%
Angola	115	4,2%	5,7%
DRC	17,2	7,1%	8,6%
Egypt	256,7	3,0%	3,4%
Ghana	40,4	10,3%	5,9%
Kenya	40,7	4,9%	6,2%
Mozambique	14,2	7,3%	8,0%
Nigeria	270,2	7,3%	6,8%
South Africa	384,3	3,0%	3,0%
Tanzania	28,2	6,8%	7,0%

Source: International Monetary Fund

Retail logistics companies should keep an eye on South Africa, Nigeria and Kenya.

The biggest agricultural producers are Egypt, Kenya, and South Africa, but there's huge room to expand modern farming in Tanzania and the DRC.

transportation and logistics services

Much of our analysis takes a closer look at Africa's countries and regions, but it's also important to understand the particular patterns of specific industries. We've singled out a few sectors that are most relevant for T&L investors: retail and consumer, agriculture, raw materials and manufacturing.

Retail is growing along with incomes

More than 70% of the world's biggest consumer goods companies are already operating in Africa, and there are a number of high-profile companies making big bets in the region.iv

Observers say that African retail markets will grow significantly over the next decade. In most countries the demographics are favourable for increased consumer demand. Populations are generally growing at healthy rates, and in many countries the middle class is growing too. That said, in many countries most retail trade takes place in semi-formal or informal settings, e.g. groceries are bought at informal or semi-formal markets rather than in supermarket chain stores. The development of formal retail drives the highest growth rates, but some consumer goods companies are finding potential in less formal markets too. 'Micro-distribution' strategies are popping up as a way to reach African consumers, despite less-developed supply chains.v

What are some retail hot-spots? South Africa has the most developed retail sector, with most consumers shopping in formalised retail settings. It also has some major local players expanding throughout the continent, like supermarket chains Shoprite and Pick n Pay. Nigeria's large urban population is

an attractive market that can stand alone and also serve as a gateway to Western Africa.

Kenya is also emerging as a strong choice for retail companies looking to set up in eastern Africa.vi With its large population, growing middle class and central location, the country is well positioned both as a point of entry and as a gateway to other markets. The primary challenges are around security issues, as the September 2013 attack on a shopping mall demonstrates.

Will the DRC or Tanzania become Africa's bread basket?

Overall, agriculture is Africa's second largest contributor to the continent's GDP, after mining and quarrying.vii Egypt, Kenya and South Africa have significant agricultural exports, but much of the agricultural production across the continent is subsistence farming. Agriculture plays a huge role in employment in many countries, with 60-80% of the workforce employed by the sector in Ghana, Tanzania and Kenya.

For some countries like the DRC, agriculture already plays a major role in employment and food security, but production is still far below potential. The DRC only farms 10% of its arable land, and irrigation is practically non-existent at 0.4%. That means there is room for massive improvements. The World Bank estimates that the DRC could feed a billion people if farming were modernised, potentially turning the country into the breadbasket of Africa.

Similarly, 20% of Tanzania is suitable for farming, but only 5% is cultivated. Poor rural road conditions, limited irrigation and limited power supplies are constraining growth.

Agricultural production is also dependent on weather conditions, which can make it more erratic. In 2011, for example, Kenya's tea production was hard hit by drought. That had an impact on the country's trade balance. And one estimate suggests that 90% of agricultural jobs are 'vulnerable'.viii

Still, countries currently dependent on minerals or fossil fuels for exports, like Angola, see agriculture as a way to diversify. Nigeria has already started down this path; 42% of the country's GDP comes from agriculture. The government has ambitious plans to expand, but here, too, infrastructure deficiencies are constraining growth.

Getting the most of natural resources

The energy sector has been particularly critical to the economies of Nigeria and Angola, both of which have become major oil exporters over the past decade. Oil and particularly natural gas are also important to Egypt. But energy exports look likely to shift a bit in the coming years. Angola and Nigeria will to a different extent need to cope with decreasing demand from the US, where the shale gas boom has started to impact oil imports. While the US is Nigeria's main trading partner, Angola's oil exports have been directed to China rather than America in recent years.

And new players may emerge in East Africa. The IMF believes that Kenya will begin producing commercial quantities of oil in six to seven years. ix Tanzania has natural gas reserves too. And Mozambique has massive reserves of both coal and natural gas. But accessing the country's coal is proving to be very challenging.

Indeed, Mozambique is a case in point of how inadequate transport infrastructure can stall growth. Infrastructure improvements aren't yet keeping pace with the country's resource potential. Improvements to its Sena rail line have been behind schedule and more investment is needed. Flooding on the rail line interrupted coal shipments for two weeks in February 2013, hitting coal producers hard. And in July 2013, the line was closed again after a train derailed.

But questions remain about who will pay for and run the new infrastructure needed. Private companies are already making major investments, but far more needs to be done. In addition to its coal, Mozambique may also have the potential to be the world's third-biggest liquefied natural gas exporter, after Qatar and Australia - but again, massive investment is needed, including the development of an entirely new port. Mozambique's own ports and railways company, CFM, estimates it will cost US\$20-US\$25 billion to build the infrastructure it already has planned.xi That's far more than Mozambique's entire 2012 GDP of US\$14.2 billion.

Africa has other important natural resources too, like timber and minerals. For example, South Africa exports significant quantities of gold and diamonds. Ghana has some significant minerals as well, ranking second as Africa's largest gold producer, right behind South Africa. But other countries with less developed transportation networks aren't yet capitalising on mineral wealth. For example, the DRC has massive reserves of copper, cobalt, diamonds, coltan, and gold. And Tanzania has significant underdeveloped deposits of gold, diamonds, gemstones, industrial minerals, coal, kaolin, tin, gypsum and phosphate. For both countries,

Funding infrastructure will be challenging

billion

Estimated cost of improving Mozambique's ports and infrastructure

\$14.2 billion

Mozambique's estimated **GDP in 2012**

Source: International Monetary Fund, Allafrica.com

mining has the potential to grow significantly.

Industrialising Africa

Historically sustained economic growth has been linked to industrialisation. China's rapid growth is a case in point. But in Africa, industrialisation has actually declined over the past several decades. In 2012, manufacturing contributed less than 10% to overall GDP, while resources accounted for more than 20%.xii

In fact, Africa's share of global outputs actually declined from 1970 to 2010, while East Asia's more than doubled. That has a major impact on income levels.

In its 2013 Economic Report on Africa, the UN argues for making more of the continent's commodities. Rather than exporting raw materials, the continent should look to develop the industries that add value to them. The UN authors believe that increasing commoditybased industrialisation can "serve as a launching pad for long-term diversification and competitiveness in new and non-commodity sectors in Africa's commodity-rich countries."

The World Bank's Africa Development Forum agrees about the need for industrialisation, but sees strong potential in light manufacturing.xiii They see potential comparative advantage for Africa in low-wage, less-skilled labour, particularly as wages in China rise. And sub-Saharan Africa also enjoys duty-free and quota-free access to the US and EU markets for light manufacturers under the African Growth and Opportunity Act (AGOA) and the Cotonou Agreement.

Where is it already happening? Although some manufacturing utilises less-skilled labour, countries with better-educated populations seem to have an edge. South Africa already has 1.2 million citizens working in manufacturing. Ghana has a small manufacturing industry, but its share of GDP has declined over the past decade.xiv That may change if government plans to improve links to higher education work out. There are some positive signs: in September 2013, India's Mahindra announced plans to build an auto assembly plant in Ghana together with a local partner.xv Kenya also has a manufacturing sector producing mostly food and consumer goods, and Tanzania is starting to manufacture similar types of products.

Africa needs more manufacturing to help drive growth. As wages go up in China, new opportunities are beginning to open up.

Coping with the African business environment

Many companies that aren't considering investments in Africa cite the business environment as too risky. Certainly there are big issues around security, corruption, and the workforce. But that's been true in China, too.

Security and corruption risks are still issues

It can't be denied that there are still significant security issues in a whole range of countries. In Algeria's south, terrorism includes bombings, false roadblocks, kidnappings and ambushes. Other countries are facing this threat as well. The legacy of war lingers in Angola, where landmines and high levels of crime make business a problem. And continuing conflict in the Democratic Republic of Congo has led some countries to take strict actions to avoid subsidising militants, like the Dodd-Frank Act in the US. In Mozambique, threats by dissidents to derail trains forced coal producers to suspend shipments for two weeks in June and early July 2013.xvi

Even where the situation isn't violent, theft is often an issue. From our interviews we learned, for example, that some companies avoid using rail, because containers are opened on the route and then there is no accountability.

Bribery and corruption are a problem too. According to Transparency International, a score of under 50 on their corruption perception index (CPI) suggests a high level of corruption. None of the countries we surveyed made the 50 cut in 2012. Some of the executives we interviewed expressed frustration.

Better education will help Africa grow

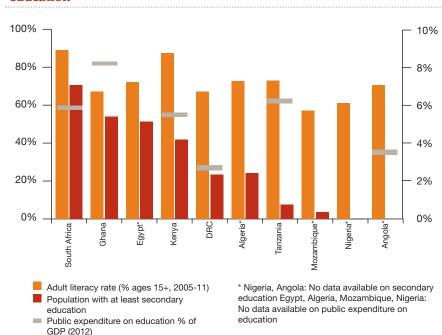
By 2035, Africa's labour force will be larger than China's.xvii That's a huge opportunity for a 'demographic dividend' - but it's also a significant risk. Africa's population is growing faster than the continent is creating jobs. Unemployment rates are high in many countries. For example, in 2011, nearly a quarter of Nigeria's workforce didn't have a job. And the majority of Africa's workers are still employed in the informal sector, where jobs are more vulnerable. Youth unemployment is also linked to civil unrest, so there's an impact on overall stability.xviii

Education and literacy levels have been increasing in many countries, but there are still huge variations. While more than half of the populations in Egypt, South Africa and Ghana have a secondary education, the rate is under 10% in Mozambique and Tanzania. Literacy rates range from a poor 57% in Mozambique to a considerable 89% in South Africa. Education needs to be a government priority across the continent.

However, as the chart below shows, public expenditures on education as part of GDP vary significantly.

But education isn't the only area where the government can make a difference. Labour regulations are also critical. Africa includes some of the most inflexible labour markets in the world. In Angola, for example, fixed-term contracts aren't allowed and firing an employee means getting approval from a third party.

South Africa, Ghana and Egypt lead when it comes to secondary education



Source: World Bank/United Nations, PwC analysis

"Express and logistics services are the engine of economic growth in Africa. Despite challenges like the under-developed infrastructure, we extended our international Express Network to all countries in Africa. We provide our customers access to the African markets and help African manufacturers develop their export. Compared to other regions, our Africa business is still small, but growing above average."

Dr. Dirk Baukmann, CFO, DHL Express Sub Saharan Africa

Transfer knowledge and understand the local culture

When we spoke to T&L executives operating in Africa, we asked about their approach to staffing. Their answers varied; some rely primarily on expatriates. But others say they are working with the local talent and also working to increase knowledge transfer within Africa, for example by bringing in skilled Kenyans to help train local staff in other African countries.

What about some of the most important professions in transportation and logistics? With most goods in Africa carried as road freight, truck drivers are especially critical. When South African truck drivers went on strike for three weeks in 2012, food shortages were just one of the resulting disruptions.xix As in many other parts of the world, Africa is facing a pilot shortage. In 2012, the Association of African Aviation Training Organization was founded to help standardise training across the continent.

Trading within Africa

Each of the more than 50 countries in Africa needs to find its own solutions locally to many of these challenges. But by working together, governments can do a lot to encourage and facilitate crossborder collaboration and expanded trade. That helps all the countries involved. At the moment, only about 11% of Africa's trade is with other African trading partners.xx Compare that to Asia, where half of trade is between countries in the region.

There are some infrastructure barriers to intra-African trade which will be discussed in the next section. And while regulatory obstacles still exist, there has been progress in crafting trade agreements to help overcome these and stimulate cross-border trade on the African continent. African countries have signed a number of regional agreements, including COMESA, SADC, EAC, ECOWAS, ECCAS, IGAD and AMU (see table). These aim at promoting cooperation on economic, political and security issues and ultimately to make free cross-border trade possible. Most of these regional agreements date back to the last quarter of the 20th century, but significant progress was made after 2000. All of the 10 countries analysed in this report are members of one or more trade blocks.

In 2008, three key trade blocs in southern and eastern Africa, COMESA, SADC and the EAC, announced their intention to join together in a much larger trade bloc, the African Free Trade Zone (AFTZ).

The AFTZ would represent a major step in the process of integration on the African continent and would bring together nearly three-fifths of Africa's population and GDP.xxi In 2011, South Africa's trade minister said the first phase of negotiations on trade of goods and the removal of tariff barriers would be completed by 2014. Talks around services and intellectual property would then follow.¹ In 2012, an African Union official predicted the zone would be operational by the end of 2017.xxiii

Some leaders are skeptical about the African Union's 2017 goal and it remains to be seen whether and when the AFTZ will fully integrate. xxiv If it happens, it will be an important step towards increased trade within Africa – and that means opportunities for transportation and logistics service providers on the African continent.

Trade agreements stimulate cross-border trade

	Trade agreement	Member states
COMESA	Common Market for Eastern and Southern Africa	19 East and Southern African states, including DRC, Egypt and Kenya
EAC	East African Community	5 East African States, including Kenya and Tanzania
SADC	Southern African Development Community	15 Southern African states, including Angola, DRC, Mozambique, South Africa and Tanzania
AFTZ	African Free Trade Zone	COMESA, SADC and EAC members
ECOWAS	Economic Community of West African States	15 West African states, including Ghana, Nigeria
ECCAS	Economic Community of Central African States	10 Central African states, including Angola and DRC
IGAD	Intergovernmental Authority on Development	8 East-African countries, including Kenya
AMU	Arab Maghreb Union	5 North African states, including Algeria

Transport infrastructure needs to catch up

Taken as a whole, Africa's infrastructure lags well behind the rest of the world. But between the regions there are significant differences. While none of the African countries we analysed comes close to the United States and China still has an edge too, South Africa's overall transport infrastructure scores almost identically to India's, and better than Indonesia's. lauded by many as one of the next economies to watch. Egypt and Kenya score lower, but they're still ranked higher than Vietnam, another of Southeast Asia's growing economies.

In fact, when it comes to roads, ports and air transport infrastructure, South Africa actually scores better than China. But the People's Republic has a clear edge in rail.

Transportation and logistics companies entering the market need to understand local constraints and plan accordingly. Our interviewees confirmed that local transport infrastructure has a direct impact on secure and on-time delivery. To cope, one said his company "sometimes has to add a few days to our standard delivery schedule."

Lions and Dragons: the China Factor

Africa is rich in a whole range of natural resources, but poor in transport infrastructure. When it comes to hvdrocarbons and some raw materials. China faces the opposite situation. The Chinese Government and Chinese state-owned enterprises are looking for solutions. One route they've taken is financing massive infrastructure projects throughout the sub-Saharan region.

The intention is clear: China needs resources, and it's willing to help build the infrastructure needed to access them. In the DRC two Chinese state construction companies and the DRC's state copper company have signed a contract worth more than the DRC's state budget.xxix Another, more direct case of China's interest in Africa's resources is in Angola, where infrastructure is rapidly expanding as part of an 'infrastructure for oil' trade agreement with China. In Angola, China is funding not only transport infrastructure, but also infrastructure for everyday life like the large housing area of the city of Kilamba Kiaxi.xxx Meanwhile, Angola has became China's top supplier of oil in 2010.In 2013 Kenya signed a US\$5 billion deal with China. The deal includes the construction of a rail link from the Port of Mombasa to adjoining Uganda as well as other projects.xxxi

In other African countries, like Tanzania, Ghana, Mozambique and even South Africa, Chinese government entities and companies are also supporting the funding and construction of a whole host of individual infrastructure projects. By helping improve Africa's infrastructure, Chinese companies make it easier to operate in Africa. At the same time they position China to take advantage of future growth in African markets.

Getting around local markets

Most freight in Africa gets transported via road. But the majority of the continent's roads are still unpaved and many paved roads are in poor condition. Quality tends to deteriorate significantly once you leave international trunk roads. The situation is particularly dire in the DRC and Angola. And even in Kenya, which scored next after South Africa in road quality among the countries we studied, only 14% of roads are paved. Kenya's capital city, Nairobi, suffers from massive congestion too.

Where roads are currently adequate, road maintenance is looming as a potential problem. For example, Nigeria's roads carry more than 90% of domestic passengers and freight. But capital expenditures there aren't keeping up with the need for preventive maintenance – just three-quarters of federal roads are in good or fair condition, and regional roads are in worse shape. And the situation is similar in other African countries.

Africa's rail networks are generally in even worse shape than its roads. In many countries, most rail lines are still left over from the colonial period and are in poor repair and out of date. But there are some notable bright spots. Between 2006 and 2011, South Africa invested more than US\$5 billion in railways. That's had a profound impact – but investments are set to increase further in the coming years, as South Africa still lags well behind China and India in rail infrastructure. And Mozambique has major plans to improve its rail network, start-up difficulties notwithstanding.

Africa's trans-continental highway network looks better on paper than on the ground. It's a real constraint for T&L companies.

Rail connections are lacking too, but a number of projects to improve regional connectivity are underway.

Connecting within and across Africa

One of the most important factors in Africa's future development will be increasing cross-border trade, both within Africa and with the rest of the world. That means solid road and rail networks that span regions, and indeed, the continent.

There are already a number of trans-African highways, and several, like the Lagos-Abidjan highway through West Africa, already include expansion plans. A quick look at the map suggests that the highway network provides good access for road travel all across the continent.

But appearances can be deceiving. Road quality is very patchy on these highways. While some offer a good transport route, others are in such bad repair that they are essentially unusable. One example is the Beira-Lobito corridor. In the view of our experts this stretch of road isn't an available freight route at present, with some sections unfinished and others frequently subject to floods. However, in the future it could develop into a viable corridor.

What about rail? Regional integration with new rail lines and the extension of existing tracks has started in southern and eastern Africa. South Africa is collaborating with Swaziland on a joint rail project. In the East, Tanzania is working with neighbours Rwanda and Burundi on plans to link the gateway city of Dar es Salaam with Kigali in Rwanda and Musongati in Burundi. And Kenya is already connected to neighbouring Uganda via rail. But rail integration in the west is nearly nonexistent.

Gateways to the rest of the world

While transport within Africa is important, so is getting the continent connected to the rest of the world. That's where gateways ports and airports – come in. Ports are by far the most important entry point to the African continent with most goods travelling by ship, but there aren't enough ports to handle existing traffic, much less allow for growth.

That's set to change. There are currently plans to build or significantly expand five ports - in the west at Barra do Dande (north of Luanda) and Lobito in Angola, and Lekki in Nigeria, and in the east at Lamu in Kenya and Musoma in Tanzania (see map on page 11). While these projects will be a big step in the right direction, demand is rising even faster and congestion will remain.

In the South, Durban is indisputably the number one port – not only in southern Africa, but the whole of the continent. In North Africa, by far the most important shipping route is the Suez Canal in Egypt. The transhipment centre of Port of Said has emerged as a state-of-the-art facility since it began operations in 2004, serving the Mediterranean as well as the entrance of the Suez Canal.xxv

East and West Africa have a number of competing ports, but there are big issues with capacity and efficiency. While the western African coast includes several larger ports, it still lacks a clear maritime hub. One strong contender for the role was the Port of Abidjan in the Ivory Coast, but a local political crisis in

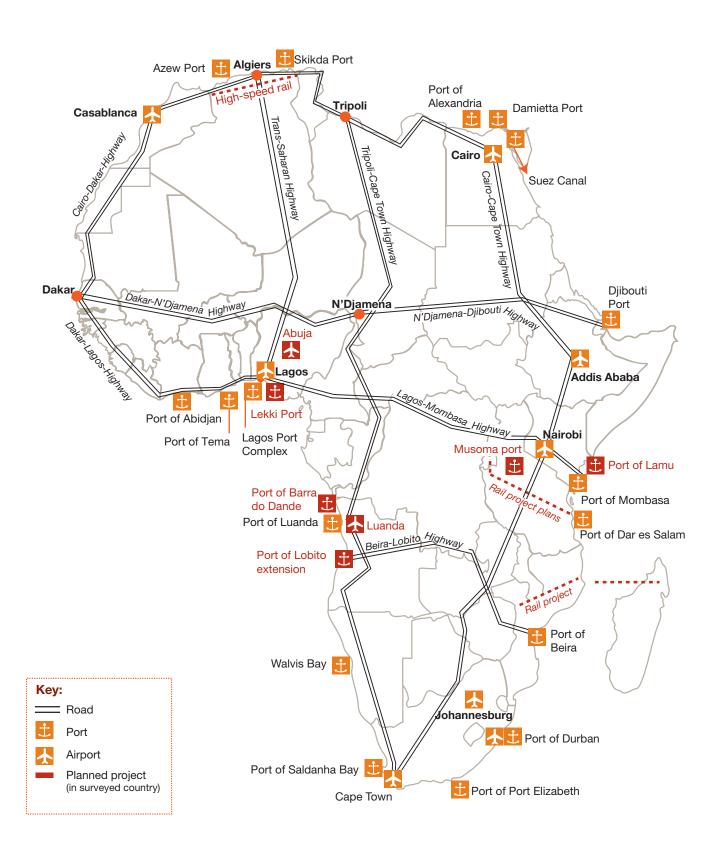
2011 has had a negative impact. Another competitor, the Lagos Port Complex, offers direct access to the large Nigerian market, but it is massively congested. This picture could shift after 2016, when a new deep-sea port at Lekki in Nigeria is due to be completed. The Port of Tema benefits from Ghana's political stability, but it currently has severe capacity constraints. Long waiting times pose security risks for ships. As Africa grows, all of these ports will need to decrease congestion and become more efficient.

On the east coast, Mombasa in Kenva and Dar es Salaam in Tanzania compete as the preferred maritime "gateway into East Africa". Congestion in Mombasa has led to some shippers shifting to Dar es Salaam, but the port is now also congested and faces issues around clearing through customs efficiently. New railway connections between Dar es Salaam and Rwanda, Burundi and Uganda are planned, which could help goods move through faster. Similarly, in Kenya there are plans to build a new access road and railway link to better connect the Port Mombasa container terminal and existing port network to the hinterland.

Africa has a number of international airports for passenger traffic across the continent. The busiest ones are OR Tambo International Airport in Johannesburg, South Africa (capacity of almost 21 million passengers annually) and Cairo International Airport in Egypt (13 million passengers annually).xxvi

Major port projects are a big step in the right direction, but Africa will need to do even more to get goods flowing smoothly by sea

Trans-African corridors, gateways and infrastructure projects



East and southern Africa already have air infrastructure, and two new airports planned in the west have the potential to be important hubs. But air freight won't take off in a big way unless security issues can be addressed.

Among the 10 countries analysed, South Africa and Egypt top the list on logistics performance.

Transporting air freight is more difficult, in large part due to security issues. And West Africa still lacks a strong hub-and-spoke structure. Two new international airports are already planned at Angola's capital, Luanda, and in Abuja, Nigeria. Luanda, for instance, is expected to have capacity for over 13 million passengers and a cargo terminal with an annual capacity of 35,000 tonnes. The large size of the West African market and the rising consumer demand in the West African economies suggest that more 'spokes' will develop around these future hubs.

Such a structure has already developed in the east and south of the continent. Hubs at Nairobi in Kenya, Addis Ababa in Ethiopia in the East and Johannesburg, South Africa, in the South are starting to increase connectivity there.

Improving logistics performance

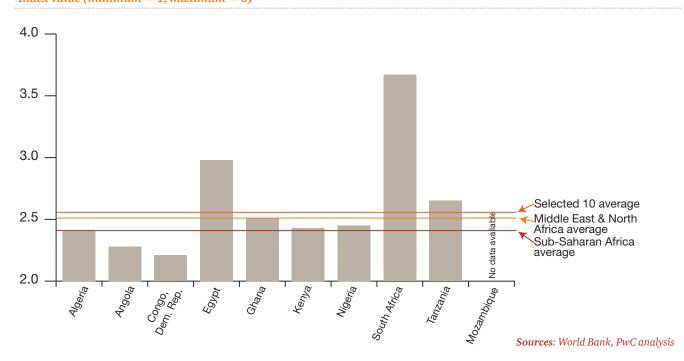
It is common sense that high-performance transport and logistics systems are a key locational factor for a country or a region. Yet, achieving excellence

in logistics is a herculean task that requires huge funds, political consent, planning capacity, and subject-matter expertise. It takes collaboration between government and the private sector. Some countries have natural geographical advantages. When this is combined with high logistics performance, they can become gateways for neighbouring, often landlocked countries and thus evolve into the continent's logistics hot spots.

There are a wide range of factors that go into smooth shipment of goods. The World Bank's logistics performance index (LPI) includes six main component indicators: infrastructure, international shipments, logistics competence, tracking and tracing, customs and timeliness. The LPI summarises the performance of countries in these six areas. It uses standard statistical techniques to aggregate data from interviews with nearly 1,000 logistics professionals.

According to these measures, South Africa is the continent's clear leader, coming in 23rd worldwide. That puts it on a par with industrialised countries. Egypt and Tanzania have lower scores, but both are currently performing well in comparison to peers. In its "Connecting to compete" report, the World Bank analyses countries' LPI against their income levels, measured by GDP per capita, and identifies South Africa as one of the overperformers, along with countries like China, Malaysia and Turkey, while Angola is the only country from our sample that's mentioned as an underperformer. xxvii However, while logistics performance in South Africa is good, costs of rail and port services remain high.

South Africa and Egypt top the list on logistics performance Index value (minimum = 1, maximum = 5)



When we acquire a domestic business, we are able to link it to our international express network and transfer knowledge around freight forwarding, so you will see an evolution of the business model. It might start with one service, but eventually you have the full service. We all know the potential is just massive. It's about how quickly it will happen.

Hussein Hachem, CEO, Aramex

"There are many challenges to operating in Africa, and one can only operate within this reality. Investors are definitely starting to show a greater interest in Africa. From Shoprite's' perspective, we see a lot of promise in Africa and we're in it for the long term."

Photios Tzellios, Supply Chain Director, Shoprite

In another report, the Africa Development Forum singles out four factors contributing to poor trade logistics in Africa: higher inland travel costs, higher port and terminal handling fees, higher customs clearance and technical control fees, and higher costs to prepare documents and letters of credit.xxviii

Long dwell times of import containers are a major problem for most of Africa's ports. When ports work efficiently, containers only face two or three days delay between the time they're unloaded and when they exit the port. The sub-Saharan Africa average is 14 days. Poor connections to the hinterland and red tape at customs are at play, but there are other reasons too, like collusion. Terminal operators may earn large revenues from storage, giving them little incentive to improve.

Building your Africa strategy

T&L companies have a vital role to play in putting Africa in motion. Better transport and logistics capacity has a profound impact on economic growth potential. By helping Africa grow, T&L operators can also secure future growth for their own companies. But while many are taking first steps, very few companies are forging a comprehensive strategy around building their presence in Africa.

When we spoke with executives from logistics companies with operations in Africa, 10 out of 16 named Nigeria as one of the African countries with the most potential for their business. Yet only four are already operating there. That's a vivid example of the gap between today's reality and future prospects.

Africa probably isn't the best destination for companies just looking for quick revenue boosts. The continent needs better transport infrastructure, more connectivity across borders, and an improved business environment to reach its potential.

But for companies willing to make long-term investments and work together with local governments, the long-term pay-off may be huge. If you make the decision to expand in Africa, you'll need a solid long-term strategy.

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Methodology



As Africa has risen to prominence as an investment destination over the past few years, so the role of transportation and logistics has taken on greater significance. Whether moving resources off the continent or bringing goods and services into its burgeoning economies, Africa's future growth and development will depend on the quality of its infrastructure and the efficiency of its transport networks.

Ten African countries profiled



In this report, we focus on 10 of Africa's leading developing nations: Algeria, Angola, the Democratic Republic of Congo (DRC), Egypt, Ghana, Kenya, Mozambique, Nigeria, South Africa and Tanzania. The countries were chosen based on their economic significance, their strong growth in recent years and their potential as transportation and logistics gateways.

The content of this publication draws on the expertise of specialists in a broad range of areas. Our team comprises PwC industry professionals from PwC's global transportation and logistics group, from PwC Southern Africa's transportation and logistics group and economic research partners, Econometrix, as well as independent industry experts.

We worked closely with Econometrix, South Africa's leading independent economic consultants. The country profiles featured in this publication are a summary of extensive research carried out by Econometrix and evaluated by our specialists.

Research sources

The research results were drawn mainly from five sources:

- Business Monitor International (BMI),
- · NKC Independent Economists,
- Africa Infrastructure Country Diagnostic (AICD),
- International Monetary Fund (IMF),
- · The World Bank, and
- The World Economic Forum.

Commentary in the text that has not been taken from these sources, and that is not our own opinion, is referenced in the endnotes at the end of each section.

The accuracy and completeness of information obtained from third-party sources, and the opinions based on such information, cannot be guaranteed.

Model of analysis

Following a five-pillar model, all countries profiled here were analysed in terms of five characteristics and their impact on the transportation and logistics industry:

- 1. Demographics and resources;
- 2. Economics;
- 3. Business environment;
- 4. Trade and logistics; and
- **5**. Transport infrastructure.

The first pillar is focused on the resources of a country, both human and natural, while the second

analyses how the country makes use of its resources and turns these into an economic output.

Pillar three includes not only a country's business environment, but also political stability and security issues. Within pillar four, a country's trade activity and its trade facilitation logistics (for instance, its customs clearance processes) are analysed.

Finally, pillar five is dedicated to each country's transport infrastructure, which is fundamental to the business of transportation and logistics companies. Here we take a closer look at the capabilities of the countries' ports, airports, railways, roads and other infrastructure.

All findings noted in the country chapters were supported by interviews with executives from companies operating in Africa. A total of 17 interviews were conducted between May and July 2013.

Investment potential assessment

We assessed the 10 countries surveyed against each other in terms of the five pillars mentioned above. No other country was included in the assessment.

Each assessment was made on the current state and the fiveyear medium-term prospects. Current-state assessments examine whether investment into the local transportation and logistics sector today would be attractive, average, or unattractive, if only this single characteristic was taken into account.

Evaluations of future prospects take into account concrete measures for growth in each country that are set to improve its performance.

Visual icons depicting the assessments are shown here:

• Icon colours depict the current state (2013)



Arrow orientation shows future prospects

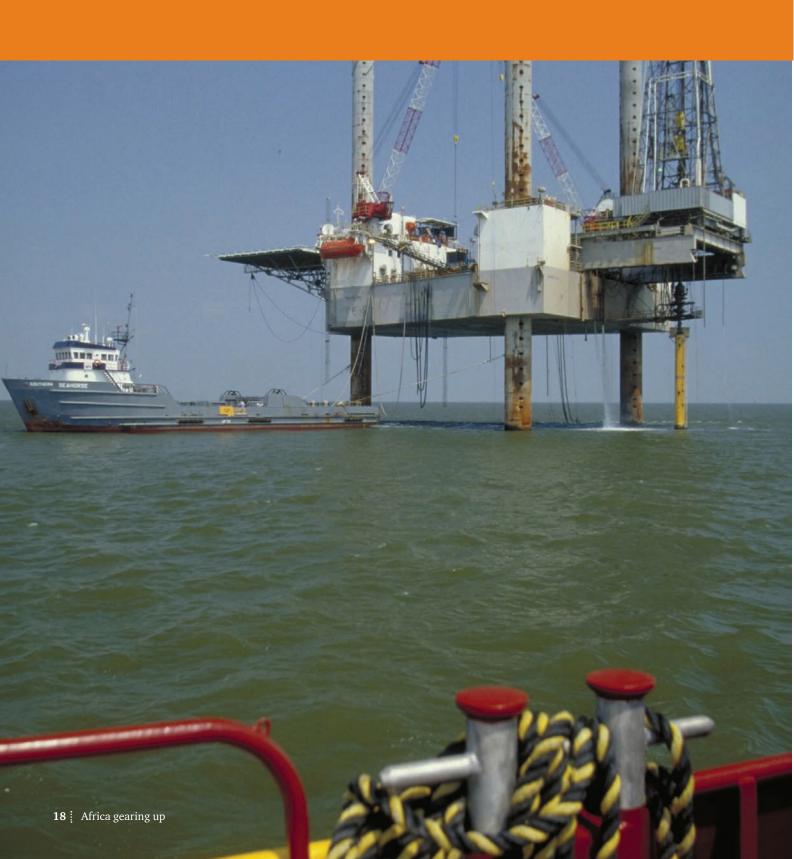


Assessments are based on:

- Key statistics for all five pillars of analysis gathered from thirdparty sources;
- Broad research on each country, done by Econometrix and PwC;
- Real-life experience of people who work in Africa; and
- Expert opinions from our team of specialists.

These investment assessments were prepared to help potential investors get to know the risks and opportunities of the main transportation and logistics markets in Africa. They should not be regarded as investment recommendations.

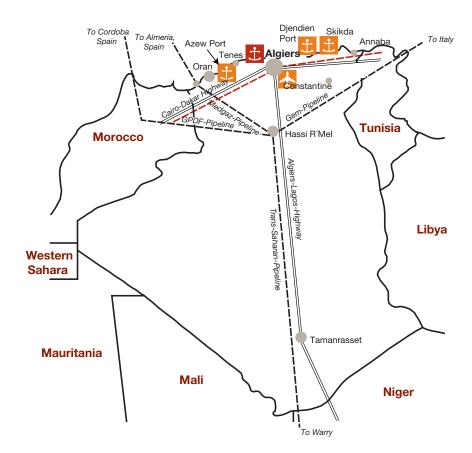
A deeper dive: Ten countries in profile





Algeria

Algeria is a big player on the African continent, not only because of its substantial land area, but also because of its sizeable GDP.



Planned investment of

\$286D11 on infrastructure

FDI inflows to Algeria tend to be below the country's potential considering its substantial natural resources, strong macroeconomic indicators and favourable demographic factors. This is amongst others due to a challenging business environment, new investment laws introduced by the complementary finance bill for 2009 and the existing tax regime.

In its current five-year plan (2010-2014), the Government made commitments to invest US\$286 billion to improve the country's infrastructure, human development and to diversify the country's economy.

However, with declining oil demand from the US and decreasing oil and gas production affecting foreign earnings, the liberalisation of economic and investment policies is set to become an increasingly pressing issue.



20-25%



Dimming prospects

Trade and economic activity is currently prosperous, but Algeria's prospects do not look good.

Algeria has substantial trade, but the external position is extremely reliant on hydrocarbon exports. Oil and gas exports account for slightly more than 98% of total export earnings. Algeria's biggest export market is the US, which accounts for 20-25% of total exports.

Rising shale gas potential in the US will impact negatively on Algeria's oil and gas exports and there is now a growing need for Algeria to find new destinations for its hydrocarbon products, presumably in emerging economies in Asia, Africa and South America.

This search for new markets will be given further impetus by Algeria's European trading partners, such as Italy, Spain and France. These countries are concerned about the stability of supplies and are considering cutting their imports from Algeria.

Gas production has decreased over the past few years, contributing to the contraction of the hydrocarbon sector and oil production declined for a fourth consecutive year in 2011. Since prospects for these sectors are not very promising, Algeria faces an urgent challenge to diversify its economy.

An Association Agreement with the European Union presents a glimmer of hope for Algeria. According to the agreement, a free trade area will be established by 2017. Despite the trade agreement, fostering trade in Africa could be fairly problematic, as Algeria is not a member of any African trade agreement.

Algeria has the fourth-largest economy in Africa and currently enjoys a solid financial position with very low debt levels. Still, growth prospects seem to be quite limited with the IMF projecting an average annual GDP growth below 4% through to 2017.

Public investment has been the principal driver of economic growth in recent years and the IMF has warned that the public investment programme has now reached a plateau in terms of the execution of large projects. ii The programme will therefore contribute less and less to real GDP growth over the next few years. Meanwhile, the current Government's plan of action has essentially not moved beyond the previous programme, a model of state-driven development, paid for with petrodollars.

Business environment

Algeria's challenging business environment and other risk factors further constrain economic prospects.

Weaknesses within Algeria's institutional framework continue to undermine prospects for sustained long-term economic development. Structural problems include a low level of competitiveness and a challenging business environment.

Algeria has set forth a restrictive regulation for foreign investors. Specifically, for businesses created after August 2009, foreign companies are obliged to have a local partner for 51% of their investment in Algeria and a 30% local partner in their import companies.

Tax exemptions are granted to foreign investors. Nevertheless, there is an obligation to reinvest profits generated by tax exemptions locally. Additionally, the Government uses price ceilings, tariffs and redistribution schemes to control prices for some largeconsumption products.

Terrorism continues to pose a threat to safety and security. According to the Bureau of Consular Affairs at the US State Department, terrorist activities are commonplace. These include bombings, false roadblocks, kidnappings and ambushes, which occur often, particularly in the Kabylie region east of Algiers and in the southern part of the country.iii

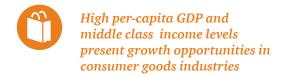
Labour

The well-developed workforce is hamstrung by the inefficient labour market.

Algeria has a large labour force and enjoys high levels of human development. It also performs quite well in terms of healthcare indicators, with Algerians having high life expectancy and low prevalence of HIV/Aids.

The labour force is productive. Algeria ranks second only to South Africa in terms of GDP per person employed among all countries surveyed in this study. On the other hand, poverty remains widespread - despite a relatively high percapita GDP- and unemployment rates are high, which is one of the fundamental socio-economic challenges facing the country.







The labour market is inefficient, ranking last globally in the 2013 Global Competitiveness Index and the wage determination regime is highly inflexible.iv

Electricity

Big energy projects will address current power supply problems.

Electricity consumption increased by an average of 6% per year during the 2000-2010 period, but in 2010, grew by almost 20% compared to the previous year. Electricity consumption is expected to reach more than 11 000MW in 2013 and 20 000MW by 2020. The Government has brought additional capacity on line to keep up with demand, but it has also imposed rationing, leading to public protest in 2012.v

Frequent power interruptions have also negatively affected productivity and growth in recent years. In response, the country's public power company has announced plans to boost capacity by 8 000MW by 2016 through the construction of nine gas-fired power plants.vi

Although Algeria is heavily reliant on fossil fuels for power generation, the Government recently unveiled plans to develop the country's renewable energy industry and has aims to produce 5% of the country's electricity needs from solar energy by 2017.vii In particular, the country will expand its solar power capabilities by investing in the Desertec project, eventually also exporting electricity to Europe.

Growth industries

Given that most of the country's land is arid, agriculture currently plays a minor role in Algeria's economy and there is a growing need to import food. However, the Government is investing heavily in programmes to increase local food production capacity. Logistics services businesses should therefore plan to adapt to imminent changes to the country's import basket in the future.

While the oil and gas sector is the most important to Algeria's economy, the mining industry also shows strong growth potential. The industry is small and has been neglected in favour of the hydrocarbons sector, but newlydiscovered mineral resource deposits are close to coming into production, with the extraction of lead and zinc due to commence in 2013. Algeria has significant gold reserves, but gold mining is largely unexploited and gold production remains limited.

High per-capita GDP and upper middle-class income levels present significant growth opportunities for diversified growth in consumer goods industries. Approximately 27.3% of the total population is classified as being middle class.

Algeria has one of the highest rates of urbanisation in Africa, which further contributes to growth potential in the consumer goods industries. Urbanisation is currently at 73% and projected to rise to above 83% by 2030.

Logistics

Logistics Performance Index



Source: World Bank

Improvements in logistics infrastructure promote Algeria's Logistics Performance Index rating.

Algeria's logistics infrastructure is poor. It rates particularly badly for its logistics infrastructure and quality as well as for having bureaucratic/inefficient customs procedures. Encouragingly, the country has managed to improve its performance in areas such as customs, track and trace and timeliness over the past few years.

According to the latest Logistics Performance Index (LPI), Algeria has improved its overall ranking from 140th in 2007, to 130th in 2010 and 125th in 2012.

Still, indicators such as infrastructure, international shipments and logistics competence show a slightly declining performance.

Transport infrastructure

Civil war in the 1990s left Algeria with a substantial infrastructure backlog.

Investment in infrastructure came to a virtual standstill in Algeria between 1991 and 2001, due to civil war. This led to a significant backlog in infrastructure maintenance and improvement. Meanwhile, the country's vast desert geography poses a permanent challenge to infrastructure developments.

In addressing these problems, the Government has made transport a priority with major upgrades and expansions in progress as part of its extensive public investment programme.

Most of the population, and hence the bulk of economic activity, is located along the northern coastal strip. Road connections focus primarily on long-distance connectivity on both the east-west and north-south axis.

In addition to the four main modes of regional and international transport – air, shipping, roads and railways - pipelines are of special importance in Algeria, as they connect the Algerian oil and gas industry to Europe.

The country has three transcontinental export gas pipelines; two transporting natural gas to Spain and one to Italy. The largest pipeline runs from Algeria via Tunisia to Italy. One to Spain passes through Morocco and the newest pipeline to Spain, which came online in 2011, stretches across the Mediterranean.ix

Ports

Algeria's economy depends on its congested Mediterranean ports.

Shipping is essential to the national economy with the vast majority of Algeria's commercial trade moving through the national port network. The most significant port in terms of traffic is Arzew in Oran. followed by Skikda. Arzew has been developed with a special focus on petrochemical exports.

For container traffic, Algiers is the most important port after Arzew, handling almost 60% of the country's container traffic. Algiers is a congested port and congestion surcharges are regularly implemented by shipping lines. Delays are common.

In general it would appear that port congestion is problematic at most major Algerian ports. Although there are significant levels of privatesector involvement at some ports, reports on physical constraints at ports such as Algiers imply that private-sector involvement is unlikely to resolve the issues. An example of private-sector involvement would be the landlord port model in Algeria, where DP World (Dubai Ports World) is responsible for port operations in Algiers as well as DjenDjen.

In October 2011, the Algerian Transport Ministry announced plans for a new port to be located between Algiers and Tenes. This will be built to relieve congestion at ports such as Tenes, Bejaia and Oran.

Population size (million, 2012)	38.5
Population growth (2012-2020, avg p.a.)	1.6%
GDP (US\$ billion, 2012)	209.3
GDP growth forecast 2012-2017 (avg, y/y rate)	3.6%
GDP per capita (US\$, 2012)	5, 582
Global competitiveness index 2012 (global rank/144 (score 1-7))	110 (3.72)
Corp. Income Tax (CIT) rate	25.0%
Top exports	Petroleum oils and oils obtained from bituminou minerals, crude (45,0%); Natural gas, in gaseous state (20,0%); Natural gas, liquefied (8,7%)
Logistics Performance Index 2012 (global rank/155 (score 1-5))	125 (2.41)
Global Competitiveness Index 2012 – Infrastructure (global rank/144 (score 1-7))	100 (3.16)







Air transport

Airports and air transport are on the Government's agenda for further expansion projects.

Algeria has 52 airports with paved runways. The primary airport is Houari Boumediene Airport in Algiers and Air Algérie is the national flag carrier. The domestic market is served primarily by Air Algérie, although there are also other airlines.

The international air transport market is well served with regular scheduled flights to Europe (mainly France). The Middle East and other hubs in Africa are also served with regular flights.

The amount of funding earmarked for airport infrastructure and technology indicates that there will be a considerable focus on airport investment in the near future. The Government is currently committed to spending US\$520 million on airport infrastructure and technology modernisation.

Rail

A future rail line will connect Africa's northern coast and link Tunisia to Morocco.

The decade-long civil war in the 1990s left the rail network in ruins. Today, rail network upgrading, renewal and expansion are major priorities and there is a strong focus on the alleviation of congestion in urban areas. Algeria's railways are heavily concentrated along the country's northern coast.

The last year has seen a significant investment in rail infrastructure with a number of major routes being commissioned or upgraded. This is part of the Government's long-term railway development and modernisation plan for the state-owned rail company, Société Nationale des Transports Ferroviaires (SNTF).

Long-distance connectivity along the north coast is also high on the agenda with the Algerian Government investing US\$87 billion to develop a 1 300-kilometre high-speed east-west line that will cross the country from Tunisia to Morocco. The line will include branches that will connect with major ports and cities.

Roads

Road corridor priorities could change in the future from east-west to northsouth.

Roads are the main mode of transport in Algeria. It is estimated that 85% of goods and passengers use road as their primary mode of transport. Road development essentially follows human settlement patterns and the network is much more developed in the northern coastal region where economic activities and population concentrations are heaviest.

The south is served by a limited number of national roads linking the few densely populated areas. Road conditions can be variable, particularly in the south on the trans-Saharan corridor, as even newly paved portions of the road often disappear under immense

drifts of sand that block the route for days at a time.

The east-west highway project, which is partly under completion at the moment, is vastly changing the highway profile in the country. It is Algeria's most important road project and is now, near completion.

The only pending section is a 150-kilometre stretch of highway between Constantine and Skikda. The 1 216-kilometre highway, which runs between Morocco and Tunisia, will connect Algeria's major coastal

Construction of the US\$11-billion highway began in 2009, with completion scheduled for the fourth quarter of 2013. However, deadline delays led to urgent calls by the Algerian Government in May 2013 for the Japanese construction consortium, COJAAL, to finish the project as soon as possible. It is considered one of the largest public works projects in the world and it is envisaged that the project will contribute significantly to alleviating the isolation of the eastern and western provinces as well as facilitating better connections with Morocco and Tunisia.

The other major axis in the country, the Trans-Saharan Highway, passes through Algeria, Niger and Nigeria. Development has been strong in the north of the country, with the focus on the east-west highway. Future development will, however focus on the north-south highway in an attempt to realise greater connectivity for the more remotelysituated populations in the south.

Conclusion

Based upon our analysis, we have assessed the investment potential for Algeria's transportation and logistics sector as shown in the graphic alongside.

Algeria – Investment potential assessment

1. Demographics and resources		
2. Economics		\Diamond
3. Business enviror	nment	
4. Trade and logisti	cs	
5. Transport infrast	ructure	$ \overline{ \mathcal{Q}} $
Key: Attractive Average Unattractive	Strong improvement expected Some improvement expected Stagnation/marginal change expec	sted

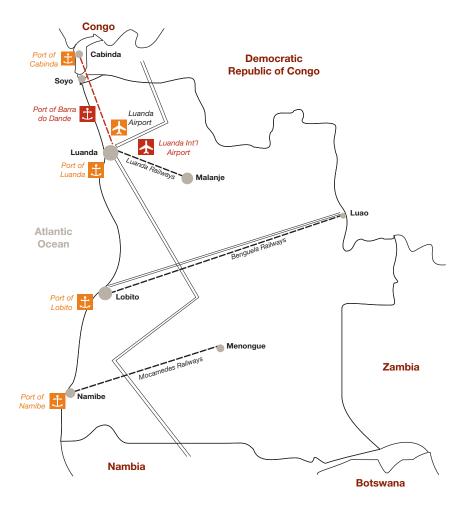
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Angola

Sub-Saharan Africa's **third-largest economy** will stay on a fast growth path. Key drivers will be further rises in oil production, recently announced reform programmes and political stability.



3rd largest economy in sub-Saharan Africa

An abundance of natural resources have made Angola one of the leading destinations for foreign direct investment (FDI) in Africa. Most FDI is directed into Angola's core sector: oil. Huge oil resources have put the country in a strong fiscal position. While this favourable economic climate presents an ideal opportunity for the Angolan Government to make decisive investment decisions, the current transport and logistics infrastructure remains a major challenge for businesses in Angola.

The Angolan Government established a sovereign wealth fund, the Fundo Soberano de Angola (FSDEA), in 2012 and has ringfenced the equivalent of 100 000 barrels per day of oil revenues (about US\$5 billion by October 2012ⁱ) for priority projects and essential infrastructure.

In addition, government reforms are targeting the improvement of the private sector in Angola. With regard to monopolised sectors, Angola

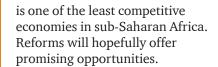








20m



Angola is well aware of its current business challenges. It also has the financial potential to overcome obstacles in the long run and put itself in a strong position in the region.

Oil resources boost growth and government spending

Due to rising oil prices and a tighter monetary policy, Angola grew its current account surplus to 7-10% between 2010 and 2012. Oil accounts for nearly 98% of total revenues, according to the World Bank, and **Angola's main trading** partners are China and the USA, followed by France and South Africa.

Angola is a member of the Southern African Development Community (SADC) and this should see an increase in regional trade. Angola's regional integration will be of further importance as it hopes to become an important supplier to its landlocked neighbouring countries.

A liberal trade regime with low tariffs provides low barriers to trade. Although the government has not yet established foreign trade zones or free trade zones, it has indicated its intention to create three free trade zones in Luanda, Catumbela and Cabinda.

The country is rich in natural resources. While oil still makes up the lion's share, rising non-oil export earnings (diamonds and gas in particular) provide further support for export receipts. This development is welcome and in

accordance with Luanda's objective of reducing Angola's dependence on the oil sector by diversifying the minerals sector.

The impending commissioning of the country's US\$10 billionii liquefied natural gas (LNG) plant near Soyo will provide a further boost to economic growth, in addition to plans to commence iron ore production.

GDP has grown eightfold since 2003 and growth is projected to remain above the 5% level over the next five years. This will be supported by infrastructure spending and increased oil production. At the same time, per capita income has grown sixfold since 2003 to reach US\$5 680 in 2012. But despite aggressive income growth, extreme inequality remains, which limits growth prospects for large-scale investments in the retail market in the near future.

Government expenditure is set to increase by 14% in 2013, based on a major scaling up of capital spending, which will impact positively on economic growth. Following the end of the civil war in 2002, inflation fell from hyper-inflationary levels to settle at 12-15% during 2006-2011.

Business environment and security a big challenge

While an inadequate institutional framework is hindering diversification in the economy, the weak business environment is also impeding industrial growth. Angola is rated as the most difficult country in which to do business in the SADC region, having the lowest ranking in the Ease of Doing Business Index.

This rating is attributable to a poor contract enforcement environment, inefficient tax bureaucracy and difficulties encountered in opening a new business. Government is already countering the latter with planned reforms to simplify

Angola has been stable since the 27-year war ended in 2002, and although there is unlikely to be any change in the general thrust of policy, security still remains an issue. Levels of crime are high across the country, especially in Luanda. Ground travel in some parts of Angola can be problematic due to landmines and other remnants of war. The northern province of Cabinda, as one of the country's most dangerous places, presents distinct safety and security-of-transit risk. Armed groups specifically target and attack expatriates there.

Frequent electricity outages

Angola's power sector is among the least efficient in Africa. A 2010 World Bank survey found that Angolan firms endured six power outages a month lasting on average 14 hours, and that overall, 36 days were spent without electricity. In the same year businesses reported waiting an average of seven days for a new electricity connection. To a large extent businesses have to rely on private diesel generators.

These problems have been recognised by the government and it has committed to investing approximately US\$16 billion in the energy sector between now and 2015.iii

"Transport infrastructure has a big influence on reliability and the ability to deliver on time. A trip from Luanda to Soyo (450km) usually takes two days, but during rainy season, the delivery can be four or five days due to the poor road conditions and poor telecommunication signals. Sometimes the rain floods can destroy the bridges, which may even bring transportation to a halt for many days."



Zhou Chuncheng, General Manager, Sinotrans Angola LDA

Workers need training

In relation to its size, Angola has a small population of around 20 million. However, population growth is high at 3.1% per year. Levels of urbanisation are also high with more than half of Angolans living in cities.

There is a large surplus of labour and a massive unemployment rate giving employers easy access to labour resources. Although this offers some potential, workers are mainly unskilled and the labour market is heavily restrictive to entrepreneurs and employers, as fixed term employment contracts are disallowed by law and the legislated minimum wage of \$126 is among the highest in Africa.

Dominance of oil and

Oil and gas are by far the most important industries in Angola. Given the reliance on export earnings from the dominant oil industry, most economic activity is located in this sector. Even though oil export earnings will remain the country's dominant source of foreign income for years to come, its share will decrease and other sectors will advance, pushed by the government's plans to diversify the economy.

Mining, along with the diversification of the minerals sector, offers significant new growth opportunities. Over the short to medium term, the energy, transportation and construction sectors are expected to all benefit from a scaling up of public

investment programmes. Despite these programmes, it will be a long way to go to diversify Angola's highly oil-dependent economy.

Patchy improvement in logistics performance

Logistics Performance Index



Source: World Bank

According to the 2012 Logistics Performance Index (LPI) released by the World Bank, Angola is one of the world's worst performers when it comes to 'trade facilitation' logistics, ranking 138th out of 155 countries included in the Index, and 30th out of 42 African countries.

The latest LPI shows there has been a slight improvement since 2010, although the 2012 assessment still lags the level recorded in the first LPI in 2007. While international shipments and logistics quality and competence remain more or less stable compared to Angola's 2010 ranking and value, timeliness and track & trace capabilities are

declining (evidenced by the high level of goods lost in transit).

In contrast, the ratings of Angola's customs procedures and infrastructure have made significant progress, rising up the ranks an impressive 50 and 57 places respectively. Reforms are gathering pace. Since 2001, the government has been taking steps to update customs legislation and modernise the customs administration. This has achieved good results and while allegations of corruption remain frequent, trade laws and regulations have been promulgated, import documentation requirements have been simplified and customs clearances at all borders have been computerised.

Transport infrastructure and operations

A major obstacle for investments into industries other than oil is the poor quality of Angola's transport infrastructure. Overall, infrastructure was severely damaged by the 27-year-long civil war that ended in 2002, while periodic flooding during the rainy season also takes its toll.

In the Global Competitiveness Report 2011/2012, Angola ranks 141th of 142 countries regarding the quality of its overall infrastructure. Angolan manufacturers stand at a very high risk of losing their goods in transit.

Despite the weakness of the country's infrastructure, Angola is one of very few African countries



New ports and capacity needed

that do not face a significant infrastructure funding gap. Thanks to its large oil reserves, Angola has the financial resources to address structural issues and to rebuild the country's shattered infrastructure, expand the economy and modernise and better connect its cities.

There is not only the potential, but also the political will to address infrastructure needs. According to the country's president, José Eduardo dos Santos, rehabilitating and expanding the nation's ports, highways and railways will be essential to transforming Angola into a 'logistical hub of considerable importance in Southern Africa'.iv

Another key factor in infrastructure funding is Chinese investment in Angola. Thanks to an 'infrastructure for oil' trade agreement, China has been making significant strides in changing the Angolan infrastructure landscape, via the construction of large railways, roads, and housing projects in areas like the city of Kilamba Kiaxi.

In return, Angola became China's main supplier of oil and even overtook Saudi Arabia in 2010. China will continue to be a key investor in Angola as one of its biggest trading partners.

Transport infrastructure in Angola is mainly concentrated around the capital Luanda and along the coast. While roads connect the three port cities of Luanda, Lobito and Namibe, railway lines should be connecting the port cities with the hinterland. However, railway lines have just recently been rehabilitated and rebuilt or are still under construction, so the transport of goods continues to congest Angola's road network, especially around Luanda.

Angola's international trade is entirely dependent on the country's ports, which account for 95% of imports. Ports will be essential for Angola's plans to become an important regional supplier to its landlocked neighbouring countries. The country currently has four important ports of trade: Luanda, Cabinda, Lobito and Namibe. These are all deep-water ports and open to international shipping.

The port of Luanda serves as the nation's main conduit for international trade, handling about 80% of the country's imports. It is one of the fastest-growing ports in Africa and already working as a gateway to the surrounding landlocked countries, namely the DRC, Zimbabwe and Zambia.

In spite of rapid growth, the Port of Luanda has become notorious for lengthy delays and has tremendous capacity constraints. The Port has an excessive general cargo vessel pre-berth waiting time of 144 hours - the sub-Saharan African average is about 18 hours. To save costs, Angolan traffic is frequently being diverted to the Port of Walvis Bay in Namibia, some 2 000km south of Luanda.

To reduce traffic at the Port of Luanda, the Government of Angola gave the go-ahead for the construction of a new commercial port at Barra do Dande (north of Luanda) in 2011. Additionally, the Port of Lobito, about 500km south of Luanda, is to be extended. The Government also plans to spend US\$1.25 billion on the rehabilitation of the Port of Lobito. This programme will extend the berthing area to a total of 7.8km and increase capacity to a total 11 million tons of general merchandise and 700 000 TEUs/year.

Key indicators	
Population size (million, 2012)	20.8
Population growth (2012-2020, avg p.a.)	3.1%
GDP (US\$ billion, 2012)	115
GDP growth forecast 2012-2017 (avg, y/y rate)	5.7%
GDP per capita (US\$, 2012)	5 700
Global competitiveness index 2012 (global rank/144 (score 1-7))	139 (2.96)
Corp. Income Tax (CIT) rate	35.0%
Top exports	Petroleum oils and oils obtained from bituminous minerals, crude (97.3%)
Logistics Performance Index 2012 (global rank/155 (score 1-5))	138 (2.28)
Global Competitiveness Index 2011 - Infrastructure (global rank/144 (score 1-7))	140 (1.89)







Despite these ambitious projects, productivity, infrastructure and operational equipment also require attention and new investment. Significant further investment will also be necessary to improve both coastal and inland infrastructure.

Inland water transport is hardly possible in Angola. The Cuanza River, south of Luanda, is navigable by ship 200km inland, but most of Angola's rivers are not suitable for transportation.

Aviation

Capacity does not appear to be a major issue in the Angolan air transport system. There are 31 airports in Angola with paved runways. The Quatro de Fevereiro International Airport just outside Luanda is the country's busiest airport and serves international and domestic airlines. TAAG Angola Airlines is the national flag-carrying airline of Angola and one of the most successful airlines in Africa.

The major challenge facing the aviation sector is safety, which is a Government priority. All Angolan airlines are on the European Union blacklist, with the exception of specified Boeing 777s and Boeing 737s operated by TAAG.

New airport

Notwithstanding capacity issues, the construction of Luanda's new international airport, which is to be completed in 2014, will create the largest airport in Africa. It will offer capacity for over 13 million passengers per year^v, and will have a cargo terminal with an annual capacity of 35 000 tonnes.

Three rail lines, no network

The rail system in Angola consists of three main railways that were built eastwards from the coast during colonial times, linking Angola's key Atlantic ports to the interior. Many of these lines were destroyed during the 27-year-long civil war, but a programme of rehabilitation has been ongoing since 2005.

The rehabilitation or rebuilding of Angola's current rail infrastructure is a huge task, since in many cases it requires expensive works to remove mines and complete the replacement of obsolete or deteriorated rails.

Still, the speed at which the Angolan railroad system has been rebuilt is a first for the African continent. In just a few years, 2 700km of railroads were rebuilt and more than US\$3.3 billion was spent on the three main lines.

The three railway lines are:

- Caminhos de Ferror de Luanda (Luanda Railways) This links Luanda to Malanje in northern central Angola. Freight rail from the port of Luanda began in March 2013. It is hoped that the construction of a railway at the port will motivate companies to use the railways as
- Caminhos de Ferro de Benguela (Benguela Railways) This links the Port of Lobito and Luau on the eastern border of the

a means of transport instead of

trucks.

DRC. Plans to connect this line with the railway networks of the DRC and Zambia will facilitate greater intra-African trade.

Caminhos de Ferro Namibe (Moçãmedes Railways) This links the port of Namibe to the southern provinces of Kuando Kubango and Hull (town of Menongue) and onto the border of Namibia. It was officially reopened in August 2012, but closed again for work to improve the line and is due to reopen in the second half of 2013.

A feasibility study for a fourth railway line linking Luanda with Cabinda is being undertaken. The line will cross the Congo River and 40km of the DRC to enter Angolan territory again in Cabinda. In December 2012, the constructions of a 300-km branch line linking Moçâmedes Railways and the Namibian railway system was announced.vi The project was due to commence in the first quarter of 2013.

Regional cooperation is essential to the joint plan to repair, maintain and operate the Lobito Corridor railroad linking Angola, the DRC and Zambia. Utilising this rail line, Angola now has the opportunity to play an important role in the outflow of the minerals coming from the Copperbelts in Zambia and Katanga (DRC), which would further increase the country's profile within SADC.

Roads

Most of the freight in Angola is transported by road on trucks, since inland water navigation is not an option and the few railway lines have just started operations. According to the World Bank's AICD, transportation causes a significant bottleneck in Angola's economy.

Poor road infrastructure and transport logistics inhibit Angola's overall economic development. With World Bank and AICD estimates of paved roads ranging between 10.4% and 17%, four-wheel drive is generally necessary for travel outside of major towns.

The poor condition of the road network is in no small part due to the civil war, when much of the network was destroyed and the impact of periodic torrential flooding. Still, the main transport routes are traversable. Specifically, the main links in the western half of the country appear to be in reasonable condition, while roads on the eastern side are sparser and more dilapidated.

Safety is a big issue on Angola's roads. Landmines remain a problem outside major urban areas. There is extra risk during Angola's rainy season, which runs from November to April, as mines may become displaced and end up outside recognised minefields. In addition, roads and bridges are often washed away by sudden floods during the rainy season.

Angola is part of two major trans-African corridors. The first runs from North to South, linking Tripoli in Libya with Cape Town in South Africa. The second one, running from East to West, links Beira in Mozambique with Lobito in Angola. Despite these noble aspirations, the quality of both these trans-African corridors and Angola's regional roads is inferior. This situation makes it more difficult for Angola to develop regional trade with surrounding countries and discourages surrounding countries from making greater use of Angola's ports.

Various role players are involved in road rehabilitation, notably:

• The Government in the form of public-private partnerships;

- · Chinese investments; and
- Natural resource companies.

With Angola being one of the highest spenders on roads in Africa, infrastructure development is expected to be the essential driver of economic growth over the next few years and this can be expected to have a positive impact on the growth of the transport and logistics industry in Angola.

Conclusion

Based on our analysis, we have assessed the investment potential for Angola's transportation and logistics sector as shown in the graphic below.

Angola – Investment potential assessment

 Demographics and resources 3. Business environment 5. Transport infrastructure Strong improvement expected Key: Attractive Some improvement expected Average Stagnation/marginal change expected Unattractive

End notes

- Sovereign Wealth Fund Institute, 24 Oct. 2012, online: http://www.swfinstitute.org/tag/
- Angola Quarterly update from NKC also states \$10bn, as well as the following two articles: http://www.energyglobal.com/news/liquid-natural-gas/articles/Angola_LNG_commences_production_197.aspx#.UgCyr-waJMs //
 African Development Bank report: http://www.afdb.org/fileadmin/uploads/afdb/Documents/Evaluation-Reports/Angola%20%20-%20Private%20Sector%20Country%20Profile.pdf
- African Economic Outlook: Angola (2012): http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Angola%20Full%20PDF%20Country%20Note.pdf
 Global Finance, online: http://www.gfmag.com/archives/134-february-2011/11059-country-report-angola.html#axzz2ZxvjuZri



Democratic Republic of Congo

2nd

Africa

largest country in

The Democratic Republic of Congo has immense potential but remains a risky investment location. Main hurdles include pervasive poverty, political turmoil, security issues, vast land area and inadequate infrastructure.

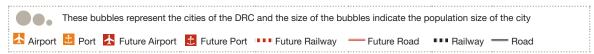


If it were not for the numerous obstacles, the Democratic Republic of Congo (DRC) would be a highly attractive investment location. It is the second-largest country and has the third-largest population in Africa. Most significantly, DRC is considered to have among the largest endowments of minerals on the continent.

Social and economic conditions are very challenging and the DRC is recognised as one of the most difficult places in which to do business in the world. In addition to these factors, transport infrastructure is a major impediment to economic growth.

An escalation in conflict in the eastern DRC also stands to impact growth prospects, but not as severely as a commodity price crash scenario, given the country's high dependence on the mining sector.

Notwithstanding the challenges it faces, the DRC should see sizeable economic growth over the short- to medium term, while remaining an extremely challenging place in which to do business.





Conflict minerals

"Conflict minerals are minerals originating from the Democratic Republic of Congo or neighbouring countries. They include tantalum, tin, gold, and tungsten.

Companies are required to publicly disclose the use of conflict minerals if those minerals are 'necessary to the functionality or production of a product'."

U.S. Securities and Exchange Commission (SEC)

The economy and resources

International trade activity contributes significantly to domestic economic growth in the DRC, with exports and imports accounting for 68% and 78% of GDP respectively. There was notable growth in exports and imports between 2001 and 2011, estimated at 8.6% and 12.3% per annum respectively.

Over 90% of exports are in the form of extracted commodities. This fragility was exposed in 2009 when a crash in commodity prices coincided with an escalation in conflict in the eastern region, revealing the country's dependence on external demand and financial flows.

Despite exports being expected to increase, there could be temporary drops in volumes as a result of international developments.

A campaign similar to the one established to control the spread of blood diamonds, but focusing on conflict minerals is gaining momentum. Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act requires electronics companies to verify and disclose their sources of certain minerals, which are used in the manufacture of electronics such as smartphones and computers.

This was reinforced in 2012 when the US Securities and Exchange Commission (SEC) passed rules requiring companies to disclose the purchase of tin, tantalum, tungsten and gold from the DRC.i It is thought that making it more difficult to export conflict minerals could decrease the level of conflict in some areas and perhaps allow the country as a whole to benefit from its mineral resources.

The DRC has made distinct efforts to improve its integration with world trade. In the aftermath of a diagnostic study to draw up the DRC's trade policy - conducted in 2010 with the aid of the World Bank - the DRC set up a steering group to introduce a one-stop-shop reform to simplify foreign trade operations.

The country is also a member of several African trade communities, including the Common Market for Eastern and Southern Africa (COMESA), the Southern African Development Community (SADC) and the Economic Community of Central African States (ECCAS).

It is not only the recent issue of conflict minerals that is holding the DRC back from fully utilising its massive mineral reserves. For example, decades of conflict and turmoil have kept the gold industry largely underdeveloped.

The country has significant offshore oil and gas reserves. Angola and the DRC are negotiating a new production-sharing agreement in the so-called 'zone of common interest' off the West Coast.

The DRC has a relatively small market size, with GDP estimated at US\$17.2 billion in 2012. With per capita GDP of just US\$272, only Burundi and Malawi rate worse than the DRC globally.

Coming off an extremely low base, the country has nevertheless experienced strong economic growth, estimated at 7.1% annually between 2010 and 2012. The IMF expects this to increase to an annual average of 8.6% between 2012 and 2017. The economy is dominated by the agricultural sector, contributing around 39% of GDP and employing over 60% of the labour force.

The DRC has historically suffered high levels of inflation, but authorities have recently managed to moderate price inflation and it is expected that it should remain within the single-digit range over the IMF forecast period until 2018.

Risk to business

The greatest impediment to economic development in the DRC has been the political turmoil in the country. The unsettled sociopolitical environment is a key risk factor for businesses.

High political risk has severely undermined prospects for diversified growth, while protection of property rights is hampered by dysfunctional public administration. Furthermore, enforcement of the complex legal code is selective. Another challenge is the local financial sector, which remains fragile and underdeveloped.







High poverty, low productivity

The DRC's high taxes are a further discouragement for investors, with a corporate income tax rate of 35% and additional types of taxes that can increase the total tax payable significantly.

The DRC's immense natural resources have fuelled conflict rather than development. Human rights abuses and banditry deter economic activity, but at the moment this mainly affects the country's eastern region, close to the borders with Rwanda and Uganda.

The eastern part of the country still sees frequent clashes between the rebels and government forces, and there is sporadic fighting in other parts of the country. Security forces are known to set up occasional, spontaneous roadblocks, especially after dark, which places a constraint on transportation and results in delays.

The DRC has a large population, estimated at 65.7 million in 2012.

A high population growth rate of 2.7% will intensify the already challenging social conditions. According to the World Bank, approximately 50 million live on less than \$1.25 a day. The DRC has a low HIV/Aids infection rate as years of war and little infrastructure development have restricted human movement and the spread of the virus.

Despite having a labour force of nearly 25 million, available labour is mostly unskilled, with only 23.2% of the population having secondary education. Labour productivity is extremely low, with every person employed contributing US\$691 to national GDP. In comparison, Tanzania, the second-lowest of the ten countries profiled in

this publication, has a labour productivity of US\$1 239 per person employed.

Power potential

Power blackouts and electricity shortages occur frequently and present major problems to the rising number of mining companies operating in the country. This situation is fuelled by fast-rising demand for power and ageing infrastructure. About 40% of firms in the DRC own and operate their own backstop generator to shield themselves from frequent power interruptions.

Despite these challenges, the DRC has immense power generation potential. It boasts the largest and most cost-effective hydropower potential on the continent and could produce up to 100 000MW of power. The entire installed capacity of sub-Saharan Africa is only 48 000MW and the DRC has the potential to become Africa's largest power exporter.

The Government has ambitious plans. While less than 10% of the population has access to electricity today, the Government has set an ambitious target to provide electricity to 60% of the population by 2025. The first step in achieving this goal is the construction of the Grand Inga dam, which will produce about 40 000MW at a cost of US\$80 billion.

Key indicators	
Population size (million, 2012)	65.7
Population growth (2012-2020, avg p.a.)	2.7%
GDP (US\$ billion, 2012)	17.2
GDP growth forecast 2012-2017 (avg, y/y rate)	8.6%
GDP per capita (US\$, 2012)	230
Global competitiveness index 2012 (global rank/144 (score 1-7))	n/a
Corp. Income Tax (CIT) rate	35.0%
Top exports	Cathodes and sections of cathodes (24,7%); Cobalt ores and concentrates (17,8%); Copper ores and concentrates (11,9%)
Logistics Performance Index 2012 (global rank/155, (score 1-5))	143 (2.21)
Global Competitiveness Index 2012 - Infrastructure (global rank/144 (score 1-7))	n/a





Resources sector

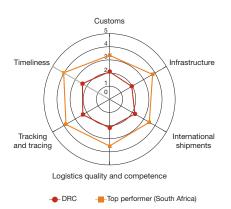
While the DRC's economy is currently dominated by the agricultural sector, mining will be the main driver of economic growth in the medium term. Copper, the country's largest export product, will play a key role in medium-term economic growth. In 2011, mine production of copper in the DRC increased by an estimated 28%, reaching 440 000 tonnes. This is equivalent to around 2.7% of global copper output.

The large population, coupled with robust population growth, implies high potential for the retail sector. However, given the low per capita GDP, this is likely to be concentrated in the area of basic consumer goods.

Logistics

Logistics performance has dropped significantly in the last two years.

Logistics Performance Index



Source: World Bank

Poor trade facilitation infrastructure and inefficiency limit growth prospects for transport and logistics businesses in the DRC. Logistics performance fell significantly between 2010 and 2012, with the

country declining from 85th to 143rd out of 155 countries on the Logistics Performance Index.

All indicators of logistics infrastructure worsened during this period: logistics competence, timeliness, customs, international shipments, infrastructure and tracking and tracing. The DRC's performance in terms of the number of documents required and the time to import and export is significantly higher than the sub-Saharan average, while the cost to import and export is more than 50% higher than that of its peers in sub-Saharan Africa.

Infrastructure

The DRC probably has the most challenging transport infrastructure environment in Africa.

The DRC is one of the most infrastructurally challenged countries in the world. Ground transportation has always been difficult and the country's vast geography, low population density, extensive forests, and criss-crossing rivers further complicate the development of infrastructure networks.

As a result of conflict, networks have been seriously damaged or left to deteriorate. Road and rail infrastructure is dilapidated and the rail network has fallen into disuse.

On a positive note, the country has thousands of kilometres of navigable waterways and water transport has traditionally been the **dominant** means of moving around approximately two-thirds of the country.

According to the World Bank, the infrastructure investment needed in the DRC is among the highest in Africa. Unless spending is increased and efficiency improved, it will take more than a century to redress the country's infrastructure deficit. But in the last few years there have been promising signs.

Since 2006, there has been a large upswing in external financing commitments from OECD and non-OECD partners. For example, a major new financing agreement signed with China promises US\$3 billion, primarily for road and urban infrastructure projects.

The DRC's population and economic activity are concentrated in three areas – Kinshasa in the southwest, Lubumbashi in the southeast, and Kisangani in the northeast. There is little well-developed infrastructure linking these three cities. The most serious impact of insecurity on infrastructure development has been felt in the east, where conflict and instability have had a major impact on infrastructure development.

Ports

With poor connections to the sea, the DRC is predominantly landlocked.

Port infrastructure in the DRC is very poor and connection to the ports is hampered by the country's nature and vast area. No ports in the DRC can take direct calls from conventional cargo liners and the country has to rely on transshipments from Pointe Noire in the Republic of Congo using smaller vessels.

There are two main ports in the DRC, Boma and Matadi, which have low capacity and a low draught and are unable to fill the needs of the western part of the country adequately.







In addition to the two main ports, the DRC has the sea port of Banana which has currently limited capacity and is used mainly for crude oil export.

According to AICD, the Port of Matadi on the Congo River is playing a greater role in serving Kinshasa and the southwest area of the country, but also has limited cargo-handling capacity and a low draught, as well as costly and inefficient port services.

Because of the high internal transport costs and large distances involved, trade from southeast DRC, notably copper, is channelled mainly through Durban in South Africa and to a lesser extent through Dar es Salaam in Tanzania. Mombasa in Kenya remains the key port for Kisangani and the northeast part of the country.

While an improved Port of Matadi will be able to service the southwest DRC for some years to come, in the longer term additional capacity will need to be found. To achieve this, the DRC faces two strategic options. One is to further develop the Port of Banana and convert it into a deep-water port. The establishment of such a port would cost around US\$2 billion and take 10 years to complete. The other option involves strengthening land links with the Republic of Congo to facilitate access to the Port of Pointe Noire.

While the network of rivers across the country poses one of the biggest challenges for national roads and rail lines, it provides an opportunity for inland water transportation. Inland waterways can provide low-cost surface transport, with only relatively modest investments needed to improve navigability.

The Congo River traverses the DRC, linking two of its main cities, Kinshasa and Kisangani, while its numerous tributaries cross much of the country. About 15 000km of the Congo River and its tributaries are navigable, or potentially so with regular dredging and relatively modest investments in quays and signalling.

Air transport

Air transport could open up access to this vast country if security improves.

There are a number of airports in the DRC. Since 2000 the number of domestic air transport routes has dramatically increased and the aircraft fleet has undergone renewal. Given the vast size of the DRC, its disparate population centres and deficiencies of the surface transport network, the air transportation system has an important role to play in passenger travel. However, the DRC is not well connected with other countries, being served primarily by South African Airways, Ethiopian Airlines and Kenya Airways.

The DRC's domestic air transport services have a worrying safety record and the most urgent issue facing the sector is to strengthen regulatory oversight in order to improve the safety of domestic flights. One of the consequences of this problem has been the diversion of a significant volume of domestic air transport outside of the country to avoid using domestic air services. This means that domestic transit was often undertaken via a foreign country. This situation has significantly changed since the arrival of Korongo Airlines – a company partially owned and technically supported by SN Brussels.

Rail

The DRC has two main rail systems of strategic importance to the country, "Société Commerciale des Transports et des Ports" (SCPT, formerly ONATRA) and the "Société Nationale des Chemins de Fer du Congo" (SNCC). The networks are inefficient and tariffs are relatively high. Both have fallen into disuse for the most part.

SCTP railway connects Kinshasa to the Port of Matadi. The line is only 30 years old and the track is in reasonable condition.

SNCC operates an extensive network centred in the southeast of the country. The most important branch of this network connects Katanga on the Zambian border to Dilolo on the Angolan border. It also connects the northern part of the Katanga region to Ilebo in the Kasaï region.

The SNCC network is used extensively for copper exports leaving the DRC for the port of Durban and will also facilitate exports through Lobito in Angola once construction on the Benguela Railways is completed. The SNCC network is in poor condition, with speed limits of 10-35km/h.

Railway connections to neighbouring countries are set to gain importance, as the three major companies providing railway services for Zambia, Tanzania and the DRC have signed a tripartite agreement in the hopes of making traveling and transportation of goods easier.

With this agreement in place, cargo can now move in either direction and from Dar es Salaam to Kapiri Mposhi and Lubumbashi, and vice versa, without necessarily trans-shipping, re-marshalling or complications of any sort. Other projects that are widely funded by the World Bank mainly include renovation, rehabilitation and upgrading of existing lines.

Recently, the SNCC acquired nine locomotives to revive the rail sector in the southern region. In addition, the company is planning a new acquisition of 47 locomotives by 2015 under World Bank funding.

Roads

Following years of armed conflict, much of the DRC is disconnected with the majority of the road infrastructure being in poor condition, and only 1.8% being tarred.

Since the end of the national conflict in 2003, rehabilitating the road network has been a priority. The country has secured major development funding as well as an infrastructure-for-minerals deal with China. Private enterprise is also playing a role with mining companies also investing in roads.

These initiatives cover many of the country's major road corridors linking Kinshasa and Lubumbashi, as well as roads along the eastern side of the country. The effort is already paying off. Rehabilitation of rural infrastructure, specifically roads, has been recognised for the contribution it has made to the agricultural recovery that started in 2006.

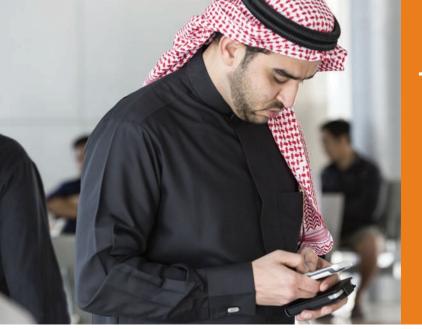
Conclusion

DRC - Investment potential assessment

Based on our analysis, we have assessed the investment potential for DRC's transportation and logistics sector as shown in the graphic below.

Demographics and resources 2. Economics 3. Business environment Transport and infrastructure **Key:** Attractive Strong improvement expected Some improvement expected Average Stagnation/marginal change expected Unattractive

End notes



Egypt

Prospects for Egypt were challenging even before the recent unrest and political turmoil. Major obstacles include widespread poverty, rising unemployment, slow economic growth and a lack of investment.

Mediterranean Sea Damietta Alexandria Port Fuad - To Jordan Cairo Sinai Suez Fayoum Saudi Arabia Internation Airpor Sharm el Sheikh Int. Airport Hurghada Sharm el Sheikh Libya Luxor \ **Red Sea** Int. Airport Aswan Sudan

More than **1/2** of population with secondary education

Foreign direct investment (FDI) flows into Egypt declined sharply after the popular uprising in 2011 as a result of the increase in political risk and deterioration in macroeconomic stability that followed the overthrow of the Mubarak regime. While these recovered slightly in 2012, the recent uprising in 2013 will once again decrease FDI flows into Egypt.

Despite the challenges, Egypt has a number of key indicators supporting growth. The Egyptian economy can draw upon a large population with more than 50 per cent having finished secondary education — which is far above the average of the African peers analysed in this report. Egypt has the biggest share of stable middle-class population, a widely diversified economy and the Suez Canal, the country's greatest asset.

Egypt is still waiting for a large IMF loan of US\$ 4.8billion. But even before the removal of Mohamed Morsi and his government, there were many uncertainties as to when the 22-month stand-by arrangement would be finalised. However, in the meantime the importance of the

"COMESA is a fantastic trade agreement. And it comes as an advantage if you are trading between Cairo and East Africa, for example. Every product produced in Cairo – and Cairo has some manufacturing power – if you transport it to East Africa, it goes without duties. On top of that, the chamber of commerce back in Egypt will give you an incentive on the shipping as well: they subsidise the shipping. But the problem that we have, is that these agreements are fairly unknown."

Hussein Hachem, CEO, Aramex

loan has diminished due to funds having been acquired from the Gulf Cooperation Council (GCC) and others.

The political situation, increased levels of uncertainty and sociopolitical tensions make definitive forecasts difficult and also suggest that Egypt will continue to suffer in the aftermath of the uprising.

Trade

Positive measures to improve the trade environment were halted in 2013 with the removal of Morsi.

International trade constitutes a sizeable proportion of domestic GDP, with exports and imports accounting for 21% and 25% of GDP respectively. Petroleum and related products and natural gas constitute the major proportion of exports.

Despite the importance of international trade to economic growth in Egypt, the country's external position has deteriorated rapidly over the past two years. Egypt's overall current account deficit is estimated to have widened slightly in nominal terms during 2012, while its trade deficit has widened sharply.

To help facilitate international trade, Egypt is a member of several trade blocs including the African Economic Community (AEC), Preferential Trade Area for Eastern and Southern Africa (PTA) and Common Market for Eastern and Southern Africa (COMESA).

Egypt also signed an association agreement with the EU and is looking to leverage its strong ties

38 Africa gearing up

with the US Government. Notably, Egypt has defined qualified industrial zones, allowing products manufactured in these zones zero-rated tariff entry in the US. Companies producing largely for export can set up business in these free zones.

The Government's post-2004 reform drive brought significant changes to Egypt's tariff system, with a cut in the weighted average tariff rate from 14.6% to 14.1% and the slashing of the number of tariff bands.

Further tariff reductions had been planned before the recent political developments. Notably, all export taxes had been eliminated and average import tariffs were reduced from 9% to 7%.

Although economic growth averaged 3.0% between 2010 and 2012, and was projected by the International Monetary Fund to rise to 4.9% between 2012 and 2017 in April 2013, this is now unlikely to be achieved. Growth forecasts for the same period have already been reduced to 3.4% in October 2013. In addition to the general political development, much-needed improvements in economic policy have been delayed.

Egypt's fiscal position has deteriorated further in recent months and public debt is also extremely high. A period of painful fiscal and monetary tightening will be needed, but this appears to be difficult to communicate to the people at this stage. The Government will need to implement austerity measures such as subsidy cuts and tax increases. Still, the US Dollar to Egyptian Pound exchange rate and the balance of payments have both improved lately.

Business environment

Egypt's business environment continues to bear the legacy of years of state domination of the economy. There is evidence of a public backlash against pro-market reforms. Anti-Western sentiment could also make life difficult for investors.

Egypt is rated poorly on the Global Competitiveness Index and fell 26 places between 2011 and 2012. Key factors driving this are the weak institutional environment, lack of innovation and lack of financial development.

The rule of law has been unstable across the country. Property rights are not protected effectively and corruption continues to erode trust in the economic system. Between the time that the political upheaval began in 2011 and May 2013, more than 6 000 corruption investigations and several high-profile scandals have tarnished the image of business.²

Bureaucracy is another major issue for foreign companies, with legal and property transactions often subject to severe delays. Before the removal of Morsi, the unstable socio-political climate in Egypt was being fuelled by the Government's inability to implement structural reforms to improve the efficacy of the institutional framework.

As part of the economic reform plan that was sent to the IMF to close the multi-billion-dollar loan, the Egyptian Government included some tax measures. These included an increase in the corporate tax rate and sales tax rate on six products as well as the introduction of a financial transaction tax.







Labour

If the political situation settles, Egypt could benefit from its large, well-educated labour force.

With the largest population in the Arab world - about 80 million

- Egypt has a fairly large labour force of nearly 27 million, with up to 700 000 new entrants into the market annually. The growing surplus of labour is increasing strain on the working population on the one hand and creating pressure on wages on the other.

By African standards the labour force is also well educated and has the third-highest rate of secondary education among the ten countries in this study. Only South Africa and Ghana rate higher.

An important structural problem in Egypt is its labour policies, which are frequently cited as an obstacle in doing business since there are significant restrictions on the hiring and firing of workers.

Power

With its huge investments in the energy sector, Egypt is beginning to address rising power demand.

Egypt's mineral and energy resource base is made up for the most part by oil and natural gas, iron ore, phosphates and gold. Notably, crude oil production has been in decline for several years, but oilfields in the Mediterranean seabed have opened up fresh opportunities for

reviving the country's oil export business. The Government has also been encouraging the exploration, production and domestic consumption of natural gas.

Rising demand and capacity constraints in electricity supply are in danger of negatively affecting industrial growth in Egypt. This could have a knock-on effect in other areas such as transport and logistics.

A recent statement by the National **Electricity Control Center indicates** that the shortage of electricity reached 4GW during the summer. While the power grid is supposed to generate 26.5GW, available capacity only reached 22.3GW.

Egypt had planned to invest US\$110 billion in power infrastructure over the 2010-2027 period. For the 2012-2017 phase, there are ambitious targets, including an additional 12GW to be added to the national grid, along with 1.2 million new connections. These targets would appear to be beyond reach in the current circumstances and it is doubtful that they can be met.

A major problem affecting the sector is a lack of natural gas feedstock for power plants, a challenge that has become more acute in the past year. There are suggestions that some of Egypt's gas export ambitions will have to be limited in order to create sufficient supply for domestic usage.

Population size (million, 2012)	80.7
Population growth (2012-2020, avg p.a.)	1.5%
GDP (US\$ billion, 2012)	256.7
GDP growth forecast 2012-2017 (avg, y/y rate)	3.4%
GDP per capita (US\$, 2012)	3 112
Global competitiveness index 2012 (global rank/144 (score 1-7))	107 (3.73)
Corp. Income Tax (CIT) rate	25.0%
Top exports	Petroleum oils and oils obtained from bituminou minerals, crude (18,3%) Natural gas, liquefied (9,5%); Light oils and preparations (5,5%)
Logistics Performance Index 2012 (global rank/155 (score 1-5))	57 (2.98)
Global Competitiveness Index 2012 - Infrastructure (global rank/144 (score 1-7))	83 (3.61)





Greater size of middle class fairs positively for retail & consumer sectors

Agriculture

Egypt has significant agricultural growth potential. Warm weather and plentiful water permit several crops per year. The land is worked intensively and crop yields are high.

Agriculture contributes 14% of the country's GDP and employs roughly 40% of the labour force. However, the agricultural sector's contribution to GDP is declining.

Services

The services sector is by far the largest and fastest growing in the Egyptian economy, accounting for approximately 50% of GDP. Tourism, trade, banking and shipping services on the Suez Canal all constitute the main sources of revenue in the sector. The current unrest is therefore likely to have the most negative impact on the services sector.

The greater size of the middle class compared to its regional peers augurs positively for growth in Egypt's retail and consumer goods industry. The middle class constitutes 31.6% of the population with per capita GDP of US\$3 112, which is projected to increase to US\$4075 by 2017.

Tourism

Tourism suffers profoundly amid ongoing unrest.

Even before the most recent political turmoil, the unstable socio-political environment in Egypt adversely impacted the country's tourism sector, which has historically been a key driver of domestic employment growth.

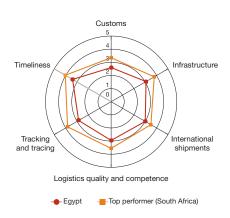
Following the removal of Morsi, tourism numbers have nosedived, just as they were recovering after the popular uprising in 2011. This is greatly concerning for a sector that makes up more than 10% of Egypt's economy. Although tourists are typically resilient and return to holiday destinations once calm has been restored, a full recovery of the tourism sector will take some time.iii

Industry

The industrial sector is the second-largest economic sector in Egypt, accounting for 37% of GDP. Approximately 13% of the total labour force is employed in industrial activity, which is concentrated in Cairo and a burgeoning construction industry.

Logistics

Logistics Performance Index



Source: World Bank

The World Bank's Logistics Performance Index shows Egypt has significantly improved its logistics performance over the past few years, with the country moving from 92nd in 2010 to 57th in 2012 and showing improvement in all indicators.

Increased efficiency in international shipments and infrastructure improvements rate strongly in the country's logistics performance.

While customs procedures also saw significant improvement between 2010 and 2012, they are still relatively inefficient.

Since major investments in the country's infrastructure have been put on hold, Egypt is not likely to advance its logistics performance any further in the near term.

Infrastructure

The good state of current infrastructure will not be sustained as numerous projects have been put on hold.

The sheer scope of projects currently under consideration will require a huge investment drive and will be almost wholly reliant on FDI. But, given the current political uncertainty, international investment is not likely to be forthcoming.

Transport

The transport sector in Egypt faces numerous other problems as well. Recent reports suggest fuel shortages are resulting in long queues of cars, taxis and trucks. Most of Egypt's territory has been affected, but the problems are particularly severe in the south. Even if the Government is able to secure the IMF loan, the Government will then be under pressure from the IMF to phase out US\$14.5 billion a year in fuel subsidies as part of its austerity programme. iv Fuel could therefore become an increasingly serious issue.

Despite the current situation, Egypt's transport infrastructure is in relatively good condition, compared to that of its African peers. Transport







routes in Egypt are mainly focused on Cairo and also follow settlement patterns along the Nile. The road transport network is supplemented by good inland water connections along the Nile as well as a good rail network.

Ports and Suez Canal

Egypt owns the Suez Canal and a broad port infrastructure.

Egypt's geographical location lends an important aspect to the maritime transport sector as it overlooks both the Mediterranean and Red Seas, linked by the Suez Canal. The Suez Canal will remain a huge asset as it is the main trade route between Europe and Asia, accounting for roughly 7.5% of world sea trade. Despite being Egypt's greatest asset, the Suez Canal could also become a huge liability though. Any disruption on the narrow passage could cause major delays and cause a spike in transport costs.

Most importantly, the Suez Canal is one of the world's five 'strategic chokepoints', defined as narrow sea passages or straits, through which the overwhelming majority of the world's oil flows. In light of its strategic importance, the threat of maritime terrorism at the Suez Canal cannot be ruled out.

Egypt has 40 sea ports, of which 12 are commercial ports; six mining ports; six fishing ports; five marinas; and 10 oilshipping ports. Among the most important ports are Alexandria, the biggest port in Egypt, and the Port of Dekheila, which is a natural extension to the Port of Alexandria.

Damietta Port has the largest container terminal and the most

sophisticated equipment in the Middle East, while Port Said and Port Suez occupy strategic positions at each end of the Suez Canal.

In addition to the sea ports, a network of river transport across the Nile Delta and its tributaries, facilitates the transport of goods and commodities.

Air transport

Egypt's airport development plans are driven by longterm tourism opportunities.

Egypt has 73 airports with paved runways, five of which are international airports. The largest and most active airport is in Cairo, being the second-busiest airport in Africa after O R Tambo in Johannesburg. There are nonstop flights from most major African, Asian, North American and European cities.

Despite current setbacks resulting from the political situation, tourism is a long-term growth industry in Egypt, and airports need to be improved to keep up with increased demand. One step in meeting this need is the extension of Hurghada International Airport, where a new airfield is to be built. The airport has also undergone massive renovations to accommodate a dramatic rise in leisure traffic.

The international market is well served by numerous European and Middle Eastern carriers, while about a dozen local airlines compete in the domestic market. There are frequent flights within the country and improvements to the air infrastructure will increase handling capacity and efficiency, which will benefit the transport and logistics sector.

Rail

Up to 85% of rolling stock is long past its replacement date.vii

Egypt has a fairly reliable staterun railway system. The railway connects Cairo and Alexandria with the main towns in the north of the country, all the large towns in the Nile Basin down to Aswan, and Safaga on the Red Sea coast.

The rail network essentially follows the Nile settlement patterns with high network coverage in the north east of the country and following the Nile through the length of the country. Egypt's rail sector can be described as adequate in its ability to handle the country's needs, although its operational capacity is stretched to the limit.

The rail system is not safe and accidents are common. In January 2013, the Ministry of Transportation confirmed that 82% of track relies on outdated mechanical systems and that there are an average of 12 rail crashes per month in Egypt. VIII Considerable work is required to upgrade the system and improve the safety record.

Roads

Road density follows economic activity at the coast and along the Nile River.

Egypt's roads carry the largest share of freight (53%), which increases the country's dependence on the maintenance of the road infrastructure. Until now, the quality of Egypt's road network has been considered good, with 92% being paved. Roads in Egypt are mainly



focused on Cairo and – just like railway lines and the country's infrastructure in general – follow settlement patterns along the Nile.

The densest network of roads is in the north-east of the country and connects Cairo to the ports as well as to the rest of the Middle East through the Sinai Peninsula. In contrast to the reasonably extensive network in the north-east and along the Nile, connections within the south of the country are sparser and need to be expanded.

Plans to build a 32km bridge connecting Saudi Arabia and Egypt across the Gulf of Aqaba were recently revived following the change of political leadership in Egypt, but now appear to be a long way off. The bridge would be built to handle both rail and road traffic, and would use tolls to recoup the cost of construction, estimated to be in the region of US\$3 billion.

Before President Morsi was ousted, the Government had recognised the importance of the road network to the national economy and outlined US\$5.46 billion in investments to improve the road transport system to facilitate the more efficient movement of goods. However, the current circumstances increase the risk of deterioration in road quality and congestion while making development of new road infrastructure more unlikely.

With levels of car ownership having increased substantially, it is clear that the continual expansion of the road network and the creation of freight corridors will be a vital step in helping to ease congestion and drive economic development. At the moment Egypt is the starting point for two major trans-African highway corridors: first, the Cairo-Dakar Highway along the Mediterranean Coast, and second, the Cairo-Cape Town Highway, running north to south.

Conclusion

Based on our analysis, we have assessed the investment potential for Egypt's transportation and logistics sector as shown in the graphic below.

Egypt – Investment potential assessment

Demographics and resources 2. Economics Business environment Transport infrastructure Strong improvement expected **Key:** Attractive Some improvement expected Average Stagnation/marginal change expected Unattractive

End notes

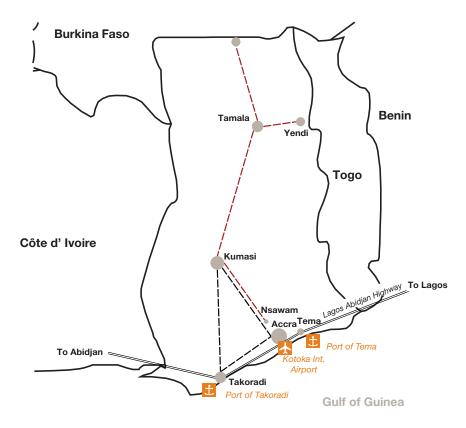
- Sam Applegate, "Transport Infrastructure Egypt Hears of Dire Need to Overhaul Everything", MENA Rail News, http://www.menarailnews.com/transport-infrastructure-egypt-hears-of-dire-need-to-overhaul-everything/



Ghana



Ghana is making strides to establish itself as an important gateway to the West African market. Key supporting factors are its abundant natural resources, economic liberalism and track record of political stability.



With annual GDP growth averaging 10.3% between 2010 and 2012, and forecast to average 5.9% between 2012 and 2017, Ghana is among the world's fastest-growing countries and a rising star in Africa.

Ghana's investor attractiveness is buoyed by its political stability (one of Africa's most stable governments), economic liberalism, abundant natural resources and diverse economy. Foreign direct investment inflows have flourished in recent years, especially since the commercialisation of oil began in 2007, which is a further factor contributing to Ghana's investor attractiveness.

On the downside, critical limiting factors are the rising tax burden, weak rule of law, as well as the country's growing fiscal deficit.

We believe that Ghana will continue to foster its reputation and position to be known as a safe gateway to West Africa and an ideal point of arrival for newcomers to Africa.









Trade and economic factors favour growth, but Ghana's high fiscal deficit presents uncertain danger.

Trade represents a significant portion of Ghana's economic growth, with exports and imports accounting for 44% and 50% of GDP respectively. The principal foreign exchange earning products are gold, oil, and cocoa. The main trading partners are led by developed European economies: the Netherlands, UK and France.

The ongoing Eurozone crisis could negatively impact Ghana and in the longer term it should look to diversify its trade relationships. Intra-African trade is also very important. Bilateral trade between South Africa and Ghana, for example, has strengthened steadily since 1994, as relations improved and expanded in light of the political and economic transformations in both countries. Ghana is now South Africa's second-largest trading partner in West Africa, behind Nigeria.i

Ghana is a member of several trading blocs, including the **Economic Community of West** African States (ECOWAS) and Africa Economic Community (AEC). As part of its commitment to an open trade policy, the Government has focused on harmonising external tariffs with the members of ECOWAS. It has progressively eliminated or reduced its import quotas, tariffs and import licensing

requirements over the last two decades. The Government has also ruled out the use of high tariffs to protect domestic industries.

Ghana is endowed with a number of natural resources, including arable land, forests and substantial deposits of gold, diamonds, salt, manganese and bauxite. Additionally, the commercialisation of oil since 2007 has broadened the scope of natural resources, enabling Ghana to become a net oil exporter, with production estimated to rise to 200 000 barrels per day by 2019.ii Gas is produced as by-product in the production of oil, but is currently not commercially viable.

The IMF predicts annual GDP growth of 5.9% between 2012 and 2017. This is more than robust and is expected to lead to a tangible increase in Ghana's per-capita GDP and thus to rising demand in the retail sector. Still, the middleclass population, with per-capita consumption levels of \$4-20 per day, presently constitutes only 19.8% of the total population.

A key risk in Ghana is the growing fiscal deficit, which widened to 12% of GDP in 2012. Businesses should factor the risk of a rising public debt burden into their longerterm business planning processes. Fiscal slippages in election years are not uncommon in Ghana, but the extent of the slippage last year was enormous even by the country's own standards. If spending is not cut back proportionately, Ghana could experience another fiscal blowout.

Business environment

Ghana has a quite favourable business environment.

Although Ghana might not have a demographic profile quite as favourable as some other African countries, it makes up for this by having a less restrictive business environment and better macroeconomic policies. Civil liberty improves Ghana's investment attractiveness, as does its legal and regulatory framework, which the World Bank/IFC's Doing Business Projects rates highly in sub-Saharan Africa for protecting investors' rights and interests.

Ghana's banking sector is well developed in the African context and it also has quite good labour market efficiency. But even though the country's laws make it relatively easy to hire and fire workers, it can be quite costly (in terms of severance packages).

There are other obstacles. Property rights are poorly protected and corruption persists due to overall weakness in the rule of law. Still, Ghana suffers less from corruption than other countries in the region, and among the least of all 10 countries survey in this report. Red tape is another issue. For examples, setting up a company is a lengthy process that involves numerous government departments and agencies.







Political stability, but security issues

Ghana has been a stable democracy since 1992 and is considered a regional model for political and economic reform. After 20 years and two changes of government, democracy is very deeply rooted in Ghana and the prospect of a return to military rule seems implausible. Political stability adds tremendous value to Ghana's business environment.

However, despite its political stability and fairly favourable business environment, security remains an issue. Violent crime has grown in frequency over the past years and armed robberies have occurred in expatriate residential areas.

Piracy in the Gulf of Guinea provides a further threat, especially as vessels have been attacked while waiting to be served at Ghana's congested ports.iii

Energy crisis

Ghana's most pressing challenge lies in the power sector, where the lack of reliable power is a major constraint to economic growth. Due to rising demand and problems with the reliability of hydroelectric supply, the country is increasingly reliant on expensive oil-based generation. The Government has plans to address the energy supply gap by increasing its power generation capacity to 5 000MW, from a current level of 2 000MW, within the next four years.

The Government intends to diversify the power sector away from its overwhelming reliance on hydroelectric power towards thermal fuel sources by converting existing thermal power plants to be more fuel efficient as well as initiating renewable power projects.

Education and human development

Ghana has the advantage of comparatively high levels of education and human development.

Ghana's population is small in absolute terms, but its population density is much greater than in most other sub-Saharan countries. The World Bank's World Development Indicators suggest the population is growing fast at an estimated 2.0% per year.

The growing workforce is well-educated by sub-Saharan standards and nearly 54% of the population has at least **secondary education**. Government expenditure on education – 8.2% of GDP - is higher than in Kenya or South Africa. This has facilitated to a fast-rising labour productivity at 7.9% per year between 2009 and 2011. Still, the country offers a large, low-cost labour pool. The majority of Ghanaians - an estimated 60% - still work in the agriculture sector.

Ghana's human development indicators have improved notably over the past few years, having achieved a medium level of human development according to the UNDPs Human Development Report.iv

Agriculture

Agriculture remains an important sector in Ghana's fairly diversified economy.

Being blessed with a diverse natural resource base, Ghana's economy is quite diversified and there are a number of sectors that contribute

Key indicators	
Population size (million, 2012)	25.4
Population growth (2012-2020, avg p.a.)	2.0%
GDP (US\$ billion, 2012)	40.4
GDP growth forecast 2012-2017 (avg, y/y rate)	5.9%
GDP per capita (US\$, 2012)	1 622
Global competitiveness index 2012 (global rank/144 (score 1-7))	103 (3.79)
Corp. Income Tax (CIT) rate	25%
Top exports	Cocoa beans, whole or broken, raw or roasted (46,4%), Cocoa paste, not defatted (7,2%), Manganese ores and concentrates (5,7%)
Logistics Performance Index 2012 (global rank/155 (score 1-5))	108 (2.51)
Global Competitiveness Index 2012 - Infrastructure (global rank/144 (score 1-7))	110 (2.87)







meaningfully to the country's GDP. Ghana is currently undergoing a transformation from an agriculturebased economy towards one that is industry and services based. Oil and gas are playing a role of growing importance in this transition.

However, agriculture is still a vital sector in Ghana and provides employment for more than half of Ghanaians. Arable land accounts for 21.1% of the total land area and Ghana is one of the countries in sub-Saharan Africa with the most agricultural potential.

Cocoa is the main agricultural revenue generator in Ghana and one of its principal earners of **foreign exchange**. The country is the second-largest cocoa grower in the world after its neighbour, Cote d'Ivoire. The country also has a strong forestry industry, which takes advantage of the arable land and large indigenous forests.

Mining and manufacturing

Gold is the top export earner and Ghana's reputation as a gold-rich country dates back to the days of the Ashanti Empire in the 18th century.v

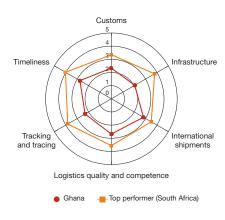
In addition to gold, the presence of other minerals such as industrial diamonds, bauxite and manganese makes mining an important sector in Ghana.

The Government's focus on transforming Ghana into an industry and services-based economy adds greater importance to the development of these sectors. While services were already the largest contributor to Ghana's GDP in 2011 (49%), manufacturing had a share of just 70% of GDP and contributed 12% to the country's exports. Ghana's industrial base is relatively advanced compared to many other

African countries and its most important services sectors include trade, transport and storage, and real estate.

Logistics

Logistics Performance Index



Source: World Bank

Ghana's logistics performance and customs procedures are better than of its regional peers.

Ghana is rated 108th out of 155 countries on the Logistics Performance Index 2012. This is an overall improvement of nine places since the previous assessment, which was driven by good rankings in international shipments and logistics quality and competence.

Important weaknesses remain in infrastructure, timeliness and tracking and tracing. Although the efficiency of Ghana's customs clearance procedures (speed, simplicity and predictability of formalities) is not exceptional (103rd), it has improved consistently since 2007.

It is now slightly better than average in the sub-Saharan region and better than its most competitive neighbour, Côte d'Ivoire, where difficulties with

customs remain a huge problem for international shippers.

Transport

Transport infrastructure needs to be upgraded to meet the needs of a middle-income country.

Ghana has an advanced infrastructure platform when compared with other low-income countries in Africa. But as it approaches the middle-income threshold, Ghana will need to focus on upgrading its infrastructure indicators in line with this benchmark. Like electricity, infrastructure presents a major constraint to growth.

Following the successful commercialisation of its oil reserves, Ghana is in a position to raise additional public funding for infrastructure from its increased fiscal receipts and thus to address the country's infrastructure needs.

In addition, much of the transport investment is being funded and developed by Chinese companies and China will continue to be a major player in the region, despite growing anti-China sentiment during Ghana's 2012 electionvi.

Increasingly, the Government is also looking to partnerships with the private sector in the financing and delivery of infrastructure. Overall, Ghana's infrastructure situation is hopeful.

Unlike in many other African countries, Ghana's infrastructure backbone covers the entire national territory and helps to integrate its different regions. However, the distribution of infrastructure networks generally reflects the spatial distribution of economic

"Ghana is making major advancements and is an attractive investment destination, benefitting from a strong rule of law and stable political environment combined with a strong economic outlook in both the broader economy and the oil and gas sector in particular. It is particularly attractive for English speaking companies – language barriers need to be accounted for when operating in Africa."

Marco Raffinetti, Divisional Chief Executive - Capital Projects, Grindrod Freight Services

activity, with a greater density of transport, power, and information and communications technology (ICT) infrastructure in the south and southwest of the country than in the north.

Ports

Ghana plans to make its ports a maritime hub for West Africa.

Ghana has made significant progress in modernising its ports sector and is committed to making further improvements. Still, ports in Ghana are struggling to keep up with the demands of the expanding economy.

Domestic maritime trade is served by two ports: Tema, around 25km east of Accra, the capital; and Takoradi, 230km to the west. The two ports handle more than 90% of foreign-trade volume.

While Takoradi is serving the rapidly developing offshore gas and oil fields, Tema in particular is also increasingly serving as an outlet for Ghana's landlocked neighbours, Burkina Faso, Niger and Mali. This trend has intensified since shippers began to shift over from the Port of Abidjan in 2011, following postelectoral violence in neighbouring Cote d'Ivoire, further adding to the total throughput at Ghanaian facilities.

The ports at Tema and Takoradi are considered fairly well equipped to service local production and international traders. However, sharp increases in demand over recent years have led to congestion and capacity constraints, which have become serious impediments to further development.

The long lines of vessels outside the entrances to the ports, which remain exposed to the potential of pirate attacks, are constant evidence of the capacity gap in maritime facilities. What's more, cumbersome procedures in the clearance of goods have led shippers to call for the simplification of clearance procedures of goods at the country's ports and borders to prevent delays.

The Government is already trying to address these problems with expansion plans for the Tema and Takoradi harbours, but freight volumes will continue to rise too, suggesting that congestion problems will not go away.

At present West Africa lacks a clear maritime hub. Abidjan had begun to play that role, but with the political crisis in Cote d'Ivoire, major shipping lines diverted their West African operations to Malaga (Spain) or Tangiers (Morocco).

While Cote d'Ivoire has better port infrastructure at present, Ghana's political stability, better economic policies and strong economic growth, give it strong potential to become the regional gateway.

Air transport

Low volumes in the air transport sector offer vast future potential.

Ghana's air transport market is small in absolute terms and average in the African context. The country has eight airports, including one international Airport (Kotoka) in Accra. A number of major international airlines fly there regularly.

The bulk of the country's air transport market is international and fairly evenly divided between intra-African and intercontinental

flights. Despite Ghana continuing to face significant safety and security issues in air transport, domestic and international passenger numbers have grown massively in the past few years.

With growing incomes and more and more foreign companies establishing themselves in Ghana, the prospects for the air transport industry are good. And, just like in the ports sector, West Africa lacks a clear air transportation hub. Accra is still behind rivals Lagos, Dakar, and Abidjan and requires significant investment to make it the regional leader.

Rail

Rail freight and passenger volumes are negligible.

Ghana's railways network is insignificant and appears to be largely neglected. It currently handles less than 2% of freight and passenger traffic. Rail infrastructure is concentrated in the south and was designed to transport export commodities. The network forms a triangle that links Accra-Kumasi-Takoradi and currently only the Western line (Kumasi-Takoradi), is partially operational.

The railway also connects the major mining areas to the sea ports. In recent years, the Ghana Railway Company (GRC) has been increasingly unable to carry the full volume of mining traffic and a growing share of minerals is being diverted to the road network. This is severely limiting development of the mining sector in the Western region and will clearly not be able to support the development of the emerging oil and gas industry.

There are big plans to upgrade and expand the railway network.



of GDP on roads

These range from track upgrades to standard-gauge tracks, to the construction of new railway lines. One project will see the construction of a railway connecting Nsawam, running through Kumasi to Paga (on the Burkina Faso border) and from Tamale to Yendi. However, the Government has touted such plans time and again, but so far nothing significant has materialised.

Roads

Inland transport is happening on the roads, so road quality is essential to economic growth.

Road transport is by far the most important means of moving freight in Ghana and is the sector that requires the greatest consideration. Roads carry 95% of passengers and 98% of the country's freight. According to a World Bank report, Ghana's road transport indicators are strong. By almost all measures, they are well ahead of those found among low-income peers and nearing the levels expected of a middle-income country.

But some challenges remain. Road conditions, particularly in the north of the country are still problematic, as is rural connectivity. Although rural road quality is remarkably good, the physical extension of the rural network appears inadequate. Urban congestion remains a particular problem in the main centres.

The Government is spending on average 1.5% of GDP on roads, one of the highest levels in West Africa. Projects include repaying and upgrading existing roads as well as investing in the road network near the oil-rich, south-west region of the country.

In a collaborative project, six West African neighbours have agreed to invest and expand the Lagos-Abidjan highway, starting in 2014. The plan for the expanded highway is to provide a vital road link to the sea ports that are used by landlocked countries in the region such as Mali, Burkina Faso and Niger, but trade along the corridor could be hindered by customs barriers at each country's border.

Conclusion

Based on our analysis, we've assessed the investment potential for Ghana's transportation and logistics sector as shown in the graphic below.

Ghana - Investment potential assessment

1. Demographics and resources Economics Business environment Transport infrastructure **Key:** Attractive Strong improvement expected Some improvement expected Average Stagnation/marginal change expected Unattractive

End notes

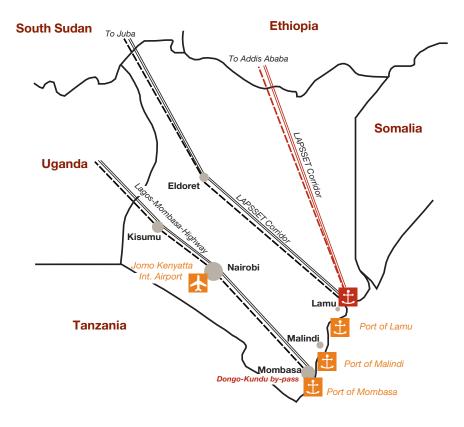
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Kenya



Kenya's long-term growth prospects appear to be solid. Key supporting factors will be its increasingly broadbased economy, youthful population and strategic location in the East African Community (EAC).



Many companies looking to expand into East Africa are looking at Kenya as their preferred entry point. One of the country's biggest strengths is the relatively stable political environment at present.

While ethnically-based political rivalries and security concerns exist. Kenva is still one of the easier African countries in which to do business.

The Government has big plans. Kenya's 'Vision 2030' provides a blueprint for future development and there have already been some initial successes with institutional and business reforms to improve the business environment.

We believe that Kenya will consolidate its position as a regional leader and begin to play a larger and more influential role in the EAC.





Per-Capita GDP expected to rise more than 41% by 2015



Plans to spend

Strong growth forecast, despite deficit

Kenya currently has large trade and budget deficits. Its biggest trading partners have traditionally been the UK and other EU countries, so a sluggish European economy has had a negative impact on Kenya's exports. This may be offset in the future by strong regional growth. Trade with the Common Market for Eastern and Southern Africa (COMESA) now outstrips that with the EU, with Kenya sending around half of its exports to its African neighbours.

Kenya has also signed a variety of economic pacts with other countries, notably China. The country's import tariffs combine national and regional rules and have been changing rapidly over recent years.

Kenya is currently reliant on imports of oil, but that looks set to change following the discovery of commercial oil deposits in March 2012. The IMF believes that Kenya will begin producing commercial quantities of oil in 6-7 yearsi.

Real GDP growth is projected to average 6.2% between 2012 and 2017. This represents a significant improvement on the economic growth performance in recent years, which averaged 4.2% between 2002 and 2012, largely due to weak growth in 2008 and 2009.

While per-capita GDP is currently low, reaching just US\$967 in 2012, Kenya's demographic profile gives many reasons for optimism. Although population growth is expected to remain above 2% until 2022, the positive growth outlook means that per-capita GDP will rise to US\$1 365 by 2015.

Corruption, contracts and taxes

Kenya also has a fairly restrictive tax regime. The total tax rate payable by businesses is 44.4% and includes a profit tax of 28.1%.ii

Although the political risk in Kenya is regarded as being low, security is an issue, with violent crime a problem in some areas and signs of terrorist activity and piracy in coastal regions, resulting for the most part from Kenya's proximity to Somalia.

Favourable labour and investment climate

Kenya presents a relatively more conducive business environment than its regional peers. It has flexible labour regulations and investment laws that allow foreign investors to receive the same treatment as local ones.

Kenya's financial sector is rated as the most developed in East and Central Africa. This facilitates greater ease in accessing capital markets for businesses looking to support growth through debt and capital market funding.

Kenya is also one of the most innovative countries on the continent, with only South Africa rated ahead of it in the World Economic Forum's Africa Competitiveness Report 2013.iii

Power problems and solutions

One major risk facing Kenya is its power infrastructure. While Kenya ranks poor on businesses' ability to get electricity in a global comparison, it performs above average compared to its African peers. Inadequate electrification rates are a major constraint to the wider business environment. Furthermore, since Kenya relies heavily on hydroelectric generation, less power is available during periods of drought.

This situation is set to change, as Kenya plans to spend US\$1.4 billion on new geothermal power plants, with total installed generation capacity of 280MW. The goal is to establish Kenya as one of the largest generators of geothermal energy, aiming for 5GW of capacity by 2030. iv

Demographic dividend

Kenya has a large population of 43.2 million, growing at around 2.6% per annum. Only around a quarter of the population currently lives in cities, but urbanisation is on the increase. Kenya is also a young country, with two-thirds of the population under 24. The Government has an ongoing drive to provide free secondary education and boost technical and vocational skills, which means Kenya's workforce is relatively well-educated compared to other countries in the region.

There's still room for improvement though, as labour productivity is currently quite low and Kenya's human development indicators are also fairly low.







Agriculture

Agriculture is very important to Kenya's economy, especially in terms of ensuring food security and employment. All of Kenya's top merchandise exports are agricultural commodities and the sector provides jobs for around 75% of the country's labour force.

Kenya is the largest tea producer in Africa and is also Africa's largest exporter of flowers, but overall Kenya's export base is fairly narrow. Logistics service providers have focused heavily on serving the agricultural sector so far, but with drought an ever-present threat, there is significant risk involved.

Retail

For logistics companies, prospects in the retail and manufacturing sectors are the most critical.

The outlook for the retail sector is strong and Kenya is starting to be seen as an ideal point of entry for launching retail outlets and consumer goods distribution into East and Central Africa.

Kenya has a growing local market with a wealthier consumer base from which to launch into other regional markets. Only about 16.8% of the population currently falls into the middle class, but that should grow strongly.

The dynamism in the consumer market has also sparked strong growth among local producers, increasing competition. Local supermarket chain Nakumatt's 'blue label' packaged food line and Interconsumer Products' popular feminine hygiene and diaper lines, for example, are rapidly gaining market share.

Once they develop traction in Kenya, firms have ample opportunity for expansion to the rest of the East African Community, which includes Uganda, Tanzania, Rwanda and Burundi. In addition, fragile recent conflict countries in which consumer demand is rapidly rising and consumer goods are in short supply like South Sudan and Somalia are easily accessible due to strong historical trade links.

Kenya's retail market comprises a mixture of modern retail outlets that supply consumer goods from major international firms and informal traders or family-run concerns that sell more basic goods.

The country's Vision 2030 includes plans to improve the efficiency of the retail market and once the formal retail expands, there should be significant opportunities for logistics service providers.

Manufacturing

The World Bank has identified significant opportunity for growth in light manufacturing in sub-Saharan Africa, but contends that feasible, low-cost, focused policy initiatives aimed at enhancing private investment will be needed to enable the region to realise its potential. Kenya currently has a small manufacturing industry dominated by food and consumer goods processing. The Government's trade strategy now looks to encourage greater exports of processed goods, so there's potential for growth. Still, inadequate power and transport infrastructure and poor trade logistics are major obstacles to growth in the sector.

Logistics performance

Logistics Performance Index



Source: World Bank

Kenya's logistics performance has deteriorated in recent years. From an overall global ranking of 76th in 2007, it is now 122nd out of 155 countries on the Logistics Performance Index. Although international shipments, infrastructure and logistics competence have improved marginally since 2007, customs, track & trace and timeliness have all declined significantly over the period.

While the time to import goods, as well as the number of documents necessary, are comparable to the average in sub-Saharan Africa, the cost to import is significantly higher. These values are all considerably higher than OECD benchmarks, as are similar indicators for exporting.

Low logistics efficiency is a key concern and business risk for companies importing to or exporting from Kenya as well as the logistics service providers involved.

Transport

Despite having made significant progress in infrastructure development in recent years, Kenya's transport infrastructure is





inadequate to meet the country's needs. The country's infrastructure indicators may look relatively good compared to other low-income countries in Africa, but they remain below the levels found in Africa's middle-income economies, like Egypt or Nigeria.

Bringing Kenya's infrastructure up to the level of the region's middleincome countries could boost annual growth by more than three percentage points. v

Kenya's development plans include significant improvements to roads, railways, seaports, airports, water and sanitation, as the country attempts to increase its competitiveness in the global market. 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's population and agricultural activity are heavily concentrated in the southern half of the country, along the corridor linking Mombasa to Nairobi and then on to Kisumu and into Uganda.

Kenya's infrastructure backbones including the country's principal road artery and its major power transmission and fibre-optic backbones have followed this route. The northern half of the country, by contrast is sparsely populated and characterised by fragmented infrastructure coverage.

Ports

Mombasa is growing in importance as a port, but congestion is a major problem.

Ports stand out as one of the keys to Kenya's future growth. There are currently major ports at Mombasa,

Lamu and Malindi. Mombasa is the main port, serving not only the Kenyan hinterland, but also markets in neighbouring countries such as Uganda. With almost 800 000 TEUs and 3.7 million tons of cargo handled each year, Mombasa is the second-largest port in sub-Saharan Africa after Durban in terms of tonnage and containers handled.

Together with Dar es Salaam, Mombasa is one of the key trading centres for the East Africa region. The port is also a natural transshipment centre for East Africa.

But Mombasa is facing serious capacity constraints and congestion. Delays in cargo clearance as well as congested and insufficient rail and road feeder systems are contributory factors to this situation. 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.

Over the last decade, Mombasa has steadily seen total cargo volumes grow by an annual average of 11.6% compared to a global average of 7.1%.

In terms of performance, Mombasa fares relatively well compared with other ports in eastern and southern Africa. However, its container crane productivity, at 10 containers per hour, is far behind Dar es Salaam (20) and Durban (15).

Kenya is ranked 88th out of 155 countries in the international shipments category of the 2012 Logistics Performance Index, while competitor Tanzania's rank is much better at 59th.

Kenya-based Trademark East Africa (TMEA) is investing US\$53 million in the Port of Mombasa over the 2012-2016 period. TMEA has suggested specific technical and

Population size (million, 2012)	43.2
Population growth (2012-2020, avg p.a.)	2.6%
GDP (US\$ billion, 2012)	40.7
GDP growth forecast 2012-2017 (avg, y/y rate)	6.2%
GDP per capita (US\$, 2012)	967
Global competitiveness index 2012 (global rank/144, (score 1-7))	106 (3.75)
Corp. Income Tax (CIT) rate	30.0%
Top exports	Black tea (fermented) an other partly fermented tea (18,6%), Cut flowers fresh (13,1%), Coffee, not roasted, not decaffeinated (6,1%)
Logistics Performance Index 2012 (global rank/155, (score 1-5))	122 (2.43)
Global Competitiveness Index 2012 - Infrastructure (global rank/144, (score 1-7))	103 (3.09)





grant support, including a portwide productivity improvement study, upgrading rail links and space rationalisation within existing port land, along with improving port access, yard facilities and stacking areas at berths.

A new berth next to the old container terminal is making it possible for larger ships to dock. Work is also being undertaken on a new container terminal. Once the final phase has been completed (by 2019), the new facility will have added 1.2 million TEUs to Mombasa's capacity.

A new access road and a railway link will also be constructed to connect the container terminal and existing port network to the proposed Dongo-Kundu bypass and the Mombasa-Nairobi Highway.

Port mega project

Multi-modal mega project is planned in Lamu, but questions remain.

Kenya is also looking to develop a new mega port project in the north of the country at Lamu. According to BMI the new facility will include a 10-berth container terminal, three bulk cargo terminals and an oil terminal. The site will also be home to a new international airport. In total, price estimates for the multimodal project range from US\$16 bn

The port will serve as the maritime entry point to the Lamu Port-Southern Sudan-Ethiopia Transport (LAPSSET) Corridor, which will include rail, road, oil pipeline and fibre-optic cable connections with South Sudan and Ethiopia.

Aid for Somalia and transit cargo for northern Uganda, South Sudan and Ethiopia could all be shipped through the new facility. In April 2013, Kenya awarded a construction contract for the first three berths to a Chinese firm, but questions about financing for the overall project remain. Environmentalists have also raised concern about the impact on marine life.

Aviation

Kenya is well served from an airport and airline perspective and is a regional leader in air transportation. According to 2007 figures, Kenya has 225 airports, with 15 of these having paved runways. There are four runways longer than 3 000m.

Jomo Kenyatta International Airport in Nairobi is a major international gateway in sub-Saharan Africa. A major fire caused extensive damage to the airport terminal in August 2013, but the Kenya Airports Authority (KAA) announced normal service would resume by the beginning of 2014.

The domestic air transport sector in Kenya is thriving, and is the fourth-largest in sub-Saharan Africa according to the World Bank.

Kenya Airways is among the top three international carriers in Africa and one of the most respected. Its extensive network across Africa and safety record is on par with international standards. The airline is one of the few African flag carriers to have been successfully privatised.

Much of the company's success is attributable 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 its management. Kenya Airways currently flies to 59 destinations worldwide, 47 of which are in Africa, and carries over three million passengers per annum.

Railways

Railways are strategically important, but major investments are needed.

Kenya's rail corridor, linking the Port of Mombasa to Nairobi and continuing onward into Uganda, is of strategic importance to the region. It is a key conduit for bulk freight, easing pressure and providing additional capacity along the northern corridor. But the corridor is still poorly developed, and there is an urgent need to improve the rail-port interface at Mombasa.

Improving rail infrastructure is also critical to increasing trade throughout the East Africa Region and the EAC estimates the corridor requires US\$2.1 billion in investment.

However, Kenya's national rail carrier, Kenya Railways Corporation (KRC), is reportedly insolvent, and although it registered a profit of US\$13.2 million in 2012, it could be extremely difficult for the company to lead the planned revival of the railway sector.vii

In 2012, KRC signed a landmark US\$2.6 billion contract with a Chinese construction company to build a new standard-gauge railway running from Mombasa to Nairobi to Malabi.

Currently the Rift Valley Railways Consortium (RVR), a group led by South African companies, runs much of the rail system in Kenya and Uganda under a 25-year concession contract. RVR runs trains on old narrow-gauge track that won't be compatible with the new standard-gauge line. While RVR has been upgrading - in June 2013 it announced it had completed repairs to 73km of track between Mombasa

New Nairobi-Thika superhighway reduced time to traverse from hours to 30 minutes

and Nairobi Kenya's new transport secretary has already noted that the country is dissatisfied with RVR's performance and wants to encourage more competition.

Roads

Most of the burden of freight transport currently falls on roads and while Kenya has a reasonably well-developed road network, the condition of most roads is only fair and few roads have been tarred. Kenya has enough trunk roads, but lacks decent roads connecting rural and urban areas, so it is hard for farmers to deliver food directly to city markets.

Investments are being made. The new Nairobi-Thika superhighway, located at the very heart of Kenya's economic engine, is a good example. The time taken to traverse Thika town and Nairobi has dropped from 2-3 hours to 30-45 minutes, greatly improving transport connections throughout the area. This is an important development since the Nairobi Metropolitan Area accounts for more than 30% of national GDP.

There are plans to improve road connections at Mombasa to help handle growing freight traffic, some of which are being financed by a Japanese Official Development Assistance (ODA) loan.

The Governments of Kenya and South Sudan have started consultative talks with several international donors to finance the US\$1.08 billion Juba-Eldoret development corridor. The road linking the north-west Kenyan town of Eldoret with the South Sudanese capital Juba, is an integral part of the LAPSSET Corridor.

Kenya has established a sound system for funding road maintenance and has made great strides with institutional reforms. The country's road fund meets most of the good practice design criteria and the fuel levy is set at a level (around \$0.12 per litre) adequate to fund the country's road maintenance requirements. Associated revenues are also being fully captured by the sector.

Despite these positive strides, the quality of public investment still needs to improve and a major rehabilitation backlog remains, which needs to be addressed before the trunk network can be considered to be in a maintainable condition

Conclusion

Based on our analysis, we've assessed the investment potential for Kenya's transportation and logistics sector as shown in the graphic below.

Kenya – Investment potential assessment

1. Demographics	and resources	Image: Control of the
2. Economics		
3. Business enviro	onment	
4. Trade and logis	tics	$ \sqrt{2} $
5. Transport infras	tructure	A
Key: Attractive	Strong improvement expected	1
Average	Some improvement expected	
		vnootod
Unattractive	Stagnation/marginal change ex	xpeciea

End notes

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Mozambique



Mozambique has massive potential underpinned by its vast natural resources, but it will take some time until the benefits spread through the whole economy. Key hurdles are the challenge to diversify the economy, upgrade infrastructure to meet rising demand and a lack of investment in human capital.

Tanzania 'Unity Bridge' Pemba Int. Malav Zambia Zimbabwe **Botsawana** Indian Ocean South Africa Technobanine port project To Gauteng - Maputo

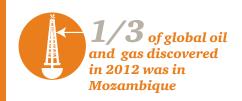
of natural gas discovered in 2012

Mozambique ranks 185th out of 187 on the UNDP's Human Development Index and is one of the most aiddependent economies in the world.

Its economy is highly dependent on natural resources - mainly coal, ores and other minerals – and this is not expected to change over the medium term, particularly since large reserves of natural gas were discovered in the Royuma Basin in 2012.

Promising coal and gas reserves

This find, in addition to massive coal reserves in the Tete Province, not only demonstrate Mozambique's potential, but also points to the intense pressure on the already shambolic transportation infrastructure, with massive investments in infrastructure needed to catch up with sharp increases in coal production. Rising coal production will lead to growing transport volumes from the hinterland to the coastal ports and increased earnings from exports.





Mozambique's geographical location as a natural entry and exit point for the flow of goods to its landlocked neighbours will continue to congest the country's transport channels. This will intensify as volumes of goods in transit increase.

While massive investment in infrastructure is needed, the United Nations reports that Mozambique ranks as the third-poorest country in the world, making private-sector investment imperative. Given the prevailing circumstances, we recognise that the realisation of the vast opportunities for transportation and logistics service operators in Mozambique is likely to be a slow process.

High growth, low base

Mozambique's export base remains narrow, with more than half of the value of exports being aluminium. Coal exports are the country's second-largest export product by value. The country's exports are mostly directed to Europe (26.4%) and South Africa (22.7%). Despite the ongoing economic crisis in Europe, exports are projected to increase by a further 14.4% to US\$ 3.6 billion in 2013. Natural gas could emerge as Mozambique's main export product in the medium term, with the first two five-milliontonnes-per-annum liquefied natural gas (LNG) liquefaction trains to be commissioned by 2018.

Mozambique is responsible for 70% of goods transit in the Southern African Development Community (SADC), with logistics corridors linking the deepwater coastal ports with the neighbouring countries.

Intra-regional trade is expected to gain further importance after a consolidation of SADC free trade tariffs, which were initiated in 2008. Bilateral agreements with Malawi and Zimbabwe have already been

signed to enforce the rules of origin based on a product's value.

Mozambique's massive reserves of coal and natural gas should provide a substantial boost to exports, foreign investment, economic growth – which was supported by an increase in coal production in 2012 – and government revenues.

Economic potential arising from natural resource discoveries and extraction is extremely high, with natural resources rent of about 7% being recorded in 2011.

The success rate of companies looking for natural gas offshore has been phenomenal. In 2012, one third of all global oil and gas discovered was in Mozambique.

OECD expects Mozambique will become the fourth-largest exporter of liquefied natural gas globally and second-largest in Africa after Nigeria.

Real GDP growth averaged around 7.3% between 2010 and 2012 and is projected to be around 8% annually between 2012 and 2017. In spite of this, Mozambique remains one of the smallest economies in sub-Saharan Africa. The country's most pressing medium-term economic structural challenge is the diversification of the revenue base. Aid flows are expected to decrease, which could have a major effect on the economy.

Per-capita GDP is forecast to grow at 7.4% between 2012 and 2017, coming off a very low base of just US\$634 per capita in 2012. Meanwhile, government spending is projected to increase by 10% as the state attempts to address infrastructure shortcomings. While consumer price inflation has been erratic, it has been declining overall since 2010 (reaching 1.1% in 2012).

Vast potential for improvement

The weak institutional and business environment offers massive potential for improvement.

Trade and investment policies in Mozambique are undercut by a number of factors, including:

- Government interference in the economy;
- Arbitrary tax policies;
- Minimal enforcement of property rights;
- Private ownership of land is not permitted, and
- Weak rule of law.

These have driven many people and enterprises into the informal sector.

Mozambique also faces challenges with its governance and anticorruption framework. Corruption is perceived to be widespread and bribe-seeking by officials is considered to be a problem. Red tape and government decisions can also be a barrier to doing business, as for example oil companies have not yet received the go-ahead to build the first platforms, with deadline for gas exports to begin in 2018.

The tax regime is not too restrictive to business development and growth. However, the level of inefficiency created by the Mozambican tax bureaucracy heightens the cost of operating in the country. The World Bank's **Doing Business Project estimates** it takes 230 hours, or twentynine 8-hour days, to become tax compliant.ii







Having successfully completed the transition from one-party state to democracy in 1994, Mozambique is considered a low political risk country and the security issues are not as significant here as in other African countries, though given pervasive poverty, social pressures will remain for the long term.

However, a new problem emerged early in 2013 when Renamo, a former rebel group and opposition party, threatened to sabotage the only railway access to the coalfields. It is understood that this is the result of the group's bitter dispute with the ruling Frelimo party and heightened political tensions ahead of general elections in 2014.

Low human development level affects skill level of available workforce

Mozambique has a reasonably small population of just over 25 million people. The population growth rate is high at 2.5% and the estimated 300 000 new entrants into the labour market every year are a reasonable number.

The formal economy accounts for only a third of total employment.

As a result, many of the new entrants into the labour market are forced into marginal jobs in the informal economy, both in rural and urban areas. One possible reason for this is that Mozambique's labour regulations are restrictive and as a consequence the cost of laying-off an employee is high even if the nonsalary cost of employing a worker is low.

While there are vast numbers of workers available, their skill levels are low as Mozambique still ranks among the bottom 2% of countries on the United Nations Human Development Index.

Low life expectancy of 50 years and high stagnant poverty levels, with 54.7% of the population living below the national poverty line, are the focus of the Mozambican Government's Action Plan for Reducing Poverty (PARP) 2011-2014. The plan aims to reduce levels of food poverty to 42% by 2014.

Power generation and exports

Most of Mozambique's electricity capacity is exported to South Africa with less than a quarter of Mozambicans being connected to the local grid. Electricidade de Moçambique (EdM), the national electricity provider, expects electricity demand in the country to grow by around 15-20% per annum over the next few years on the back of a boom in the coal and natural gas industries. At the same time the energy sector is expected to continue its expansion of nearly 10% a year, which will lead to a gap in supply.

To address this gap, power projects worth US\$12 billion are in the pipeline.

Agriculture and small business development

One objective defined in the PARP programme is to focus on increased agricultural production and fishery. ^{iv} However, this could be limited to some extent by the scarcity of arable land, which makes up only 7.2% of the country's total land area.

The Government also hopes to create jobs and boost agricultural production by facilitating and developing micro, small and medium-sized enterprises. Thus there should be some improvement

in the agricultural sector, but the impact on transport volumes is not expected to be significant.

Trade facilitation logistics and customs

Trade facilitation logistics and customs procedures are a serious obstacle to logistics efficiency.

Mozambique ranked 136th out of 155 countries in the World Bank's 2010 Logistics Performance Index (LPI), a decline from 110th out of 150 countries in 2007.

Logistics Performance Index



Source: World Bank

This poor showing is largely due to problems with customs. The efficiency of Mozambique's customs clearance procedures (i.e. speed, simplicity and predictability of formalities) rated below average as customs clearance is a slow, complicated and uncertain process.

In the same study, Mozambique also ranked poorly in 'trade facilitation' logistics. It takes on average 23-28 days to export or import goods, making Mozambique a costly place to either sell or manufacture goods.

The country was excluded in the most recent survey in 2012 due to an



of transport projects are in the pipeline.



insufficient number of responses or other data reliability concerns.^v

Transport infrastructure and operations

Overall, Mozambique's transport infrastructure and links remain in disarray two decades after its civil war ended.

Transport projects worth US\$17 billion are in the pipeline,

including increased rail links to ports and expanding port capacities to allow for greater exports. However, it should be noted that these projects are being developed to serve the natural resource industry primarily, and therefore an uneven infrastructure build out will be inevitable.

Transport infrastructure is mostly being developed transversally, west—east, connecting mining and agricultural clusters in Mozambique and neighbouring countries to exit ports. The central transport infrastructure extends from the Port of Beira to Zimbabwe, and marginally to Malawi and Zambia.

The concentration of urban population in Maputo means that this will continue to be the hub for infrastructure development projects over the medium term. The southern transport network links the Port of Maputo to the north-eastern part of South Africa, Swaziland and Zimbabwe. These two 'transport clusters' are, however, not connected other than by road.

Unmet demand

Despite good port performance and considerable upgrades, demand will not be properly met. There are seven main seaports in Mozambique, of which Maputo, Beira and Nacala are the most important. All of these have functioning rail linkages to the hinterland and neighbouring countries via the rail network as well as some adequate road linkages.

Maputo is the busiest port and the primary hub for various kinds of cargo. Nacala is well suited for the export of coal and heavy-bulk products. Beira faces physical limitations that render it inefficient for the export of coal.

Mozambique has significantly increased the use of its ports' capacity as port demand has risen strongly in recent years. In terms of performance indicators, Maputo, Beira, and Nacala's truck-processing times compare well with other Southern African ports. While these ports also have above-average crane productivity, container dwell time in Mozambican ports is very high.

The Port of Beira has restricted sea access, significantly constraining its ability to accommodate more traffic. This issue is being addressed as part of Mozambique's considerable investments in its existing ports.

New ports are also on the agenda, with the Mozambican Government inviting bids for a US\$2 billion railway and port development project to boost coal exports – a 525-km rail line will link the coalrich Moatize basin with a new port at Macuse. In addition, a new US\$7-billion project is planned to construct a new deepwater port at Techobanine, close to the South African border. There is also a new port planned for Palma north of Pemba in support of the LNG sector.

Despite important progress in the modernisation of Mozambique's port systems, there is still a significant time lag between the increase in demand and the development of infrastructure projects to meet that demand.

Air transport

Airports and air transport does not seem to adequately serve the country's needs.

Although air travel has shown strong growth in the last few years, airports have seen limited investment in recent years, with the quality remaining relatively low by global standards.

In general, aside from Maputo International Airport, airports service either tourist or economic destinations, such as mining hubs. Flights within the country are limited. A number of airport projects are currently underway, including an upgrade and extension to Maputo International Airport.

Additional airport hubs are planned for Pemba and Tete with a total investment of US\$ 420 million. In addition, US\$114 million rehabilitation and expansion of Nacala airport is due to be completed in 2013.

Numerous international airlines service Mozambique through the Maputo International Airport as well as some of the smaller international airports. However, Mozambique's air industry still faces major challenges, including a decline in competition following the exit of a private carrier (Air Corridor), the national flag carrier's financial troubles, performance at the Maputo airport and compliance with safety standards.

Rail

Private mining companies are funding a number of rail projects.

There are three major corridors in Mozambique's rail network:
The Nacala railroad (CFM Norte)





connects the Nacala Development Corridor and links to the Central East African Railway (CEAR) of Malawi.

Beira railroad (CFM Centro) is the oldest railway system in Mozambique. It connects the city of Beira with Harare in Zimbabwe, and also connects Beira to the coalfields of Moatize. It also has the potential to link to the railway of Malawi as well as to Zambia via the Sena line.

The third corridor, **Maputo railroad** (CFM Sul), links Maputo to the northeastern part of South Africa. It also connects with Zimbabwe and Swaziland through railway branches.

The railway system is functional and has been attracting private interest in recent years. The main challenges in the rail sector are meeting the increasing demand due to growing trade with neighbouring countries and significant increase in domestic coal production.

This requires balancing the demands of maintaining the existing infrastructure while also completing the Moatize-Nacala corridor.

In addition, railway lines in Mozambique are still operating below capacity because there is a shortage of locomotives and wagons to run on them.

The quantity of coal that Mozambique can currently produce exceeds its rail capacity. This explains private-sector interest in several rail projects, particularly since transporting coal by road is prohibitively expensive and

inefficient.

As the narrow highway between the mines in Tete province and Beira is congested with trucks, Brazilian mining group Vale –a leading mining investor in Mozambique – is spending a total of US\$4.5 billion developing the 912km Nacala railway corridor.

"There is a Tete railway line, but everyone has to buy their own rolling stock and the line's capacity is a constraint."

Vernon Harvey, consultant on African operations

Despite being further away than Beira – 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 than the Sena/Beira line.

The refurbishment of the Sena railway line has repeatedly been delayed. Although mining companies have been able to use the line to transport coal, the trains cannot run at full-speed and capacity is limited.

There are several other projects being proposed by the private sector such as Eurasian Natural Resources Corporation's (ENRC) plans for the construction of a second new railway linking Tete province to the Port of Nacala.

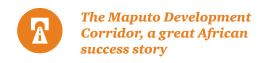
Such potential infrastructure development plans are positive and will ensure that Mozambique's exports will increase substantially over the medium to long-term or the Macuze Rail for which the Mozambican Government has issued tenders.

Road network

Roads regionally connect Mozambique to its neighbours, just as rail does.

Mozambique has one of the least developed road transport infrastructures in the Southern

Population size (million, 2012)	25.2
Population growth (2012-2020, avg p.a.)	2.5%
GDP (US\$ billion, 2012)	14.2
GDP growth forecast 2012-2017 (avg, y/y rate)	8.0%
GDP per capita (US\$, 2012)	634
Global competitiveness index 2012 (global rank/144 (score 1-7))	138 (3.17)
Corp. Income Tax (CIT) rate	32.0%
Top exports	Aluminium unwrought, not alloyed (48.0%); Electrical energy (7.5%) Natural gas, liquefied (5.0%)
Logistics Performance Index 2010 (global rank/155 (score 1-5))	136 (2.29)
Global Competitiveness Index 2012 - Infrastructure (global rank/144 (score 1-7))	129 (2.36)



African region. With the exception of major arteries, overall road conditions in Mozambique are generally poor – the road network is mostly unpaved and underdeveloped.

Road conditions are a significant bottleneck in developing trade in the region and utilising its port assets to move goods to neighbouring countries. The road network also requires expansion to keep pace with the country's high growth rate.

The road network has, however, seen some improvement in investment and rehabilitation and a secondgeneration road fund has been set in place. Today, the connectivity between concentrations of human settlement, as well as the quality of roads along these transport corridors, is relatively good.

The predominant problems facing the road network right now are overloading and a lack of maintenance and repair.

Regional integration

Similar to the railway network, road corridors have developed, around the three main logistics corridors (Maputo, Beira and Nacala) that serve coal exports and link to hinterland countries.

The Maputo Development Corridor connects Maputo with South Africa's Gauteng province and provides access to South Africa, Swaziland and Zimbabwe.

Connectivity between urban and economic clusters is quite limited, as are the linkages that connect parallel corridors to each other. With the exception of the recently finalised north-south National Road, there is virtually no (or only very limited) connection between the several west-east corridors.

Large-scale road projects include an upgrade of the Great East Road, part of the Nacala Development Corridor, linking Central and eastern Zambia to Mozambique's northern provinces.

In the far north, the Unity Bridge across the Ruvuma River between Mozambique and Tanzania was opened in 2010 and is recognised for the important contribution it's making to development in the region.

Construction of a second bridge across the Zambezi River in Tete is due for completion by September 2014. Until now, trucks have had to cross the existing Samora Machel Bridge one at a time, and the new structure will alleviate perpetually long tailbacks.

Conclusion

Based on our analysis, we've assessed the investment potential for Mozambique's transportation and logistics sector as shown in the graphic below.

Mozambique - Investment potential assessment

Demographics and resources **Economics** Business environment Transport infrastructure Strong improvement expected **Key:** • Attractive Some improvement expected Average Stagnation/marginal change expected Unattractive

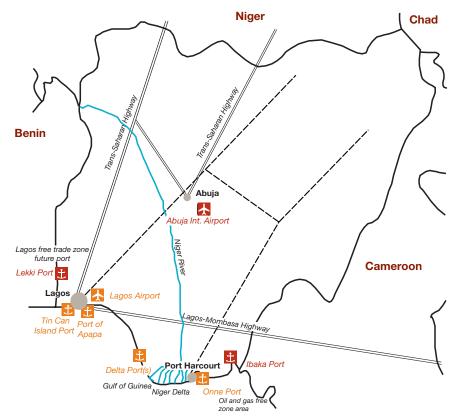
End notes



Nigeria



Nigeria is rapidly advancing and scale of real growth stands second only to government plans. Key supporting factors will be the huge, young and urbanised population, large oil and gas reserves and an increasingly diversified economy.



largest economy & leading oil producer

A lot of companies expanding into West Africa see Nigeria as a gateway to the region, even before Ghana. While Ghana's main advantage is a stable democracy and thus a safe entry point for total newcomers to the African continent, Nigeria offers by far the largest market in the region, being home to nearly 170 million of the 250 million people living in West Africa. **Nigeria is also** Africa's second-largest economy and its leading oil producer.i

"Although trading in Africa has its challenges, the opportunity exists to invest in its future with particular emphasis on infrastructure and utilities such as electricity, water and telecommunications. Besides the need to upgrade roads and ports there is an absence of refrigerated space to accommodate agricultural and perishable product."

- Photios Tzellios, Supply Chain Director, Shoprite

These bubbles represent the cities of Nigeria and the size of the bubbles indicate the population size of the city 🛂 Airport 보 Port 払 Future Airport 🐧 Future Port 🚥 Future Railway 📁 Future Road 💵 Railway 💳 Road





These factors form the basis for ambitious government plans. With its Vision 20:2020 Nigeria aims to be among the world's top 20 economies by 2020.

Such plans are not as unrealistic as some might assume given the weak growth projections for many current top-20 economies, some of which have recently suffered credit downratings as a result of the ongoing global economic crisis.ⁱⁱ

Nevertheless, obstacles to the ambitious target remain in the form of inadequate infrastructure, increasing sectarian violence arising mainly in the north of the country and, in some instances, restrictive actions by the Government.

Notwithstanding these challenges, we believe that Nigeria will continue to be a leading destination for international investors and that this, in turn, will generate strong potential for transportation and logistics service providers. Nigeria has the potential to establish itself not only as a gateway to West Africa, but to Africa as a whole.

Economy and trade

Nigeria' robust economic indicators and prosperous trade sector ensure it has tremendous growth prospects.

Nigerian exports are exceeded by strong import growth (13.9%). This is being driven by an increasing appetite for consumer imports, while capital imports for infrastructure development have also increased. This augurs well for transport and logistics service providers.

In spite of rapid import growth, the current account position remains positive. **Nigeria's major trading**

partner is North America due to its geographic location, but trade with China and South Africa is growing.

Nigeria is a member of the Economic Community of West African States (ECOWAS) and several other trade communities. To simplify Nigeria's tariff system, the Government relaxed trade restrictions by replacing its 19-band tariff regime with the ECOWAS five-band Common External Tariff system. However, several protectionist measures remain in place and bureaucracy and graft remain severe impediments to trade.

For external trade earnings Nigeria is highly dependent on domestic crude oil production levels and the international oil price. It is the leading oil exporter in Africa and has the second-largest oil reserves after Libya.

However, business risks are elevated in the oil sector where sabotage on oil fields and pipelines and violent attacks on foreign workers are common.

Nigeria also has the largest natural gas reserves in Africa, but it presently has limited infrastructure in place to take advantage of this massive resource.

The IMF expects Nigeria to be one of the world's fastest-growing economies over the 2011-15 period, which would help speed up the Government's Vision 20:2020. Real GDP growth will continue to be driven by the non-oil sector over the short to medium term. Per-capita GDP is quite moderate compared to Nigeria's sub-Saharan African peers; it is expected to grow steadily at about 6.3% between 2012 and 2017. However, due to unequal income distribution, most of the population is still living below the poverty line and only about 10% could be considered middle class.

Business environment

The business environment and security issues are a major impediment to economic growth.

While corruption has historically been a constraint on business development in Nigeria, the Government is in a continuous process of reform in order to eliminate corruption and mismanagement.

Still, the business environment in Nigeria remains very challenging. Starting a new business is a time-consuming and cumbersome process. Registering private property is also a challenge, while investor protection is poor.

The legal system is inefficient, as the judicial system is susceptible to political interference and the rule of law is generally weak throughout the country.

The results of the African Development Bank's 2011 "Country Policy and Institutional Assessment" show that Nigeria has undertaken important reforms, particularly in public finance management, to improve efficiency in resource allocation and business regulation.

Structural reforms are also being made with amendments to the tax system being initiated to attract further investment. In contrast, increases in the minimum wage have undercut labour productivity and hiring flexibility.

Security and operational risk in the oil sector is particularly significant. Foreign workers in the Niger Delta region, in particular, are subject to frequent kidnappings by the network of militias and bandits long active in the region. Furthermore, the International





Arable land is 0, creating opportunity



Maritime Bureau has classified the waters off Nigeria as one of the worst pirate hotspots in the world. In Lagos and the capital, Abuja, road travel, especially at night, is dangerous owing to inadequate vehicle maintenance, poor driving conditions and the risk of armed robbery.

Power

Improvements in energy supply will depend on security, not only investment.

Top of Nigeria's list of infrastructure shortcomings is the poor performance of the energy sector: According to BMI, 54% of manufacturers cited unreliable power as the most binding constraint to efficient production. iii

Ageing transmission facilities and gas supply shortages, exacerbated by gas pipeline vandalism in

the Niger Delta, are the primary problems. An improvement in security is therefore even more important than investment, which is highlighted by the fact that although the Government poured more than US\$10 billion into the sector between 2000 and 2007, service actually declined over the period.

Nigeria's four refineries operate at a fraction of capacity, while most businesses rely on generators. This makes Nigeria one of the most energy-intensive countries in the world.

Labour

Nigeria has a large workforce, but workers are mostly unskilled.

Nigeria is Africa's most populous nation providing entrepreneurs with the continent's largest labour force. This, coupled with a high rate of unemployment means that

wages are likely to be relatively competitive, despite the increase in the minimum wage.

However, Nigeria's poor human development performance means that skilled labour is not easily available and carries a premium to it. While labour productivity in Nigeria is comparable to its regional peers, it has improved faster than them, but is still below the rate of economic growth.

HIV/Aids poses a significant risk to Nigeria and the country has the third-highest HIV infection rate in the world, which could negatively impact labour productivity in the long term.

Agriculture as alternative to oil dependence

Despite oil's dominance, agriculture takes a significant share in the Nigerian economy, accounting for about 42% of GDP in 2012. Sustainable expansion of agriculture will play a major role in driving economic growth, reducing poverty and enhancing food security.

Nigeria is starting to take advantage of its agricultural potential and it lists among the countries with the most commercial agricultural opportunities in Africa – with arable land making up nearly 40% of total land area. Agribusiness is seen as one of the best opportunities for the economy to reduce its dependence on oil.

Retail

Wholesale and retail trade is also an important sector, which accounted for 18.8% of GDP in 2012. The retail sector is currently undergoing a transformation with international supermarket brands entering

Population size (million, 2012)	168.8
Population growth (2012-2020, avg p.a.)	2.8%
GDP (US\$ billion, 2012)	270.2
GDP growth forecast 2012-2017 (avg, y/y rate)	6.8%
GDP per capita (US\$, 2012)	1 555
Global competitiveness index 2012 (global rank/144 (score 1-7))	115 (3.67)
Corp. Income Tax (CIT) rate	30.0%
Top exports	Petroleum oils and oils obtained from bitumino minerals, crude (85,9% Natural gas, liquefied (6,9%), rubber
Logistics Performance Index 2012 (global rank/155 (score 1-5))	121 (2.45)
Global Competitiveness Index 2012 - Infrastructure	130 (2.28)



50%

of the population is urbanised making retail & consumer sectors attractive



Completing unfinished projects will accelerate infrastructure upgrades

the country, new malls being constructed and informal markets being converted into modern facilities.

Given the size of the population, potential for economic expansion, and under-served retail market, retailers are increasingly targeting Nigeria.

Another factor favourable to the growth of consumer industries is rapid urbanisation (50% of the population is urbanised). Lagos is expected be the twelfth-largest city in the world by 2025. High rates of urbanisation, coupled with vast economic potential suggest that Nigeria will increasingly grow into an industrial and services-based economy.

Logistics

Logistics Performance Index



Source: World Bank

Logistics facilitation procedures are a persistent constraint to trade.

Nigeria's poor infrastructure has constrained growth in the logistics industry. Time delays, bottlenecks for international shipments, poor tracking and tracing capabilities and poor logistics quality and

competence are all industry risks that weigh on growth prospects for logistics and transport industries.

Nigeria ranked poorly on all these factors on the Logistics Performance Index 2012 and has lost significant ground since the 2010 rating. Adding to this are burdensome customs procedures, which are still a major stumbling block in the effective functioning of the Nigerian logistics system and add to business costs and risk for transport and logistics services providers.

Transport infrastructure

Transport infrastructure performs comparatively well but remains a hurdle.

Compared to many of its African peers, Nigeria has relatively advanced infrastructure networks that cover extensive areas of the nation's territory. It is inadequate though and has been described as one of the leading impediments to the country's growth.

Roads are lagging far behind in investment and rail infrastructure is falling behind, too. On the other hand, airports and ports have seen considerable investment over the past few years, resulting in good international portals. It is estimated that raising the country's infrastructure level to that of the region's middle-income countries could boost annual real GDP growth by around four percentage points.iv

Nigeria's infrastructure challenges, though substantial, are not daunting given the strength of the national economy. Due to its abundant petroleum revenues, Nigeria is better placed than many of its African neighbours to increase the share of fiscal resources going to

infrastructure.

The Government has also been advocating the increasing use of public-private partnerships for several transport projects. But infrastructure investments have to be managed from the start to project completion, because historically, many of Nigeria's projects have been left unfinished and the country is littered with examples of wellfunded, but unfinished projects, including roads, factories and oil and gas plants.

Completing unfinished projects would further accelerate infrastructure upgrades.

Nigeria's infrastructure networks mirror the spatial concentration of economic activity in the south. The south is characterised by relatively high population density, and this is where many of the country's cities and larger towns are clustered.

Meanwhile, there is also an important concentration of both population and agricultural activity in the north of the country. Fortunately, unlike some of its neighbours Nigeria has developed infrastructure backbones that are national in reach.

Ports

Port infrastructure has seen major improvements in recent years.

Nigeria's port system has traditionally put a brake on economic development, due to poor performance and high costs. After a comprehensive reform of the port sector, beginning in 2000, the ports have undergone a major overhaul with operational management being converted to a landlord model.



Port at Lekki estimated to cost

could be gateway to West Africa





Terminal concessions now attract private investment on a scale unprecedented for Africa. Partial privatisation has helped eliminate overstaffing at the ports, cargo theft and excessive port-related charges, in addition to unlocking funds for infrastructure improvements.

Still, a number of key challenges remain, such as poor customs performance and corruption. There is also a need to improve both marine and landside access to ports.

There are a number of ports in Nigeria, with the two most important ones located in Lagos. Apapa and Tin Can Island Port together form Lagos Port Complex and serve Lagos as well as western Nigeria. Apapa Container Terminal is West Africa's largest container terminal.

Aside from the two Lagos ports there are several ports serving the oil and gas sector, such as Delta Port, which is located in the petroleum and natural gas producing Niger River Delta region of Nigeria.

Onne Port is located about 19 kilometres from the city of Port Harcourt. Onne Port has been designated as an Oil and Gas Free Zone by the Government of Nigeria and it serves as a hub port for oil and gas operations throughout West and Central Africa.

Because of the absence of a deepwater port, plans have reached an advanced stage for the construction of two deep-water ports in Lekki near Lagos and Ibaka in Akwa Ibom River State. The port at Lekki, which may become operational by the third quarter of 2016, at an estimated cost of US\$1.55 billion, will be part of the Lagos Free **Trade Zone**. The port is located

65km east of Lagos Mainland and could become the gateway to the West African region, which currently lags a clear maritime hub.

Air transport

While Nigeria has a well-developed air transport sector, Lagos has not established itself as a regional air transport hub.

Nigeria's aviation sector has seen enormous growth over the past few years, largely due to the rapid expansion of domestic services. Today, Nigeria is well served by air transport, with sufficient competition to offer competitive fares in the domestic market.

The size of Nigeria's air market is second only to South Africa in sub-Saharan Africa. Nigeria has 22 airports, four of which are international airports. Still, Lagos has not yet assumed its place as an air transport hub for the region. The primary reason for this is that the Federal Airport Authority of Nigeria has not been reformed and has not been allowed to proceed with the concessioning of airport terminals, which are in dire need of investment, to the private sector.

By contrast, on the eastern and southern side of the continent, a strong hub-and-spoke structure has developed around Johannesburg, Nairobi, and Addis Ababa. Additionally, air travel to and from Nigeria, as well as within, is sometimes hampered by fuel shortages that cause flight cancellations.

A number of projects are currently underway at airports across Nigeria. In February 2011, the Government approved a new international airport in the capital, Abuja, the

construction of five new terminals at five airports, the redevelopment of five existing terminals and six cargo terminals.

Rail

Nigeria's railway network is dilapidated and vastly underutilised. Traffic volumes (both freight and passengers) have consequently collapsed due to deficient performance and erratic service, despite the potentially significant demand for rail.

The inability to transport commodities at reasonable cost by means of a bulk transportation system could severely impact the country's ability to leverage opportunities from bulk products. Often, the food grown in the north ends up rotting in the fields because the cost of driving it to markets is more than its value.

The rail network is comprised of eight lines with an overall length of more than 3 500km. Investment projects in the sector concentrate on railway modernisation, line rehabilitation and completion or upgrading of existing rail lines.

In addition, Nigeria also plans to participate in the AfricaRail project by upgrading lines from 1 067mm gauge to 1 435mm gauge. AfricaRail is a project to rehabilitate and construct 2 000km of new railway, linking the railway systems of Cote d'Ivoire, Burkina Faso, Niger, Benin, Togo and ultimately Nigeria, at estimated costs of US\$2 billion.v

Roads

Roads are the mainstay of Nigeria's transport network.

Nigeria has developed an extensive national network of roads and bridges. Nigeria's roads carry more than 90% of domestic passengers and freight. Road network density is more than double that of other resource-rich African countries, although still only half of the levels found in Africa's middle-income countries.

Road network conditions are generally quite patchy, alternating between good, fair and poor across the country. National connectivity and road quality will see an improvement once numerous projects are completed in the near future.

Few areas remain unconnected to national backbones, and those are generally concentrated in the central, west and east of the country.

Nigeria's regional connections are fair, with a number of transnational corridors. These include connections to neighbouring countries like Niger, Chad, Cameroon and Benin, as well as coastal roads joining routes to Dakar in Senegal or Abidjan in Cote d'Ivoire.

The Trans-Sahara Highway connects Nigeria with Algeria via Niger. A cross-African route, the Lagos-Mombasa Highway links Nigeria, Cameroon, the Central African Republic, the DRC, Uganda and Kenya.

Conclusion

Based on our analysis, we've assessed the investment potential for Nigeria's transportation and logistics sector as shown in the graphic below.

Nigeria – Investment potential assessment

1. Demographics and resources Strong improvement expected **Key:** Attractive Some improvement expected Average Stagnation/marginal change expected Unattractive

End notes



South Africa



facilitation logistics

South Africa has the largest economy in Africa and is the most developed in sub-Saharan Africa. As a member of the BRICS countries, an association of five major emerging market economies, South Africa is recognised as a key emerging market along with other members of the group Brazil, Russia, India and China.i

Zimbabwe Botswana Mozambique O.R. Tambo Int. Pretoria eMalahleni Namibia Swaziland Walvis Bav Sisher **Richards Bay** Port of Lesotho Saldanha Port of Cape Town Port Elizabeth Cape Town Port of Port Elizabeth Port of Cape Town

Key factors supporting South Africa's position are its well-developed financial, legal, communications and transport sectors, as well as an open trade policy and a comparatively strong domestic market. South Africa is the best performer in Africa when it comes to trade facilitation logistics and among the best in terms of transport infrastructure. However, there are some obstacles, including rigid labour policies that diminish growth prospects to a mediocre level. Furthermore, South Africa faces the triple challenge of

poverty, unemployment and income

inequality.

To address these weaknesses cabinet has officially endorsed a programme of action, the National Development Plan (NDP). This plan represents the most comprehensive and constructive attempt at providing recommendations for redressing structural imbalances in the economy. However, there has been a loss of momentum with the implementation of the NDP due to political developments and industrial unrest.



Relatively low tariff rates are supportive of trade activity



More than

manufacturing firms export to African countries

Average GDP growth lagging peers and projected % annually

Provided it can get to grips with fundamental issues undermining business confidence, notably policy uncertainty, South Africa has the potential to establish itself as a top investment destination. As an important gateway to the African continent, it stands to benefit vastly from the extraordinary economic growth in neighbouring countries.

Economic performance

South Africa's economic growth correlates with the global economy.

South Africa has an open economy, with trade activity making up a significant component of domestic economic activity, with exports and imports accounting for 29% and 30% of domestic GDP respectively.

Exports are dominated by minerals, but there has also been an increase in manufacturing exports in recent years. ii There has been much debate focused on recent losses in exports as a result of more intense competition from the east and the impact of high labour costs in South Africa. South African imports, on the other hand, consist mainly of capital and intermediate goods. Tariff liberalisation undertaken since the early 1990s has been a major contributor to South Africa's strong economic growth. Today relatively low tariff rates are supportive of trade activity.

Trade policy is underpinned by deepening functional integration in the region, on the continent, and with emerging economies, particularly the BRIC nations. South Africa is a member of the Southern African Development Community (SADC) and Southern African Customs Union (SACU). This provides significant regional trade opportunities.

The rest of Africa is a prime export destination for South African manufacturers, according to the latest survey by the Manufacturing Circle, which showed that more than 75% of manufacturing firms were exporting to Africa.iii

South Africa is endowed with abundant natural resources. It is the world's largest producer and exporter of gold, chromium and platinum – 90% of the world's global platinum mineral resources are estimated to be in South Africa's Bushveld Complex.iv

Structural constraints have weighed on South Africa's growth momentum. Average GDP growth between 2010 and 2012 registered a tepid 3.0%, which benhinds its sub-Saharan African peers. The economy appears incapable of extricating itself from a rut of suboptimal growth which is projected to be around 3% annually between 2012 and 2017.

Business environment

A fairly favourable business environment supports South Africa's status as a regional economic powerhouse.

South Africa has one of the most sophisticated business environments in sub-Saharan Africa and strong state institutions, which are key to its status as a regional economic powerhouse. Importantly, the low cost of starting a business, estimated at 0.3% of per-capita income, means that entrepreneurs can respond

quickly to developing opportunities.

The country is acknowledged for its resilient and stable banking sector. The private business regulatory climate is also regarded as one of the most conducive in Africa.

While the general governance environment is robust, corruption is an issue. Corruption is not endemic,. There are a number of initiatives and structures in place to fight it. This means that the situation is better than in most other African countries.

The tax and financial regulatory climate is robust, the tax regime is progressive and includes a number of incentives for non-South Africans.

South Africa has long been struggling with very high crime rates, which not only pose a threat to individuals, but also impose considerable costs on business operations in the country. The impact of high levels of crime on business is clear, with 'crime and theft' frequently cited as one of the most problematic issues facing business in South Africa.

Labour

An inadequate education system, skills shortages and high unemployment are significant challenges.

The literacy rate in South Africa is fairly high at 89%, and the percentage of the population with at least a secondary education is also very robust at 70.4%. Yet, the quality of South Africa's education system rates poorly by global standards and remains a considerable obstacle to the country's attractiveness as an investment destination. South Africa's labour force is fairly welleducated and skilled in comparison to many other sub-Saharan countries.



The ratio of minimum wage to value-added is C the average for other BRICS countries



State-owned power utility is expanding capacity that will add 17 GW by 2019



Services and manufacturing have overtaken agriculture & mining in contribution to GDP

Energy

One of the biggest obstacles to growth in the country is putting its human capital to work. The labour market is relatively inflexible and lacks a robust labour relations framework. According to the World Economic Forum, although South Africa has very low non-wage labour costs (such as social insurance expenditure), the country has some of the most excessively rigid hiring and firing practices, as well as very low flexibility with regard to wage determination. The ratio of minimum wage to value added is almost three times the average for other BRICS countries.^v

Energy capacity has become a government priority following the power crisis that began in late 2007.

After years of underfunding, South Africa's power sector reached a crisis point at the beginning of 2008. Power shortages and steep tariff increases have seriously damaged South Africa's economy, as well as its appeal to foreign investors.vi

Despite there being two large-scale 4 800MW coal-fired power stations currently under construction as well as a number of renewable energy projects, energy supply remains a major risk factor in South Africa.

Energy and utilities infrastructure has historically accounted for a small portion of total infrastructure industry value. However, this has changed since the power crisis, with energy and utilities having accounted for the largest portion since 2008.

The state-owned power utility, Eskom, is busy with a capacity expansion programme that will cost 337 billion Rand (about US\$33 billion) and add 17 GW of new generating capacity to the national grid by 2019.

Consumer market

Growth in purchasing power opens new opportunities in the consumer market.

South Africa's economy was originally based on agriculture and mining. But this has changed over the years with services and manufacturing now contributing the greatest share to GDP. The country's economy is reasonably diversified with key economic sectors including mining, agriculture and fishery, vehicle manufacturing and assembly, food-processing, clothing and textiles, telecommunication, energy, financial and business services, real estate, tourism, transportation, and wholesale and retail trade.

South Africa's per-capita GDP is high due to the sizeable and developed nature of its economy. Per-capita GDP (based on purchasing-powerparity) is US\$11 375, compared to the average of US\$2 476 for sub-Saharan Africa. Real GDP per capita is expected to more than double in US-dollar terms over the coming 10 years, which will further increase

Population size (million, 2012)	51.2
Population growth (2012-2020, avg p.a.)	0.3%
GDP (US\$ billion, 2012)	384.3
GDP growth forecast 2012-2017 (avg, y/y rate)	3.0%
GDP per capita (US\$, 2012)	7 525
Global competitiveness index 2012 (global rank/144 (score 1-7))	52 (4.37)
Corp. Income Tax (CIT) rate	28.0%
Top exports	Platinum unwrought or in powder form (7,6%); Gold (incl. gold plated with platinum), in unwrought forms (excl. powder) (6,9%); Iron ore & concentrates, non- agglomerated
Logistics Performance Index 2012 (global rank/155 (score 1-5))	23 (3.67)
Global Competitiveness Index 2012 - Infrastructure (global rank/144 (score 1-7))	63 (4.13)





the purchasing power of consumers and drive forward sectors such as wholesale and retail. Additionally, South Africa's rising black middle class will play a determining role in further shifting the country's economy from an export-oriented to a more consumption-based one.

Logistics

Logistics Performance Index



Source: World Bank

South Africa's logistics performance outperforms its regional peers.

The efficiency of South Africa's customs clearance procedures (i.e. speed, simplicity and predictability of formalities) is generally considerably better than its neighbours' and is amongst the best in the region.

Globally, South Africa's logistics performance is also very good with an overall ranking of 23rd out of 155 countries in the 2012 Logistics Performance Index. South Africa made progress between 2010 and 2012, improving by five ranks and now ranks between Norway and Italy.

On the African continent, South Africa is by far the best performer, followed by Tunisia (41st) and Morocco (50th).

Transport

The need to move goods to inland centres of commerce have created a transportintensive domestic economy.

The transport sector is a key contributor to South Africa's competitiveness in global markets. The country's transport infrastructure is modern and among the most developed in Africa. Its physical infrastructure received a substantial boost from projects associated with the 2010 FIFA World Cup.

The air and rail networks are the largest on the continent, and the major roads are in good condition. South African port efficiency has improved considerably as a result on investment in new assets such as ship to shore cranes and other supporting handling equipment. However tariffs have remained high in comparison to global benchmarks. A re-positioning of South African ports and a reduction in tariffs could attract further transshipment traffic to and from Europe, the Americas, Asia, Australasia and both coasts of Africa. Some 35.6% of the country's GDP is concentrated in Gauteng, which lies 1, 400m above sea level and more than 500km from the nearest local port at Durban. This has resulted in very long freight corridors.

Despite its impressive credentials, South Africa's transport infrastructure also faces some challenges and is no longer the only gateway to Africa. Because of increasing infrastructure bottlenecks hampering growth, investment has begun to bypass South Africa.

The continued absence of an intermodal solution - which usually provides the most efficient transport solution – has led to a significant increase in South Africa's truck fleet in an attempt to address freight owners' door-to-door needs for reliability and performance.

Infrastructure funding for roads is largely provided by South Africa's national government. Parastatal companies have provided funding for freight rail and port infrastructure and they also undertake infrastructure development in other sectors, while other initiatives include the government's Expanded Public Works Programme, and publicprivate partnerships.

For the 2012/2013 fiscal year and subsequent three fiscal years, the South African Government has adopted an aggressive new National Infrastructure Plan. It has a budgeted expenditure of R827 billion (about US\$80 billion) over the three years, beginning in the 2013/2014 fiscal year, to boost both existing and new major infrastructure projects.vii





Port of Durban is Africa's busiest making it a suitable candidate for establishing a mega port



year in a row

Ports

Africa's busiest port, Durban, will be extended by the area of an old airport.

South African ports are generally considered to be the gateway to southern Africa. Approximately 96% of the country's exports are conveyed by sea, and its commercial ports are the conduits for trade between South Africa and its southern African neighbours as well as hubs for traffic to and from Europe, Asia, the Americas and the east and west coasts of Africa.

South Africa has eight main commercial ports. Some focus almost exclusively on bulk commodities, while others serve one major industry only, such as the offshore oil industry in the case of Mossel Bay. Richard's Bay has the world's largest bulk coal terminal. Durban was previously the largest container handling facility in the southern hemisphere (overtaken in recent years by Jakarta, Indonesia). Ngqura, which opened in 2009 near Port Elizabeth in the Eastern Cape, is the deepest container terminal in Africa.

Durban is Africa's busiest port. More than three out of every five containers entering or leaving the country go through this port. Durban's position in relation to the N3 highway, and its high throughput volumes, make it a suitable candidate for the establishment of a mega port to attract world trade.

Constraints at the Port of Durban have, however, resulted in some importers and exporters bypassing Durban in favour of ports such as Port Elizabeth, Walvis Bay in Namibia and Maputo in Mozambique. While there has been significant investment in ship-toshore cranes and straddle carriers at Durban, South Africa remains behind its global competitors regarding port productivity.

Comparatively high tariffs payable by vessels calling at South African ports have also contributed to lower volumes and shorter port stay times. Although port capacity is not the biggest constraint in operations, operational efficiencies, port charges, customs procedures and inland linkages all serve to constrain port performance.

Port infrastructure development is currently being prioritised, although investment is also required to enhance performance and efficiencies. Transnet – South Africa's state-owned transport company and main operator of ports, railway and pipelines – is focused on expanding handling capacity at the main container ports of Durban, Cape Town and Ngqura.

With regard to long-term growth in container terminal capacity, Transnet is looking beyond current investment programmes. A comprehensive container strategy is being developed, including both port capacity and inland terminals.

Expansion of the Port of Durban will include the conversion of an 800-hectare site, including the old Durban International Airport, into a dig-out port with a planned handling capacity of approximately 9.5-million TEU. The first phase is expected to be operational by 2019, with the project scheduled for completion by 2050.

Air transport

South Africa has an excellent infrastructure of airports, with airports in all major cities. These include the three main international gateways of OR Tambo in Johannesburg with a capacity of 21 million passengers a year, Cape Town International Airport (14.5 million) and King Shaka International Airport in Durban (7.5 million).

Capacity is not a major issue within the South African air transport system and the state of infrastructure and associated services is good. In fact, overcapacity in the airport sector has resulted in airlines paying higher airport charges. Airports have been significantly upgraded in recent years, mainly in preparation for the 2010 FIFA World Cup.

South African Airways (SAA) is the national flag-carrier which continues to hold considerable aviation market share in Southern Africa and has considerably expanded the number of African destinations to which it now flies. In 2012, it was voted the best airline in Africa for the 10th year in a row by UK global aviation research organisation Skytrax.





Rail

Progress in the rail sector has been impeded by decades of underinvestment.

The country's rail infrastructure, which connects the ports with the rest of South Africa, represents about 80% of Africa's total. The country's rail system is significantly more developed than those in the majority of other emerging markets and more than two million people travel by train every day within South African cities.

South Africa's extensive rail network - the 14th longest in the world - connects with other networks in the sub-Saharan region and neighbouring Namibia, Botswana, Mozambique, Zimbabwe and Swaziland.

The Gautrain, Africa's only highspeed train, was opened just days before the start of the 2010 FIFA World Cup. Connecting Johannesburg, Pretoria and OR Tambo International Airport, it transports about 40, 000 people every day.

In terms of freight rail, South Africa's rail network developed historically in support of the growth of the mining sector and other heavy industries, as well as large-scale agriculture and forestry.

South Africa is currently feeling the effects of almost 30 years of underinvestment in its rail system. The average age of the fleet is 30 to 40 years (with a maximum life span being 46 years) and 51% of the fleet soon due to be retired.

There has been significant investment in the rail sector and infrastructure has considerably improved, although freight densities and performance still require attention. There are, however, t already major limitations on the network.

In the next ten year's system limitations will become more serious especially on key corridors, including the coal line to Richards Bay. The network is already experiencing major operational, institutional and technical constraints. Rolling stock failures, signalling failures, security and power outages (including power outages as a result of cable theft) are major issues. The South African rail industry will only become a cost-effective alternative to road transport if the operational efficiencies of freight rail are increased to deliver a predictable and reliable service at lower cost than competing road freight offerings.

Improving the country's rail network is one of the government's top priorities, with projects aiming to increase freight rail volumes and increase market share of container traffic. Significant investment is being made in rolling stock, as well as other equipment such as signalling equipment, infrastructure, processes and improving efficiencies.

Road

Long-term failure to maintain roads has resulted in the network becoming increasingly unable to cope with rising demand.

South Africa's road network is the longest of any African country and about 89% of the country's freight relies on this mode of transport. ix About 19% of the national roads are toll roads. While 90% of the national network is in good-to-excellent condition, and metropolitan roads are in satisfactory condition, the paved provincial road network has deteriorated significantly over time.

The major challenge for South Africa's road network is that 78% is estimated to be older than its original 20-year design life. There is a massive backlog in road maintenance and rehabilitation. Despite increased funding for roads, resources allocated to roads infrastructure remain inadequate for eliminating the huge backlogs in maintenance over the next five to ten years.

Recognising the constraints and imbalances in the existing transport system, in 2007 the Government initiated a project to develop the National Transport Master Plan 2050 to guide the developments of multimodal transportation system to meet South Africa's long-term transport needs. Amongst other initiatives, the plan will prioritise a major shift from road to rail transport for both passenger and freight traffic.x



Conclusion

Based on our analysis, we've assessed the investment potential for South Africa's transportation and logistics sector as shown in the graphic below.

South Africa – Investment potential assessment

1. Demographics and resources 2. Economics **Key:** • Attractive Strong improvement expected Some improvement expected Average

Stagnation/marginal change expected

End notes

Unattractive

- "Imports and exports", South African Reserve Bank, http://www2.resbank.co.za/internet/Glossary.nsf/0/0e423e39f84af20042256b43002da8ac?OpenDocument



Tanzania

Tanzania is expected to become one of the fastestgrowing economies in the world. Key drivers will be recent natural gas discoveries, regional integration, reforms to ease doing business and long-term stable democracy.

Uganda Lake Victoria Kenya Musor Kigali Mwanza Burung Musongati Kigoma DRC Kigoma Tabor Mwambani Port Bagamoyo Port Proiect Port of (expansion) Mbeya Indian Kilwa Ocean Zambia Mtwara Kilwa Port Mbamba Bav Mbamba Bav Mozambique

A rapidly growing economy but still small in abosolute terms

Tanzania is already one of sub-Saharan Africa's most rapidly growing economies, but it is still rather small in absolute terms. with a market size of about **US\$28 billion**. Recent discoveries of natural gas offshore and a broad number of planned infrastructure projects promise to further boost to the economy. However, increased development will lead to greater congestion at the Port of Dar es Salaam, which the construction of a new US\$10 billion port at Bagomoyo will alleviate once it begins operating in 2017.

With regards to the low level of human development and poverty, the Tanzanian Government has called for more active private-sector participation in its Second National Strategy for Growth and Reduction of Poverty, MKUKUTA II, initiated in 2010. There are positive signs that Tanzania will stay on a favourable growth path in the long run and establish itself as a viable alternative to Kenya as a gateway to the East African region.

"In terms of rating it as an investment haven, I would say it has potential and I haven't been exposed to any corruption. There are large areas that are relatively unexplored and therefore a good investment attraction."



Dick Kruger, Deputy Head: Techno Economics, Chamber of Mines

Trading hub

A liberalised trade regime and regional integration will foster economic growth and increase traffic volumes.

International trade constitutes a significant proportion of GDP in Tanzania, with exports and imports accounting for 31% and 50% of GDP respectively. The widening trade deficit has been driven by a sharply rising oil import bill.

Tanzania's export base is fairly broad. The principal exports include gold, coffee, cashew nuts, manufactured goods and cotton. Major trading partners are from Asia with China and India of growing importance - the Middle East and Europe.

Export growth remained below its potential at 5.4% between 2001 and 2011. However, this is likely to change as the Government is actively working to increase competitiveness, while participating actively in regional trade integration. Notable reforms in facilitating increasing trade efficiency include the lifting of price controls on most products and a decrease in the number of road blocks to facilitate greater cross-border trade, although further reduction is still required.

Tanzania is a member of The East African Community (EAC) as well as The Southern African Development Community (SADC). Given its active role in these regional trade communities, the Government's plans for increasing trade competitiveness have sped up. Tanzania has pursued implementation of the EAC Common Market Protocol, which became operational in July 2010, and

continues to play an important role in the process of establishing a Common Market by the SADC member states.

Diverse natural resources provide the basis for attracting investment and support economic growth. Tanzania is a significant producer of gold and diamonds, with gold being the most important mineral and key growth area. Tanzanite gemstones and coal have the potential to become among the fastest-growing mining subsectors. Tanzania also has substantial reserves of uranium oxide. Exploration has also been conducted in nickel, oil and natural gas.

Tanzania achieved almost 7% average growth over the last decade. For the 2012-2017 period, the IMF projects annual economic growth to vary between 6.6 and 7.2%, placing it among the world's fastest-growing economies over the medium term.ii At the same time per-capita GDP will grow at a robust 5.7%, though starting from a low base. Economic growth is constrained by high levels of poverty and other poor socioeconomic indicators.

At the beginning of 2012, inflation stood at 19.8%, but thanks to structural and fiscal reforms on the part of the Government, the IMF predicted it would reach single digits by mid-2013. This was proved right as per Tanzania Bureau of Statistics where annual inflation stood at 9.4% in April 2013 and 6.1% by September 2013. This has been accompanied by a continuing decline in prices of staple foods, which together with lowing lending rates, provides a more positive environment for investment growth.

Despite reforms, challenges remain

Despite impressive reforms, the challenging business environment and security still remain important issues.

Tanzania's historically state-led economy is now more market-based but remains hindered by weak property rights. Land in Tanzania is officially government property and can only be leased from the Government for 33, 66 or 99 years, depending on its use. However, annual land rentals are low and new legislation gives the lessee first right of refusal to extend lease when it expires.

In addition, recent reforms have been aimed at establishing a reliable system of transferable property rights. Despite efforts to reform the business environment, the country continues to suffer from a regulatory environment that is not sufficiently responsive to the needs of investors.

Corruption is one of the major obstacles facing investors in Tanzania, even though less severe than in neighbouring Kenya. Tanzania's ranking in Transparency International's Corruption Perception Index 2012, though high at 102 out of 174 countries, is better than most of its African peers.

Furthermore, the lack of efficiency within state institutions and the goods market as well as an overall lack of business sophistication add to the challenge of domestic productivity growth. Access to finance is another bottleneck to the development of the private sector.



force employed in agriculture



Security is an issue in Tanzania, with armed banditry prevalent in regions near the borders to Rwanda and Burundi. Outside these regions and election times, crime is the most common security risk. Traffic is a leading safety concern with congestion becoming an increasing problem in larger urban areas. To protect passengers, busses are not permitted to drive cross-country at night.

Unskilled workforce

The unskilled local workforce is a major challenge.

Tanzania has a large population and a robust population growth rate. It had the sixth-largest population in

Africa in 2010 and is expected to move up to fifth by 2020 and fourth by 2050. Consequently, there is a large labour force and a sustained surplus of labour. Up to 80% of the labour force is employed in the agriculture sector.

Tanzania's socioeconomic indicators remain weak. Its score on the Human Development Index in 2011 was similar to the average for sub-Saharan Africa. The level of education among youth and people in rural areas is also comparatively

Shortages of skilled labour are a significant challenge for firms operating in Tanzania, particularly in new and fast-growing sectors of the economy. This has spurred growing levels of government and private investment in education, but

Tanzania still has some way to go in translating its large population into a competitive advantage.

Existing labour regulations allow foreign investors to recruit only up to five expatriates. Although additional work permits for expatriates may be granted under certain conditions, it can sometimes be difficult to get the necessary approval.

Power

Tanzania's electricity industry has grown at a slightly slower pace than the economy as a whole over the past decade, making electricity shortages and frequent power outages a constraint to economic growth. Only 20% of the population of 45 million currently has access to electricity. Improving supply and distribution will assist the country in attaining higher levels of economic growth. Tanzania presently produces about 800MW of electricity, scarcely meeting demand, which is expected to be double that amount by 2015.

Although demand for electricity is expected to continue to outstrip supply in the short term, by the end of 2015, supply is expected to exceed 3 GW, as various power projects come onstream. The increase in capacity will be enough to meet domestic demand and stimulate the manufacturing sectors as well as providing a surplus for export.iv

Population size (million, 2012)	47.8
Population growth (2012-2020, avg p.a.)	3.0%
GDP (US\$ billion, 2012)	28.2
GDP growth forecast 2012-2017 (avg, y/y rate)	7.0%
GDP per capita (US\$, 2012)	628
Global competitiveness index 2012 (global rank/144 (score 1-7))	120 (3.60)
Corp. Income Tax (CIT) rate	30.0%
Top exports	Other precious metal ores and concentrates, other than silver (14,5%); Tobacco, partly or wholly stemmed/ stripped (8,7%); Coffee, not roasted, not decaffeinated (6,4%)
Logistics Performance Index 2012 (global rank/155 (score 1-5))	88 (2.65)
Global Competitiveness Index 2012 - Infrastructure	132 (2.27)







Agriculture

Agriculture is a crucial to Tanzania's economy and domestic employment.

Tanzania has immense agricultural potential. Only 5% of land is permanently cultivated, but 20% is considered cultivatable. However, while most other sectors are growing, agriculture faces stagnation in productivity growth. In 2011, agriculture accounted for 25.2% of GDP and is the largest contributor to employment.

However, it continues to be dominated by small-scale and subsistence farmers with average farm sizes between 0.9 and 3 hectares and with little capital to invest in machinery and irrigation. As a consequence the Government is supporting large-scale investment into the agricultural sector.

Tourism

Tourism is the second-highest earner of foreign currency in Tanzania and the country is already one of the top tourist destinations in Africa. With a quarter of its land area set aside for conservation and vast natural attractions, there is still much untapped potential, which will be able to be more effectively exploited once necessary tourism infrastructure upgrades have been made.

Economic diversification

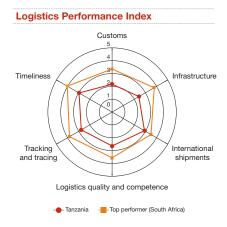
Economic diversification is driven by good development in manufacturing and mining.

There have been some signs of diversification in Tanzania's economic output, with strong growth in manufacturing value-add over the 2005-2010 period of around 8.8% annually, with manufacturing exports to the EAC and SADC countries also expanding briskly over this period.

Most activities in the manufacturing sector are concentrated on the manufacture of simple consumer goods for the domestic market. Because of Tanzania's low per capita GDP, retailers must also focus on basic goods, but even this is not easy since the inefficient and inadequate product supply chain is one of the main impediments to expansion in the retail sector.

Thanks to the country's wide natural resource base, mining is a sector of growing importance, though its contribution to GDP remains relatively small at 3.2%. The Government aims to expand this to 10% by 2025.

Logistics improving



Source: World Bank

Logistics performance has improved significantly in recent years

The Logistics Performance Index shows that Tanzania's overall logistics ranking has shown significant improvement over the past few years. From an overall global ranking of 137th in 2007, it is now ranked 88th out of 155 countries and 9th in Africa.

Although international shipments, infrastructure, track & trace and logistics competence have improved significantly since 2007, customs and timeliness have declined slightly since 2010. However, the performance of customs procedures is likely to improve in the near future, since Tanzania has started implementing the Pre-Arrival Declaration (PAD) system and electronic submission of customs declarations to promote trade and to improve the business environment generally.



in the pipeline



Transport infrastructure

Transport infrastructure performs better than most peering countries.

Tanzania's infrastructure quality differs largely between the four major modes of transport: It is well served by air, particularly domestically, but also has relatively good international connections. Roads are also sufficient for the purposes of trade, but the low levels of rural connectivity could constrain the development of agricultural and mining interests.

Rail requires significant investment to adequately serve domestic and neighbouring markets and connect these with ports and international markets. Finally, the Port of Dar es Salaam is a major bottleneck, limiting the country's ability to trade, not only from a capacity perspective, but also in terms of clearing shipments through customs appropriately.

Overall, Tanzania's infrastructure performs fairly well compared to its African peers, but quality is still poor and has a negative impact on the economy's productive capacity.

Infrastructure in Tanzania has witnessed impressive investment in recent years and there is more to come. Transport and utilities infrastructure projects worth US\$19 billion are in the pipeline. Many of these projects are expected to be financed by donors (in the form of loans), while the rest will be financed by the Government or via bilateral agreements with other countries such as China, which is currently funding railway rehabilitation projects.

The infrastructure plans of the entire EAC should see a number of new regional transport links developed, with a focus on improving rail infrastructure in the two major transport corridors linking to the regions two export hubs: the Port of Mombasa in Kenya and the Port of Dar es Salaam.

Port competition

Dar es Salaam is a major regional maritime hub and in competition with Mombasa as the main maritime hub in East Africa. While Mombasa is currently the largest port in the region, for its part, Dar es Salaam handles 4.1 million tonnes of dry cargo and six million tonnes of bulk liquid cargo annually. It also serves the landlocked countries of Malawi, Zambia, the DRC, Burundi, Rwanda and Uganda.

Dar es Salaam's performance indicators compare well to those of other eastern and southern African ports. It has a low container dwell time, low truck processing time, and high crane productivity. As a result, the port leads sub-Saharan Africa in container handling productivity and ranks among the top in general cargo handling.

But quality comes at a price. The European Union (EU) reports that shipping costs at Dar es Salaam are among the highest in the world. Currently, the cost of using the port is 24% higher than other port facilities in sub-Saharan Africa.

What makes Dar es Salaam port costlier than others are delays in cargo handling, as it suffers from significant capacity constraints - caused by high traffic growth

and poor backward linkages with inland transport networks - and congestion. Its demand-to-capacity ratio is the highest in Africa after Mombasa. Adding to the pressure, Dar es Salaam also accommodates transhipments that Mombasa cannot handle due to its own severe capacity constraints and operational inefficiencies.

The Port of Dar es Salaam is due to be expanded, with the port authority's development plan estimated to cost US\$400-650 **million.** Other port projects include the construction of new ports at Bagamoyo, Mwambani in Tanga, Kilwa and Mtwara in the South, Malindi in Zanzibar and Musoma, situated on Lake Victoria. Musoma is an important hub that connects to Jinja and Port Bell in Uganda and Kisumu in Kenya.

Air transport

Tanzania has three international airports in Dar es Salaam, Kilimanjaro and Zanzibar. In addition, there are a number of domestic airports. Tanzania has one of the largest domestic air transportation markets in sub-Saharan Africa, but high demand leads to capacity constraints, especially at Dar es Salaam airport. Indeed, the airport is currently operating beyond its design capacity in terms of the numbers of passengers it accommodates.

In contrast to its vibrant domestic air transport market, its international market is one of the smallest in sub-Saharan Africa. Tanzania's appeal as a tourist destination would benefit greatly from the increased availability of direct intercontinental flights.



One of **2** countries in sub-Saharan Africa that allow competition in its domestic sector



Chinese Government signed

Tanzania-Zambia Railway Authority to rehabilitate regional transport network



Tanzania stands out for allowing competition in its domestic air transport market and has more than one provider on each of its 17 routes. This is outstanding for the region, as only one other country in sub-Saharan Africa, South Africa, permits competition in its domestic air transport sector.

Flight safety is a concern and greater investment is needed in this area.

Rail

There are big plans for investment in rail infrastructure.

Tanzania's rail corridors are key conduits for bulk freight in the region as they ease the pressure on roads. The rail system consists of two main lines. The central line, which runs from Dar es Salaam to Tabora, has two branches: one to Kigoma in the west along Lake Tanganyika, the second runs from Tabora to Mwanza port on Lake Victoria.

The other line runs from Ruvu northward to Korogwe and then branches to Tanga port on the Indian Ocean. The other branch goes north-west to Moshi. It connects to the Kenyan railway system at Taveta as well also to Kenyan and Ugandan networks by rail ferry on Lake Victoria. Still, not all railway lines are operational and significant further investment is needed.

The national railways of Tanzania, the DRC and Zambia signed an agreement in March 2013 to facilitate easier movement of cargo and people between these countries.

Rail projects with an estimated value of more than US\$14 billion are currently in various stages of development. These include a

US\$2.7 billion project to develop new a new railway line from Tanga at the Indian Ocean to Musoma on Lake Victoria.

The Chinese Government has signed a US\$42 million agreement with the Tanzania-Zambia Railway Authority (Tazara), enabling Chinese companies to rehabilitate the railway, which is an important regional transport network connecting Eastern Africa to Asia and the Far East through the Port of Dar es Salaam. Once completed, the deal will drastically increase capacity.

Tanzania, together with Rwanda and Burundi, is also developing plans for a new railway linking the three countries. The 1 651 kilometres line is planned to link Dar es Salaam with Isaka (Tanzania), Kigali (Rwanda) and Musongati (Burundi). It is estimated the project will cost US\$ 5.1 billion.

Although much work is being considered in the rail sector, it should be noted that plans are ambitious and funding has yet to be secured for many of the projects.

A central road network forms Tanzania's infrastructure backbone

Tanzania's road coverage is better than the regional average and the network of trunk roads is adequate. Although the network provides basic regional and national connectivity, linking the capital Dodoma to the coast, roads are generally in poor condition and can become impassable in rains, when floods sometimes wash them away.

Nevertheless, compared to benchmark groups, both paved and unpaved roads in Tanzania can be considered to be good. Due to great progress in road sector reform in recent years, Tanzania is also one of the few African countries that appear to be allocating adequate resources to road network maintenance.

As mentioned earlier, road safety is a major concern, which increases operational risks and undermines the viability of logistics businesses.

On a trans-African level, the Cape-Cairo route traverses Tanzania along the main part of a central corridor that links Dar es Salaam to Rwanda, Burundi, Uganda and the DRC. This is part of one of the four corridors that form Tanzania's infrastructure backbone:

- From Dar es Salaam west to Dodoma and northwest to Mwanza on Lake Victoria;
- · From Dar es Salaam west and southwest to Mbeya and on to Zambia:
- From Dar es Salaam north to the mountainous area around Kilimanjaro; and
- · From Mwanza to Kigoma on Lake Tanganyika.

The rest of the country, by contrast, is sparsely populated and characterised by only fragmented infrastructure coverage.

Conclusion

Based on our analysis, we've assessed the investment potential for Tanzania's transportation and logistics sector as shown in the graphic below.

Tanzania – Investment potential assessment

1. Demographics	and resources	$ \sqrt{2} $
2. Economics		
3. Business envir	onment	Image: Control of the
4. Trade and logis	stics	
5. Transport infra	structure	Ø
Key: Attractive Average Unattractive	Strong improvement expected Some improvement expected Stagnation/marginal change ex	pected

End notes

- "Declining inflation a boon to the mortgage business", Daily News, http://www.dailynews.co.tz/index.php/biz/21285-declining-inflation-a-boon-to-mortgage-business

Appendices





Key figures

Demographics	Algeria	Angola	DRC	Egypt	Ghana	Kenya	Mozambique	Nigeria	South Africa	Tanzania	Commments
Key figures											
Population 2012 (in m)	38.5	20.8	65.7	80.7	25.4	43.2	25.2	168.8	51.2	47.8	World Bank - World Development Indicators 2013
Population 2020 (in m)	43.8	26.5	81.3	91.1	29.7	52.9	30.6	210.2	52.4	60.4	World Bank - World Development Indicators, p 42/ Table 2.1
Population growth (2012-2020, avg, p.a.)	1.6%	3.1%	2.7%	1.5%	2.0%	2.6%	2.5%	2.8%	0.3%	3.0%	Calculation
Human Development Level (2012)	high	low	low	medium	medium	low	low	low	medium	low	Human Development Index (United Nations)
Human Development Index (rank out of 186)	x 93	148	186	112	135	145	185	153	121	152	Human Development Index (United Nations)
Labour force 2012 (in m)	12	7.4	24.9	26.6	10.5	16.1	11.4	51	18.6	22.8	World Bank - World Development Indicators 2013
Labour productivity (GDP / person employed 2012, US\$)	17 442	15 541	691	9 650	3 848	2 528	1 246	5 298	20 662	1 239	Calculation
Labour productivity (GDP / person employed, % growth 2009-2011)	1.1%	%0:0	3.3%	1.1%	7.9%	2.6%	4.3%	5.0%	3.0%	3.2%	World Bank - World Development Indicators, p54/ Table 2.4
Labour market efficiency (2012, score 1-7)	2.8	4	n/a	3.1	4.1	4.6	3.72	4.5	3.94	4.6	World Economic Forum - Global Competitiveness Index 2012
Adult literacy rate (% ages 15+, 2005-11)	72.5%	70.5%	%0.79	72.0%	%0.79	87.5%	92.0%	61.0%	%0.68	72.0%	World Bank - World Development Indicators 2013
Health and primary education (2012,score 1-7)	5.4	2,9*	n/a	5.3	4.7	4.6	3.5	3.2	3.9	4.6	World Economic Forum - Global Competitiveness Index 2012
Population with at least secondary education	24.1%	n/a	23.2%	51.2%	53.8%	41.9%	3.6%	n/a	70.4%	7.4%	United Nations - Human Development Report 2013, p170 (United Nations)
Higher Education and Training (2012, score 1-7)	3.4	1,9*	n/a	3.3	3.4	3.6	2.39	3.31	3.98	2.7	World Economic Forum - Global Competitiveness Index 2012
Public spending on education % of GDP (2010)	5 n/a	3.5%	2.5%	n/a	8,2%*	%2'9	n/a	n/a	%0'9	6.2%	World Bank - World Development Indicators 2013
Public spending on education per capita (2010)	n/a	193.5	6.5	n/a	130.4	63.1	n/a	n/a	450.4	36.6	Calculation
Size of (stable) middle class (2010, % of total; per capita consumption level of \$4-20 per day)	27.3%	13.2%	4.7%	31.6%	19.8%	16.8%	2.6%	%6.6	19.8%	2.9%	Africa Development Bank - The Middle of the Pyramid: Dynamics of the Middle Class in Africa, p5

Economics	Algeria	Angola	DRC	Egypt	Ghana	Kenya	Mozambique	Nigeria	South Africa	Tanzania	Commments
Key figures											
Market size 2012 (GDP US\$ 209.3 115.0 17.2 256.7 4 billion)	209.3	115.0	17.2	256.7	40.4	40.7	14.2	270.2	384.3	28.2	IMF -World Economic Outlook (Oct. 2013)
Market size 2017 (forecast, GDP 230.3 US\$ billion)		156.3	27.0	373.0	63.8	70.1	22.4	398.9	438.7	43.1	IMF -World Economic Outlook (Oct. 2013)
GDP growth 2010-2012 (avg, 3.2% y/y rate)	3.2%	4.2%	7.1%		10.3%	4.9%	7.3%	7.3%	3.0%	6.8%	IMF -World Economic Outlook (Oct. 2013)
GDP growth forecast 2012-2017 (avg, y/y rate)	3.6%	5.7%	8.6%	3.4%	5.9%	6.2%	8.0%	6.8%	3.0%	7.0%	IMF -World Economic Outlook (Oct. 2013)
GDP per capita 2012 (US\$)	5 582	5 700	230	3 112	1 622	296	634	1 555	7 525	628	IMF -World Economic Outlook (Oct. 2013)
GDP per capita forecast 2017 (US\$)	5 700	6 671	311	4 075	2 255	1 446	904	2 114	8 090	827	IMF -World Economic Outlook (Oct. 2013)
GDP per capita growth rate 2012-2017 (avg, y/y rate)	0.4%	3.2%	6.2%	5.5%	6.8%	8.4%	7.4%	6.3%	1.5%	5.7%	Calculation
Macro-economic environment / stability (2012, score 1-7)	5.7	4.2	n/a	3.1	4.1	3.4	4.6	5.2	4.6	4.1	World Economic Forum - Global Competitiveness Index 2012
CPI inflation (2012 average)	8.9%	10.3%	9,3%*	7.1%	9.2%	9.4%	1.1%	12.2%	5.4%	16.0%	World Bank - World Development Indicators 2013

Business Environment	Algeria	Angola	DRC	Egypt	Ghana	Kenya	Mozambique	Nigeria	South Africa Tanzania	Tanzania	Commments
Key figures											
Corruption perception index (2012, rank out of 174 countries)	105	157	160	118	64	139	123	139	69	102	Transperency International - Corruption Perception Index
Informal payments to public officials (2002-2012, % of firms)	66.6%	48.9%	65.7%	15.2%	38.8%	79.20%	14.8%	40.9%	15.1%	49.5%	World Bank - World Development Indicators, p 288/ Table 5.2
Total Tax Rate as a percentage of commercial profits (pwc paying taxes 2013)	72.0%	53.2%	339.7%	42.6%	33.5%	44.4%	34.3%	33.8%	33.3%	45.3%	PwC - Paying Taxes 2013, http:// www.pwc.com/gx/en/paying-taxes/ data-tables.jhtml
Global Competitiveness Index 2012 (score 1-7)	3.72	2,96*	n/a	3.73	3.79	3.75	3.17	3.67	4.37	3.6	World Economic Forum - Global Competitiveness Index 2012
Institutions (score 1-7)	2.7	2,9*	n/a	3.6	3.8	3.4	3.4	3.3	4.4	3.6	World Economic Forum - Global Competitiveness Index 2012
Goods market efficiency (score 1-7)	ဗ	3,2*	n/a	3.8	4.2	4.1	3.8	4.2	4.7	3.9	World Economic Forum - Global Competitiveness Index 2012
Financial market development (score 1-7)	2.4	2,7*	n/a	3.7	4.2	4.7	3.1	4.1	5.7	3.9	World Economic Forum - Global Competitiveness Index 2012
Business sophistication (score 1-7)	2.5	2,4*	n/a	3.8	3.6	4	3.1	4	4.3	3.5	World Economic Forum - Global Competitiveness Index 2012
Innovation (score 1-7)	2.1	2,1*	n/a	2.8	ဇာ	3.4	2.6	3.1	3.5	3.1	World Economic Forum - Global Competitiveness Index 2012

Trade & Logistics	Algeria	Angola	DRC	Egypt	Ghana	Kenya	Mozambique	Nigeria	South Africa	Tanzania	Commments
Key figures											
Exports of goods & services (2011, % of GDP)	31%*	65.0%	%0.89	21.0%	44.0%	29.0%	29.0%	40.0%	29.0%	31.0%	World Bank - World Development Indicators 2013
Export volume growth (2001-11, % avg annual growth)	-0.20%	10.4%	8.6%	8.7%	7.6%	3.5%	%6.9	4.7%	%6:0	5.4%	World Bank - World Development Indicators, p 338/ Table 6.1
Imports of goods & services (2011, % of GDP)	22%*	43.0%	78.0%	25.0%	20.0%	45.0%	46.0%	36.0%	30.0%	50.0%	World Bank - World Development Indicators 2013
Import volume growth (2001- 11, % avg annual growth)	11.2%	18.0%	12.3%	12.0%	10.7%	8.9%	8.5%	13.9%	7.1%	13.0%	World Bank - World Development Indicators, p 338/ Table 6.1
Balance of Trade (2011, % of GDP, Exports – Imports)	%0.6	22.0%	-10.0%	-4.0%	-6.0%	-16.0%	-17.0%	4.0%	-1.0%	-19.0%	Calculation
Logistics Performance Index (LPI 2012, score 1-5)	2.41	2.28	2.21	2.98	2.51	2.43	2,29*	2.45	3.67	2.65	World Bank - Logistics Performance Index 2012
LPI – Customs (score 1-5)	2.26	2.33	2.1	2.6	2.33	2.08	1,95*	1.97	3.35	2.17	World Bank - Logistics Performance Index 2012
LPI – International shipments (score 1-5)	2.68	2.26	2.23	င	2.81	2.69	2,77*	2.6	3.5	2.91	World Bank - Logistics Performance Index 2012
LPI – Logistics quality and competence (score1-5)	2.13	2	2.17	2.95	2.68	2.38	2,20*	2.52	3.56	2.64	World Bank - Logistics Performance Index 2012
LPI – Tracking and tracing (score 1-5)	2.46	2	2.35	2.86	2.31	2.34	2,28*	2.35	3.83	2.77	World Bank - Logistics Performance Index 2012
LPI – Timeliness (score 1-5)	2.85	2.59	2.38	3.39	2.76	2.88	2,40*	2.92	4.03	2.97	World Bank - Logistics Performance Index 2012
Port/airport supply chain Cost (US\$)	1 000	n/a	5 000	773	775	1 455	n/a	1 261	1 861	n/a	World Bank - Logistics Performance Index 2012, p43
Land supply chain Cost (US\$)	n/a	n/a	n/a	1 097	775	1 651	3 000	500	1 442	n/a	World Bank - Logistics Performance Index 2012, p43

Transport Infrastructure	Algeria	Angola	DRC	Egypt	Ghana	Kenya	Mozambique	Nigeria	South Africa	Tanzania	Commments
Key figures											
Road density (2001-10, km of road per 100 sq km of land area)	വ	4	7	41	46	11	4	21	62	10	World Bank - World Development Indicators 2013
Paved road (2000-10, % of total)	77.1%	10.4%	1.8%	92.3%	12.6%	14.3%	20.8%	15.0%	20.3%	14.9%	World Bank - World Development Indicators 2013
Paved road network condition (% in good/fair condition)	n/a	42.0%	%0:02	n/a	75.0%	84.0%	83.0%	67.4%	92.0%	94.7%	World Bank: Africa Infrastructure Country Diagnostic (AICD) table
Quality of roads (rating 1-7 worst to best, 2012)	3.4	2.5	n/a	2.9	3.5	3.9	2.3	2.8	4.9	3.2	Global Competitiveness Index 2012
Rail line density (2000-10, km of road per sq km of land area)	0.1	0.2	0.2	0.5	0.4	0.5	0.4	0.4	1.7	0.3	Estimation: Rail lines (km 2000- 2010)/ total land area
Quality of railroad infrastructure (rating 1-7 worst to best, 2012)	3 2	1.6	n/a	3.1	1.7	2.5	2.2	1.9	3.4	2.3	Global Competitiveness Index 2012
Quality of port infrastructure (rating 1-7 worst to best, 2012)	2.7	2.3	n/a	4	4	3.8	3.4	3.6	4.7	3.3	Global Competitiveness Index 2012
Average of port delays: Container dwell times (2008, avg days)	n/a	12	25	n/a	25	വ	22	42	4	7	World Bank: Africa Infrastructure Country Diagnostic (AICD) Report by country
Air freight (2012, million ton-km)) 15	64	n/a	346	-	334	rC	n/a	1 173	-	World Bank - World Development Indicators 2013
Quality of air transport infrastructure (rating 1-7 worst to best, 2012)	S.S	3.1	n/a	5	4.1	4.8	4.1	4	6.1	3.5	Global Competitiveness Index 2012
Value lost due to electrical outages (% of sales, 2002-12)	4.0%	12.6%	22.7%	3.2%	5.6%	6.3%	2.4%	8.9%	1.6%	9.6%	World Bank - World Development Indicators 2013
LPI – Infrastructure (score 1-5)	2,02	2,48	1,96	3.07	2.05	2,16	2,04*	2,27	3,79	2,41	World Bank - Logistics Performance Index 2012
Quality of overall infrastructure (2012, 1-7)	3.5	2,1	n/a	3.8	3.9	4	ဇ	3.2	4.5	3.1	Global Competitiveness Index 2012
Perceived transport quality (% of firms identifying transport as a major business constraint)	n/a	n/a	30.0%	n/a	17.6%	37.0%	23.0%	29.9%	n/a	14.1%	World Bank: Africa Infrastructure Country Diagnostic (AICD) table
Main Port	Skikda	Luanda	n/a	Damietta	Tema	Mombasa	Maputo	Lagos	Durban	Dar es Salaam	
Main Port capacity (TEUs in thousand handled in 2007)	100.0	407,6**	n/a	1 195.6	458.1	585.4	80.4	235.8	2 511.7	334.1	Containerisation International Yearboook, 2009



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