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Africa Digest

Trends and Issues in Macro Environment

Vol. 2020 - 17

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1. Digital Trends in Africa

Africa's involvement in the digital world increases at a steady pace. A broad range of industries embrace the opportunities enabled by digital technology. These include the health industry, mining, financial services, and e-commerce, to name only a few. This report explores recent developments within Africa's expanding digital domains.

DIGITAL DEVELOPMENTS IN HEALTHCARE IN AFRICA

According to the CEO of Integrated Diagnostics Holdings, Dr Hend El-Sherbini, digital technology will transform the technological landscape and drive Africa's renaissance. She envisions Africa as having an opportunity for world leadership in digital infrastructure. This will enable Africa to use technology to solve problems once deemed insurmountable. Historically neglected areas such as healthcare will become advanced, effective and democratised.

Africa produces thousands of doctors and health professionals each year. Many move to the developed world. Africa, which needs them most, has only 2% of the world's doctors. Scarcity of health services and professionals in many parts of Africa makes efficiencies even more crucial. Advanced tools such as AI and data analytics can support and extend many types of health care services. Health care organisations can apply these tools to existing patient databases to improve patient care, improving the match between patient needs and services provided. Moreover, in a region that still suffers from widespread poverty, and accesses only 1% of global funds for healthcare, the cost-savings from technology and digitisation are vital.

Technology entrepreneur Dr Khaled Ismail (formerly MD of Intel Mobile Communications and senior advisor to the Egyptian Minister of Communications) joined Dr El-Sherbini to raise the contribution of digitisation to consumer healthcare in Egypt and Nigeria. They developed the Wayak data mining and AI platform to tailor health care services to each patient's profile. The new platform leverages existing patient databases to make healthcare more convenient. More importantly, it raises patient and provider awareness of the risks facing specific demographic profiles.¹

GROWING BROADBAND CAPACITY IN NIGERIA

The Nigerian Communications Commission (NCC) recently announced plans to increase Nigeria's broadband penetration at a cost of US\$732 million. This investment will be used over a 4-year period to provide an additional 30,000 kilometres of fibre across the 774 local governments in Nigeria. This will increase the total length of digital fibre across Nigeria to 71,000 kilometres, and increase Nigeria's broadband penetration from 38% to 65% of its population.

Nigeria's proportion of broadband users grew from 5% in 2013 to 22% by 2017, and to the current 38% (as of January 2020). By 2030, almost 85% of the world economy will be digitally enabled. Nigeria plans to develop its capacity to meet that level of demand.²

CROWDSOURCING T-BILLS

The Central Bank of Kenya (CBK) launched a mobile platform (Treasury Mobile Direct - TMD) to enable retail investors to apply for and trade Treasury bills (T-bills) and bonds. This new service will ease the processing of transactions of Sh140,000 (~US\$1400) and below. This will enable mass-market investment in T-bills by removing constraints in the current market infrastructure.

Currently, retail investors have to go through a cumbersome, time-consuming and potentially costly process to invest in T-bills. The mobile service will now aggregate all the services, including the request for statements and receipt of the cash value of maturing securities. The mobile service is expected to provide smaller retail investors the same level of convenience that big buyers of T-bills, such as banks, currently enjoy.³

COMBINING CLICKS WITH “BRICKS”

Digital agritech start-up Farmcrowdy announced its plan to add to its retail portfolio by rolling out meat hubs across Nigeria in the second quarter of this year, following its recent acquisition of Best Foods.

Best Foods is a Nigerian agribusiness group with over 16 years' experience in the processing of livestock, as well as the farming and marketing of agricultural produce. It is one of the largest meat processors in Lagos, with the capacity to process 120 to 200 bulls daily.

According to Farmcrowdy, the acquisition will position it as the preferred source of processed livestock across Nigeria, starting with Lagos. The expanded business will serve over 50 meat markets and will manage over 100 consumer endpoints.

Working with Best Foods will enable Farmcrowdy to increase its capacity of processing bulls from the current 45 a day to 120. Farmcrowdy plans to enable consumers to order meat via its digital platform.⁴

DIVERGENT FORTUNES IN THE E-COMMERCE SECTOR

A previous Digest highlighted Jumia's struggles. After withdrawing from a number of African markets, the Nigerian online retailer is currently fighting to survive. Strong competition in local markets forced a further reduction on commission for locally produced and sold products. Jumia plans to incentivise local manufacturers to sell products through its platform, by extending a 50% reduction on commissions for locally produced goods. The company hopes this incentive will entice vendors to its platform, with a target increase of 30% by the end of 2020. Jumia believes the reduced commissions will help local manufacturers compete against imported goods.

Some analysts believe the promise to slash commissions will not save Jumia. Nigerian media focuses on widespread fraud in the company. The company is seen as “merely an empire built on cooked books and fudged numbers.”⁵ With Jumia struggling amidst allegations of massive fraud, some see its competitor Konga as the new occupant of the leadership position in the Nigerian e-commerce sector, and largely responsible for restoring investor and customer confidence.

Konga plans to achieve daily turnover of US\$10 million by 2024. Factors that appear critical to achieving these optimistic projections include the growth trajectory, overall operational efficiency and consistent reduction in losses. Konga set itself an interim target of reaching US\$5 million daily turnover by 2022. Konga is currently the only e-commerce brand in Nigeria operating an omni channel structure, with more than 30 stores across Nigeria. Aided by its KongaPay payment platform, which recently added cardless ATM withdrawals, the company is drawing more Nigerians into its e-commerce net.

Konga made significant progress in resolving logistics (last-mile and same-day delivery) challenges through K-Xpress, its in-house logistics company. Konga's modern regional warehousing facilities enable retention of a large inventory level across diverse states and locations, to fulfil customer orders in the shortest possible time. Konga intends to roll out additional new business units in the coming weeks and months.⁶

Adding to Jumia's woes is the rise of its West African competitor Afrikrea in neighbouring Ivory Coast. E-commerce platform Afrikrea, founded in 2016, recently secured US\$1 million to grow its team and expand its online mobile marketplace. Afrikrea is a market platform for all things African-made, from fashion, art and handicraft to beauty and fabrics. Its community of over 5,000 designers have so far sold goods valued at US\$5 million in 101 countries.

The start-up's partnership with DHL enables sellers from any African country to ship worldwide at lower cost. It now plans further growth. Afrikrea will use the new funding to expand its mobile marketplace, strengthen its marketing efforts, and add experienced remote developers to its team.⁷

B2B ONLINE DEVELOPMENTS

Sokowatch is a B2B e-commerce start-up based in Kenya. Launched in 2016, the firm obtained US\$2 million seed funding in 2018, which it used to expand within Kenya and into Rwanda, Tanzania and

Uganda. Its platform connects merchants directly to local and multinational suppliers (e.g. Unilever and Procter and Gamble) and digitizes orders, payments and delivery-logistics.

It recently raised US\$14 million in Series A funding to revamp supply chains to markets for Africa's informal retailers. It plans to broaden its client services — from working-capital solutions to data-analytics — and target new African markets.

Sokowatch's primary focus is to reduce costs and increase profit margins for small merchants. It plans to develop the largest B2B e-commerce network across Africa. Many of Africa's local merchants are sacrificing capital and incurring opportunity cost due to inefficient supply chains. Sokowatch now serves over 15,000 small retailers across its operating areas. Sokowatch saves merchants at least 20% on supply chain costs for the goods they supply, according to the company.

Sokowatch offers retailers an app to order products from its partner suppliers and maintains a fleet of delivery vehicles. In addition, it provides merchants with data analytics to help them resolve working capital issues.⁸

POINTS OF INTEREST

- As mentioned in earlier African Digest's, developments in the health sector are bringing about much needed relief for the poor in Africa. Many have previously had to travel vast distances and suffer high costs to visit health practitioners and obtain specialist services. As mentioned above, the tragedy is that Africa's governments spend significant amounts of taxpayers' money to educate their doctors, just to lose them to the Western world and other richer countries. Telehealth can play a valuable role in providing much needed services.
- A prerequisite for digital health and other digital services is the availability of broadband internet. This service is becoming increasingly available, and the cost thereof is being reduced. It must be said that in countries such as South Africa, these costs were reduced after very direct threats of sanction from the government against the providers of data. Vodacom has recently announced it would be dropping its data costs by up to 30%.
- Telecoms giant Huawei is also working with a number of stakeholders in Africa to make 5G available. This will also play a major role in enhancing the role of digital services in Africa.
- Kenya's attempt at launching T-bills via its own platform is a second attempt at "crowd-sourcing" T-bills. Its first attempt was via the M-Pesa application, M-Akiba. The general feedback on the latter was that it was not as successful as was hoped.
- E-commerce in Africa remains an attractive sector for various players. This is despite the struggles Jumia are experiencing. Jumia started with a bang, but unfortunately this is now petering out to a whimper. New players include Sokowatch (B2B) and Afrikrea (not totally new, but making a renewed attempt to grow). It remains to be seen what the eventual successful business model in the e-commerce sector will look like. As it is, until now we have seen a number of attempts, which have ended either in consolidations (in South Africa) or in a silent reduction of focus (Safaricom's Masoko in Kenya). The latter still exists but is not as prominent as a while ago. Kenya still has quite a number of local e-commerce businesses. The difference seems to be that the platforms are struggling as they intend to attract retailers to do business on their platforms.
- About two decades ago, there was a move from a physical retail presence (bricks) to include an online presence (clicks). Hence the term "bricks and clicks" as a business model. The wheel has turned: we now see digital businesses developing a physical presence, for a "clicks and bricks" business model. Konga's omni channel model in Nigeria seems to work well.

2. Developments in the Infrastructure Sector

Africa's well known infrastructure challenges remain an ongoing headache for most, if not all, African governments. These challenges span a broad range of industries: transport (rail, road, ports, airports), water, energy and housing. It does not appear that the annual required investment is falling. Investments of billions of dollars are required to meet these challenges.

ENERGY INFRASTRUCTURE DEVELOPMENT

Rosatom, Russia's state nuclear energy arm, is doing its utmost to sell nuclear energy to Africa's leaders. For Russia this provides the dual benefit of gaining influence in Africa while making massive profits. However, many critics view the technology as ill-suited to Africa's conditions and unlikely to benefit Africa's poor.

Rosatom is currently building a plant for Egypt at a cost of US\$29 billion. It also seeks to sell nuclear power capability to the governments of Uganda, Rwanda, Ghana, South Africa, among others.

Nigeria reportedly signed a deal with Rosatom for construction of a nuclear reactor, while the Russians signed agreements of cooperation with Sudan, Ethiopia and the Republic of the Congo. Russia is also promoting nuclear energy in Zambia.

Russia is making these deals as attractive as possible by providing generous loans, long-term supply contracts, and other incentives. Russia reportedly lent 85% of the construction cost for its nuclear reactor to Egypt. Rosatom trains local specialists in nuclear physics and energy in several African nations, and runs a scholarship programme in Kenya.

Despite criticism, Rosatom maintains that from a cost perspective, the latest generation of large reactors remain the best option in most regions. While this view fails to address the shortcomings of Africa's grid infrastructure, Rosatom claims it will provide a customised solution for each country.

Regarding concerns that the nuclear option will not benefit the poor, the NGO Friends of the Earth, stated that only small-scale and interconnected grids could deliver "energy sovereignty" to Africa's people. Rosatom's response to this criticism was that it focused on "sustainable development" and that nuclear energy was "intrinsically immune to any form of political manipulation." According to Rosatom, the economic benefits of nuclear power amounted to four times the upfront construction costs for nuclear plants. The Russian firm also claimed that nuclear power brought highly skilled jobs and enabled other benefits such as desalination, nuclear medicine and improved agriculture.⁹

GROWING HOUSING INFRASTRUCTURE BACKLOG

Many of the urban population in Lagos, Nigeria and over the continent will over time face the stark reality of displacement. In addition to the population of sub-Saharan Africa doubling to more than 2 billion by 2050, Africa already has an urbanised population of 43%, which is set to drastically increase as young job seekers migrate to the cities in the hope of finding a job. In Nigeria, more than 40% of people are under the age of 14. According to the UN, by 2050, Nigeria will add 189 million urban people. It is estimated that between 2020 and 2035, 10 million more people will move into Lagos.

Urbanization is accompanied by real estate speculation, as booming populations crowd into limited land and developers force out often non-paying informal tenants to chase bigger potential profits. The displaced population face disrupted education, severed community ties, destroyed houses and crushed small businesses.

In Lagos, as for many other cities in Africa, there is little focus on urban planning. This is despite the massive and growing need for housing, and the huge infrastructure projects now underway.¹⁰

DEVELOPING PORT INFRASTRUCTURE

Growing demand for imported cargo in East Africa led to a project to modernise four berths of the port of Mombasa in Kenya, at a cost of US\$193 million. This investment will enable the berths to handle

both container cargo and loose goods not packed in containers. The port at Mombasa dates to 1895 and serves as the main trade gateway for East Africa, serving Kenya and seven neighbours, including Uganda, Somalia, Rwanda and South Sudan.

Exports make up just 15% of the cargo passing through Mombasa each year, with 33% of the total belonging to neighbouring countries. Kenya, the region's biggest economy, takes the largest share.

The annual cargo traffic through the port is expected to jump from 32 million tons in 2018 to 47 million tons in 2025. Popular imports include clinker for cement manufacturing, steel, fertiliser and grains.

The Mombasa port, currently ranked Africa's fifth busiest, plans to rise to number three.

The Kenya Ports Authority (KPA) will spend an additional 39 billion shillings (~US\$380 million) to build a new oil terminal to replace its existing facility, which dates to 1968. The project will triple the port's annual capacity for oil and liquid gas to 1 million tons. The China Communication Construction Co. is the contractor.

These KPA investments are part of a 310 billion shilling (~US\$3 billion) ports investment program, aimed to boost annual capacity to 110 million tons by 2040. This includes 55 billion shillings (~US\$535 million) for building three berths at a new port in Lamu.¹¹

Kenya hopes that Lamu Port will upset the power balance along the coast of East Africa, and position it to compete successfully against the Port of Djibouti and the planned Bagamoyo harbour in Tanzania. Kenya's vision is to make Lamu the region's transshipment hub.

Lamu has strong competition in the form of the strategically located Port of Djibouti, which already controls transshipment business in the region, while Bagamoyo Port, will have to play catch up to both Lamu and Djibouti.

Bagamoyo is not Tanzania's only harbour. Tanzania is also upgrading the port at Dar es Salaam at a cost of US\$345 million.

According to President Kenyatta from Kenya, the Lamu Port will initially start as a transshipment hub for global shipping lines. A special economic zone will support it. This new zone is expected to attract investors from around the world to undertake diverse economic activities. Kenya aims to make Lamu Port the port of choice for the export of Kenya's crude oil.

Djibouti, with its two ports of Dolareh and the Port of Djibouti, currently handles the largest cargo volumes in the region, averaging three million tons annually.

A recent report by the Japan International Co-operation Agency (JICA) showed that the cost of transport in landlocked countries dropped by more than 16%, following infrastructure investments and cross border trade facilitations along Kenya's Northern corridor.

Lamu faces a challenge with transit cargo shipments, as support highways outside of the port remain incomplete and well behind schedule. This means that haulage of goods from the port by land will not be possible, leaving the port to initially only do transshipment activity.

Lamu's close proximity to the terrorist group Al-Shabab's Somalia base also poses a security headache for the port's management.¹²

DEVELOPMENTS IN LAPSETT RAIL CORRIDOR

The AU recently adopted the Lamu Port-South Sudan-Ethiopia-Transport (Lapsset) corridor project as a continental project. Implementation will be managed under AU auspices. It has been redesigned to link Lamu Port on the Indian Ocean to the Douala port in Cameroon, on the Atlantic Ocean. The project will be implemented in two phases. Phase 1 builds the Lamu-Isiolo-Addis Ababa-Djibouti route, while Phase 2 will link Lamu to Kribi/Douala (In Cameroon) via Juba and Bangui.

As an AU project, it will link with other continental corridors, such as East Africa Northern Corridor, East Africa Central Corridor. These will serve as land bridges through the African Great Lakes region.

Three countries (Kenya, South Sudan and Ethiopia), together with the AfDB, the UN Economic Commission for Africa, and the AU's New Partnership for Africa's Development (AU-Nepad), agreed to form a representative steering committee to coordinate implementation of the corridor.

The AU-status of the project will give it priority in crowd funding, beyond national budget allocations. It will also provide the programme with the increased scope and exposure needed to attract FDI and local financiers, compared to its status during its launch eight years ago.¹³

AIR TRANSPORTATION INFRASTRUCTURE DEVELOPMENTS

Ethiopia announced building of its largest and most prestigious airport in Africa at Bishoftu, south of Addis Ababa, at a planned cost of US\$5 billion. It is to be larger than the UK's Heathrow or France's Charles de Gaulle.

This initiative will create competition between Ethiopia, Kenya and Rwanda for dominance of regional aviation. It will also significantly enhance the prospects of this East African aviation hub, which is emerging as Africa's most dominant aviation space, outperforming the South African market.

Ethiopia's announcement closely followed the announcement by Qatar Airways that it was concluding a deal to take over Rwanda's RwandAir. This will increase the intensity of the battle for the East African skies, pitching RwandAir against Kenya Airways and Ethiopian Airlines. It will reportedly also create new dynamics in the Pan-African aviation sector. The project is set to be the biggest commitment to operate an airport by any airline. One implication is that the new airport will establish Ethiopia as Africa's number one destination for both business and leisure. This is similar to the way the big Middle East airlines capitalize on their hub cities.¹⁴

POINTS OF INTEREST

- Nuclear energy as a source of main on-grid energy is increasingly being pushed in Africa. Russia's Rosatom is actively marketing this technology, and seemingly are finding willing buyers on the continent. The reality is that Africa cannot really afford this technology, which in any case will not benefit many of the poor in the rural parts of Africa. It must be asked who the primary beneficiaries of this development will be. With the vast potential of renewable energy available, there is no need to go the nuclear route.
- Housing remains a challenge in many African states, if not in all of them. The problem is becoming more acute with the growth in population, as well as the growth in urbanisation. The main challenge is seemingly a funding challenge, i.e. how do the developers get their money back and how long while they have to wait for their required returns? Can they trust the governments of Africa to be a reliable partner in the development projects? Some VC funds are quite willing to invest in Africa's housing infrastructure, but have serious trust concerns when it comes to their "partner."
- Africa's ports are being developed by various stakeholders. The status quo used to be a small number of ports servicing a large number of landlocked countries. When we look at East Africa and southern Africa, we had Djibouti, Mombasa, Dar es Salaam, Durban and Cape Town. Richards Bay is primarily an ore harbour, while Saldanha on the West Coast of South Africa also has a limited use (exporting iron ore, etc). With Eritrea and Ethiopia ending their hostilities, the harbour in Eritrea has the potential to become competition for Djibouti. The Port of Lamu in Kenya will complement the facilities at Mombasa, while Bagamoyo will support Dar es Salaam in Tanzania. There are also other opportunities pushed for Somaliland and Sudan. The competition for the business of the landlocked countries in these parts, such as Ethiopia, Uganda, Rwanda, Burundi, Zambia, Malawi and Zimbabwe, is going to become a heated one, with high stakes being played for. The issue of affordability comes to mind. Is there enough business to serve all these ports where the developers all have a regional perspective? Africa does not need huge facilities that are vastly underutilised.
- A challenge remains the road and rail connections between the harbours currently being developed and the landlocked countries. Both the northern SGR (driven primarily by Kenya)

and the southern SGR (starting in Tanzania) have run into funding challenges. Many of the roads still remain a serious challenge.

- The above factors lead to cost increases in supply chains, making sending freight in Africa a costly exercise! It is also clear that where there is reasonable transport infrastructure, for instance in South Africa, freight costs are significantly lower than in Nigeria.
- The heating of competition between Ethiopia, Kenya and Rwanda for control of the airlines is welcome for passengers. Two decades ago few would have envisaged these becoming the main players in moving cargo and passengers. It is true that in Rwanda's case it is with the support of Qatar Airlines, but that does not negate the reality of the growth of the air travel business in this part of the world. Currently, the main player in Africa is Ethiopian Airlines, the only profitable airline in Africa. It is sad to see the once mighty SAA of South Africa becoming a basket case due to serious mismanagement. Very few South Africans select their national airline, and instead use Emirates, Qatar and Ethiopian Airlines, in addition to a number of European airlines such as BA. SAA is currently under business rescue.

3. Developments in the Mining Industry

The dynamics on the African continent are increasingly interesting. We saw Ghana overtake South Africa as the primary producer of gold in Africa. There are also voices calling for beneficiation versus exporting the raw minerals. This report also examines lessons from Tanzania to avoid the much-dreaded resource curse.

PUSHING FOR MULTI-SECTOR BENEFICIATION

South Africa's finance minister Tito Mboweni published a document on the National Treasury website that cut across policy areas for a wide range of ministries. The paper explores structural reforms to stimulate the country's economy and proposed a radical new approach to beneficiation.¹⁵ This term describes the proportion of the value derived from asset exploitation that stays 'in country' and benefits local communities. For example, in the diamond industry, the beneficiation imperative argues that cutting and polishing processes within the diamond value chain should be conducted in-country to maximise the local economic contribution.

The paper points out the need to set up and encourage industries that supply the mining industry as a more sensible path to create wealth and jobs. It goes on to recommend that the minerals industry explores upstream beneficiation. This approach capitalises on developing skills and technology rather than simply adding downstream value.

According to the Treasury study, relying on the transformation of mined commodities into higher-value commodities is a narrow view. It fails to consider the potential of upstream and lateral linkages across value chains and industry sectors. This form of beneficiation potentially has large spill over effects into industries that do not have direct linkages to the minerals sector. For example, an upstream beneficiation strategy can target sectors that supply the diamond industry with specialized equipment and materials.

The report states that "upstream manufacturing is engineer intensive, agile, and able to reinvent itself, which means it is not dependent on mining. When the mineral deposits are exhausted, these businesses can either import their input materials or reinvent themselves entirely."

The Treasury strategy document extends far beyond mineral beneficiation. It makes far-reaching recommendations in policy areas that will have an important long-term impact on the performance of the economy.¹⁶

AVOIDING THE RESOURCE CURSE: LESSONS FROM TANZANIA

Tanzania has large offshore gas resources with the potential to provide a viable revenue stream to finance its development needs. Unfortunately, what should be a blessing tends to become a road to conflict and corruption. Development economists call this phenomenon the resource curse. Tanzania faces the challenge of avoiding this curse, yet making its energy sector attractive to foreign investors. The think-tank Research on Poverty Alleviation (REPOA) formulated a number of ideas in this regard.

The gas discovery offers the following potential benefits:

- New revenue streams could raise the living standards of the population.
- Royalties will supplement tax revenues and allow the state to expand health, education and housing services.
- Revenues can stimulate the economy and benefit both large and small enterprises, which will create more jobs.
- Onshore processing facilities for oil and gas will attract investment, further boosting local economies, transferring skills and kick-starting supplementary industries.
- These positive effects can transfer to the construction industry, inject new energy in banking and insurance and have an overall positive effect on soft and hard infrastructure.

However, many countries failed to develop their nation's assets to realise these potential benefits. They enabled a cycle of corruption and cronyism. Their countries remain impoverished, despite the outward flows of valuable resources. The Tanzanian government reviewed the adequacy of its regulatory and policy frameworks in a bid to avoid the pitfalls related to the natural resource curse.

- Policies were adopted to develop the industry and increase the participation of Tanzanian citizens and enterprises.
- Legislation regulates upstream, midstream and downstream operations. Some address investors' concerns, while others addressed the need for protecting public interests, e.g. participation, ownership, governance, and managing of expectations.
- The midstream and downstream of natural gas and petroleum activities were regulated, as well as powers to issue, renew, suspend and cancel construction approvals and operational licences.
- The Tanzania Petroleum Development Corporation was designated as a National Oil Company and commercial agency of the government in the petroleum value chain, with the government's right to maintain at least 51% and 25% of shares in this National Oil Company and a participating interest in petroleum projects.
- An Act guides the use of revenue from oil and gas resources to avoid the effects of such revenues on fiscal stability, and to ensure that the benefits are spread to future generations.
- The Oil and Gas Fund was established, as well as fiscal rules for its use. These measures include the public disclosure of the relevant documents involved in the industry.

Critics view these measures as imposing excessive control and regulation. They view them as leading to uncertainty and inadequate security for private investors. If true, the policies would threaten future petroleum exploration activity in the country. Achieving a balance between investor needs for a transparent and stable operating environment, and governance that ensures the protection of public interests is central to avoiding the inherent pitfalls of the natural resource curse. The ideal outcome will be balanced and win-win contractual relations, and ethical and transparent government oversight.

CONSOLIDATING THE MINING SECTOR

Rwanda's mining sector is relatively fragmented. Despite more than 3,000 mining sites across the country, 50% of expected mineral production remains in the soil due to a lack of modern mining and minerals sluicing techniques. Many small mining operators reportedly fail to comply with environmental management regulations. According to Francis Gatere, CEO of the Rwanda Mines, Petroleum and Gas Board (RMB), they plan to combine small mining operators into effective and financially capable groups. This initiative will enable larger groups to raise capital to afford infrastructure, increase productivity and comply with environment management measures.

Small artisanal miners face many challenges, such as raising the capital required for infrastructure to improve their operational and financial performance and their environmental management strategies. There is an increasing emphasis on ensuring adherence to environmental protection regulations.

The value of minerals exported from Rwanda reached US\$350 million in 2018, and is expected to reach \$800 million in 2019/2020. The target for 2024 is US\$1.5 billion.¹⁷

GROWTH IN EARNINGS FROM GOLD EXPORTS

According to Reuters, Tanzania's earnings from gold earnings rose 42% in the year to November 2019 on the back of a higher gold price and an increase in volumes. Gold exports rose from US\$1.51 billion for the period January 2018 to November 2018 to US\$2.14 billion during the same period in 2019. Tanzania is Africa's fourth-biggest gold producer after South Africa, Ghana and Mali.

The Central Bank of Tanzania attributed some of the increase in export volume to government actions to effectively manage mining activities in the country.

Tanzania has changed its minerals legislation over the last two years to facilitate greater state equity participation and increase levies and taxes. The government was also involved in a serious altercation

with the former Acacia Resources over unpaid tax allegations. Acacia Mining was eventually taken over by its majority shareholder, Barrick Gold, which subsequently agreed to a joint venture with the government.¹⁸

“NATIONALISING” MINERALS IN THE DRC

The DRC produces about 60% of the world's cobalt. The sector has been hurt by falling market prices for the metal, now less than a third of the 2018 peak of US\$95,000 per metric ton. This drop resulted from excessive supply combined with the impact of the US-China trade war. While industrial operators such as Glencore and China Molybdenum extract most of Congo's cobalt, independent subcontractors called artisanal miners account for about 25% of production.

To exert greater influence over prices, the DRC government granted a monopoly to purchase and market all cobalt that is not mined by industrial operators to a new state-owned company. Gecamines has exclusive rights to sell artisanally-mined “strategic minerals”, such as cobalt, a key component in electric car batteries, as well as coltan, a tantalum-rich mineral..

The motivation behind this decree is reportedly “the necessity of controlling the entire artisanal supply chain and boosting government revenues through control of prices.” This is in addition to increasing state oversight of working conditions in the artisanal sector, which has reportedly been plagued by child labour and other abuses.

Trading of artisanal cobalt, which is extracted with rudimentary tools under often unsafe conditions, is dominated by Chinese middlemen.¹⁹

DEVELOPING SEZ IN THE DRC

Australia's AVZ Minerals signed a MoU with the DRC's Ministry of Industry for development of a Special Economic Zone (SEZ) in Manono, DRC. This project will include development of the basic infrastructure within the SEZ. The development of the Manono Lithium and Tin Project and associated infrastructure for mining operations, including the export of product, forms the core of these developments. The MoU has a 12-month term and can be terminated in the event of non-performance by either party.

AVZ will be eligible to additional benefits from the DRC Government, as opposed to being purely an investor. The SEZ will be a JV between the Government, a financier, a manager and AVZ.

The Ministry of Industry of the DRC has committed to:

- Granting all necessary legal authorisation for the completion of the SEZ.
- Making all relevant information available to AVZ and facilitate team missions.
- Engaging with AVZ in a Public Private Partnership.
- Supporting AVZ in its administrative process to develop basic infrastructure, including a hydroelectric power plant and transport channels that would contribute to the promotion of the industrialisation in the Manono SEZ and the lithium industry in the DRC.²⁰

POINTS OF INTEREST

- While South Africa's Treasury has been calling for multi-sector beneficiation, this is a strategy that all of Africa can follow. Far too many of Africa's minerals (and other products) are exported in their raw form. This actually equates to job exports as well. In the process, their economies are vulnerable to global price changes in their respective commodities. In 2014/2015, the oil price fell significantly, from US\$100+ per barrel to less than US\$30. Nigeria's economy took a serious hit. This led to much talk about diversification and beneficiation. Fast forward five years and we again have a situation where the oil price has tumbled. Unfortunately, it seems that the talk of five years ago remained just that. Apparently decision-making in Africa is biased against implementation. This time, as was the case five years ago, Nigeria is again set to move into a recession. African governments must make the diversification of their economies an urgent priority!

- Tanzania has seemingly managed to transform its mineral economy to the benefit of the country. President John Magufuli was adamant that gold had to be smelted in the country instead of just being exported. He also put a number of other policies in place to ensure the country would benefit as well. The legislation that was enacted to prevent the emergence of the resource curse will hopefully lead to the avoidance of this phenomenon. Should it be the case, other African countries that are already struggling should use Tanzania as a benchmark, and actively implement these measures!
- Rwanda's consolidation of its mining sector reminds one of the banking sector in Kenya that went through the same exercise, with encouragement from the Kenyan Central Bank. A small number of the banks had the major portion of market share in Kenya, while a large number of smaller banks were struggling, with all the associated negatives brought by banks going under and the resultant lack of trust in the sector. While there is a different kind of consequence in the mining sector, the country still loses when a large number of small mining companies are struggling to operate efficiently and to grow due to a lack of funding. Rwanda has set itself a stiff target and it will be interesting to see whether they will achieve it. The Rwandan government has been quite busy with a number of initiatives the last decade or so and one can be forgiven should one be optimistic about the prospects for this country.
- The DRC "nationalising" about 25% of its cobalt production sounds quite negative. However, when it is noted that this is the output of the smaller artisanal miners, it does create a more positive feel. The challenge on the other hand is to ensure that the state-owned enterprise is run optimally and does not disintegrate due to mismanagement. This frequently happens when corruption and nepotism raise their ugly heads.
- The DRC is a country with massive potential. A recent publication mentioned the figure of US\$24 trillion of mineral reserves. This is huge. Unfortunately, we do not see the effects thereof on the economy. As one statesman said, Africa is not poor, it is poorly managed. With the proper governance, this country, and many others in Africa, could become shining beacons of development. A case study that comes to mind is that of Singapore, where the only resource is human potential, but where it has been immensely successful. I ask myself what the country would have done had they had access to such huge mineral wealth?

4. Developments in the African Motor Vehicle Industry

The motor vehicle industry in Africa has seen many developments over the past decade or so. A number of the major players expanded their footprint on the continent, while we also saw a number of local players arrive on the scene. We have also seen the used-car market as one of the major sectors on the continent. This report addresses the major developments over the past few months.

TATA GROWING ITS FOOTPRINT IN AFRICA

India's Tata Motors designated South Africa as "strategically extremely important" to its growth in Africa, especially Sub-Saharan Africa. While the requirements of each African country are unique, South Africa leads the way in terms of technology and safety norms. Hence Tata's view on the importance of not only having a base in South Africa, but succeeding sustainably there. Tata's vehicle brands are increasingly popular in South Africa, even though it entered the market only two decades back. Tata currently has approximately 30 dealers across South Africa, offering a full range of services, including sales, service and spare parts. As part of this strategy and posture, Tata recently unveiled two new variants of their heavy-duty commercial vehicles, Ultra Plus 1418 and Ultra 814 AMT, in South Africa.

Tata's aims to be in the top three in any segment in every country in which they compete. This target guides their strategy in Africa. Tata currently has six manufacturing units on the continent, which could increase in the future. The company is becoming increasingly committed to Africa.

Tata is considering Southern, Eastern and Western Africa for its expansion. In East Africa, Kenya, Tanzania and Uganda are important markets for the Indian company.²¹

ELECTRIC CARS IN AFRICA

Volkswagen recently partnered with Siemens to launch a pilot project to test the feasibility of electric mobility in Rwanda. The pilot project will form part of Volkswagen's operations in Rwanda. Volkswagen will introduce four e-Golfs in Kigali, while Siemens will provide the charging infrastructure for the electric cars. Rwanda is the first African country to introduce a Volkswagen electric car.

Volkswagen believes that Rwanda has the potential to leapfrog the market for cars with internal combustion engines into electric cars as it has a young and progressive population that appreciates individual and modern mobility. Volkswagen therefore aims to "make the e-Golf pilot project in Rwanda a blueprint for electric mobility in Africa."

The e-Golfs will join the Volkswagen Mobility Solutions Rwanda fleet to provide customised mobility services. Depending on the success of the pilot project, the number of electric cars will be increased to 50 units and 15 charging stations. The drivers and technicians who will be work with the electric cars have received specialised training in preparation for launch of the pilot project.²²

BUILDING E-BUSES IN UGANDA

In Uganda, the manufacturing of the Kayoola Electric Bus started in October 2019, and was scheduled to be completed in December. This has moved Uganda closer to domestic vehicle manufacturing, with the shipping in of a fully built unit and the assembling of a 90-seater bus by Kiira Motors Corporation. CHTC Motors from China, the technology partner of Kiira Motors, supplied the components for the bus.

It is one of two market validation vehicles; the first was built at CHTC's facilities with the participation of six Ugandan technicians.

The buses will run exclusively on electric batteries, and can travel for 300km on a single charge at 80km/hour. Three charging stations, which can recharge the electric batteries in under two hours, will be situated at Kampala and Entebbe.

After the completion of technical tests, the buses will deploy for a road test with passengers on the 40km Kampala-Entebbe route. The collected data will be used to develop a business model for rolling out locally assembled electric commuter buses for utilisation in Kampala and other urban centres.

Another two electric buses will appear in the coming months, with the metal frame and bodies for these sourced and cut to shape locally. A further two Euro 5 buses, designed for the long-distance cross-border market, will also be built. However, diesel engines will power these units.

Local entities will supply the basic parts forming the structure of the electric buses, such as the chassis and frame, by 2021.²³

FRENCH AUTOMAKERS IN MOROCCO

French automaker Groupe PSA joined forces with Morocco's car technology industry centre (CETIEV) to boost vehicle-related R&D in Morocco. This venture should facilitate technology transfer. Morocco is attracting large investments from abroad to enhance technology transfer via the development of local suppliers. This will increase the scale and scope of locally produced parts in cars manufactured in Morocco. PSA will provide technical equipment for research purposes, which will involve 60 engineers and technicians. Their output will be used by PSA.

PSA intends to hire 1100 staff for its R&D department by 2021, in addition to 3600 engineers and technicians. The group opened a €557 million plant in Morocco earlier in 2019, and intends to build 100,000 cars by the end of 2020. This factory will increase Morocco's leadership position in the motor vehicle manufacturing sector of Africa. The country overtook South Africa as Africa's largest car manufacturer in 2018.

Renault, also from France, currently produces 12% of its global car output in Morocco.²⁴

TOYOTA INVESTING IN SOUTH AFRICA

Toyota South Africa recently announced its investment of R4 billion (~US\$255 million) in its parts distribution and manufacturing projects in the country. The project will give the South African economy a much-needed boost, generate an expected R2.85 billion (~US\$182 million) in turnover, and create 1500 new jobs.

More than R2 billion (~US\$128 million) of this investment will go towards the production of a new passenger-car model to replace Corolla production, coming to an end in 2020. Production of the new model will start in October 2021.

Hosting auto manufacturers including BMW, Ford and Mercedes Benz and a host of component suppliers, the industry employs over 100,000 people and contributes 6.9% to the South African GDP .

R454 million (~US\$29 million) will be used to improve local production of the hugely popular Hiace Ses'fikile mini bus, as well as increasing its production volume from 14,000 to 18,000 units per year. This will create 270 new jobs. R365 million (~US\$23.3 million) will go towards doubling the size of Toyota's Atlas Warehouse. When completed in 2021, this facility will be the largest in the Southern Hemisphere.²⁵

INVESTMENTS AIMED AT REDUCING IMPORTS OF USED CARS

Until recently, Isuzu East Africa assembled only trucks and buses in Kenya, and imported built-up light commercial vehicles from South Africa. It now assembles its D-Max pick-up trucks in Kenya, bringing an end to imports of readymade and used light commercial vehicles from South Africa.

Importing car parts and assembling them locally provides tax benefits that will allow the Kenyan Isuzu unit to lower the selling price of its Isuzu D-Max pick-up trucks, and to gain market share in the increasingly competitive pickup vehicle segment. The company's top rival, Toyota Kenya, has also announced plans to start local production of its popular Hilux model.

Kenya adopted policies in the 1990s that undermined its thriving local assembly industry and encouraged the import of cheap second-hand cars. Imports of 80,000 used cars each year far outstrip sales of new vehicles in Kenya. The used cars, mostly imported from Japan or the Middle East, offer an affordable route to vehicle ownership and have dominated the market for decades. The government now seeks to attract manufacturers to return to help create jobs and support growth.

Peugeot and Volkswagen recently resumed local car assembly in Kenya, joining other brands already being assembled in the country, including Toyota, Nissan and Mitsubishi.

Volkswagen, BMW, Toyota, Nissan and others have joined forces to lobby African governments to adopt steps that would reduce the imports and encourage local production to flourish.²⁶

DANGOTE SOURCING LOCALLY

Nigeria's Dangote Group entered into an agreement with Transit Support Services Limited to source Shacman trucks. These are assembled at the Anambra Motor Manufacturing Company Limited's (ANAMMCO's) factory in Enugu, Nigeria. Dangote has already purchased 3,500 trucks from Transit Support Services worth N63 billion (~US\$172.3 million).

Approximately 90% of trucks produced at Enugu are for Dangote. The project reportedly also kept the Onne port busy, which had been dormant for many years. The Dangote/Shacman truck deal also benefited the local population immensely through job creation and training of young school leavers.²⁷

POINTS OF INTEREST

- Tata is one of a number of motor vehicle manufacturers in recent years that have decided to tap the massive African market, one that is growing strongly and where the growing middle class present a strong opportunity. Tata has the benefit that it has a low cost positioning and as such will be more affordable to many Africans in comparison to brands such as Toyota, Nissan, VW, etc. Tata's main challenge is that Toyota and others are aspirational brands for many African consumers, with the Prado and other 4x4 models being highly sought after. However, if they do play their cards right, Tata should be able to over time morph into a best cost model where it provides similar quality at a lower price, or higher quality at a similar price. That is what Hyundai has done with great success.
- While second-hand cars from abroad are a main source of supply, some countries have started to develop their own supply of used cars. In Rwanda, VW is on record stating that their assembly plant will also be used to over time produce cars that once they have been used in a rental model, will be fed into the second-hand car market. They explicitly referred to the opportunity to generate their own supply of second-hand cars for the local market.
- Many countries have enticed the major players to develop assembly plants in their countries. The benefits of job creation and the transfer of knowledge and technology is too good to pass by. On the other hand, a number of these countries have also encouraged the development of a local brand. It will be interesting to see how they develop the inherent challenge of balancing local versus foreign.
- Morocco has become a highly sought after destination for French vehicle manufacturers. A number of brands have developed a manufacturing capacity in this country, which says a lot about the investment climate in Morocco. The Moroccan government has positioned itself as a gateway into Africa, but it also has a firm footing in its positioning as a foreign base for European production. As stated, the country has taken over from South Africa as the top motor vehicle producer in Africa. It is also doing very well on the renewable energy scene. It has rejoined the AU as a member, and has applied for membership of ECOWAS. It is also in a partnership with Nigeria to develop a gas pipeline between Nigeria and Morocco. This says a lot of the country's willingness to tap into the African consumer base. With membership of the newly created AfCFTA, French motor vehicle brands manufactured in Morocco will potentially have a good chance to compete successfully in a tariff-free environment on the continent.

- Dangote's strategy of sourcing vehicles locally is the way to go. This is the only way African countries can develop a thriving local manufacturing sector. With the largest economy in African and a population of 200 million people (although more than 80 million are very poor), Nigeria definitely has the market to justify the development of a serious motor vehicle industry. Granted, there are many impediments to the development this sector, but this is an achievable goal.

5. Renewable Energy Developments in Africa

Renewable energy in Africa will be a cornerstone of the business model of the future. The continent has vast natural energy resources, from wind to solar, hydro and geothermal energy. As upfront costs decline, the efficiencies of the technologies constantly increase. This report addresses some of the latest developments in this sector.

CLEAN ENERGY TO BOOST FOOD SECURITY

Experts from the Malabo Montpellier Panel in Nairobi, Kenya, reported in December 2019 that “greater investments in off and mini-grid technologies are required to transform smallholder farming in Africa and achieve food security amid rapid population growth.” They observed “access to reliable, affordable and sustainable sources of energy to prepare land, plant, harvest, process, distribute and cook food will ensure that Africa's agricultural sector can respond to the demand.”

Universal access to cleaner energy sources is key to enhancing production, processing and consumption of nutritious food. Africa can leverage off-grid projects to boost uptake of clean energy among small-holders. This will enable a new generation of food production systems. According to the Panel experts, nearly 5 million families in Africa installed solar home systems in 2018. Achieving universal energy access in Africa by 2040 will require investing about US\$120 billion annually.²⁸

SOLAR PV PROJECTS IN AFRICA

Univergy Solar from Japan will invest US\$200 million in Zambia to implement two solar PV projects that will add 200 MWp to the national grid in 2020. The first plant will be constructed in northern Zambia, with a capacity of 135 MWp. The second plant will have a capacity of 65 MWp and will be built in the copper belt, on the border with the DRC. Univergy Solar will collaborate with a Zambian company.

The projects are expected to create hundreds of jobs and business opportunities for local companies involved in maintenance of solar parks and power plants. Work on both projects will begin in the first quarter of 2020, and will be completed by the end of the year. As Zambia has a network deficit, these projects are seen as being of critical importance.

Zambia depends heavily on hydropower, and the country is vulnerable to seasonal droughts. Its efforts to address energy shortages include contracting with South Africa's Eskom, which itself is experiencing many challenges. The Zambian government now hopes to build its energy autonomy through renewable energy.²⁹

Cote d'Ivoire recently announced it would build two solar PV power plants with a capacity of 30 MWp each near the cities of Touba in the northwest and Laboa in the northeast of the country. The International Finance Corporation (IFC) will provide assistance with the feasibility study, financing and advisory assistance. According to the Prime Minister of Cote d'Ivoire, Amadou Gon Coulibaly, discussions with the IFC also focused on developing a strategy for targeted intervention for a more competitive private sector in the coming years.

Independent power producers (IPPs) will develop the two solar projects through public-private partnerships (PPPs). Construction of these power plants will enable the country to integrate solar energy into its electricity mix.

Several solar projects are currently under development in Cote d'Ivoire. One is the Boundiali solar PV plant, which will have a capacity of 37.5 MWp and will involve investment of US\$44 million.³⁰

French renewable energy company Neoen will develop and finance a 41 MW solar PV power plant in the Cabo Delgado Province of Mozambique. The project will require investment of US\$56 million, of which US\$40 million will be through a loan provided by Agence Française de Développement (AFD) and its subsidiary Proparco. Efacec, a Portuguese group established in Mozambique.

The energy produced will be sold under a long-term Power Purchase Agreement to EDM, Mozambique's electricity utility. EDM is also a sponsor of the project. It will supply the national grid and boost the power grid in the Provinces of Cabo Delgado and Nampula.³¹

SOLAR REFRIGERATORS FOR OFF-GRID USERS

M-Kopa Solar in Kenya recently launched a solar powered refrigerator with a 100-litre capacity for off-grid households and businesses with a pay-as-you-go business model. The fridge will cut losses incurred by 1.5 million off-grid homes and enterprises unable to preserve perishables, and reduce their trips to markets. It is available in 65 retail outlets of M-Kopa. The revenue model requires customers to pay Sh165 (~US\$1.61) per day for 700 days, bringing their total cost to Sh115,500 (~US\$1,125).

Solar fridges will have a significant impact on the lives of families and entrepreneurs, saving time and money and supporting business growth. It will reportedly avoid wasting two hours every week making trips to the market, and save families over Sh480 (~US\$4.68) in fuel.³²

RENEWABLE ENERGY GOING THE HYBRID ROUTE

In August 2019, Kenya announced development of Africa's first large scale hybrid wind, solar PV, and battery storage project. The leading global renewable energy developers Windlab and Eurus Energy will develop the Meru County Energy Park. They entered into a MoU with the Kenyan Investment Authority and Meru County Government to develop this project, described as a premier example of a successful Public-Private Partnership initiative. The project will also include capacity building and knowledge transfer activities.

The park will provide up to 80MW of renewable energy, consisting of up to 20 wind turbines and more than 40,000 solar panels. It is expected that US\$150 million will be invested to produce energy to power more than 200,000 homes.

The project is expected to commence construction in 2021 and Meru County will continue to own part of the project when operational.³³

Other versions of a hybrid model also surfaced in Nigeria. The Nigerian Rural Electrification Agency launched a hybrid off-grid plant in Kare-Dadin Kowa, Kebbi State. 565 solar panels provide 98.8 kW, plus a generator that takes over after sunset. The project will provide electricity to the small community of 3,180 people who derive income mainly from agriculture and fishing. The project is another example of a successful public-private partnership between the Nigerian federal government and a private company.

Another off-grid hybrid project with a capacity of 7.1 MW was recently commissioned in Kano State, northern Nigeria. The plant is equipped with 10,680 solar panels and a battery electricity storage system. This set is backed up by diesel-powered emergency generators. This plant supplies 59,000 people, including nearly 55,000 students.³⁴

COAL PRODUCERS ACQUIRE RENEWABLE ENERGY ASSETS

Exxaro Resources is a South African mining company focused mainly on coal production. Exxaro recently acquired sole ownership of two wind farms in the Eastern Cape province of South Africa. The US\$105 million acquisition provides Exxaro with full ownership of the Tsitsikamma (95 MW) and Aamakhala Emoyeni (134 MW) wind farms.

Acquisition of renewable energy producer Cennergi Exxaro increases its scope in electrical energy provision. This investment bought out its joint venture partner, a subsidiary of Tata Power. Exxaro will now supply Eskom with electrical energy, beyond its current role as a supplier of coal to the SOE.

According to Exxaro's Executive Director Mxolisi Mgojo, acquisition of the wind farms allows the company to "consolidate its interests in renewable energy, at a time when the nation needs energy security in South Africa, in response to negative sentiment towards coal-fired power generation."³⁵

HYDRO DEVELOPMENTS

Mozambique's Ministry of Mineral Resources and Energy announced the commencement of the construction of the Mphanda Nkuwa hydroelectric project, in October 2019. The dam is located on the Zambezi River in Mozambique. The project will increase the capacity to generate and transport electricity along the Tete-Maputo line. Completion is expected within five years.³⁶

POINTS OF INTEREST

- An increasing number of African countries embrace renewable energy as a major source of electricity for their populations. This is good news for those poor who live in rural areas not reached by grid-distributed energy. Electricity has been slow to reach these poor segments of Africa's population. This trend is also good news for the climate. Africa is already struggling with climate change.
- It is interesting to see coal producers acquiring renewable energy sources. This is a way to hedge their bets, as they realise that time is running out for fossil fuels such as coal. Exxaro's strategy also indicates that it has changed its vision of itself as a coal company to an energy company, which is great as it actually redefines its future. If horse-buggy makers early in the twentieth century had redefined themselves as transportation companies, they would have transformed into motor vehicle manufacturers instead of going belly-up when the likes of Ford appeared on the scene.
- Renewable energy lends itself to hybrid solutions. When the sun does not shine, the wind can generate electricity. When the air is still, a battery or diesel generator can kick in. This model can work even for mini-grid and home systems. The costs do not need be exorbitant.
- A common complaint in Africa is that while renewable energy is a good idea, there is often a lack of access to equipment that is compatible with this form of electricity. One challenge is finding appliances that function on low power output. A seasoned renewable energy user will tell you the first thing they do when buying a washing machine or refrigerator is to check the watts needed to run the appliance. You need to avoid heavy electricity demands! Therefore the development of appliances dedicated for the use of renewable energy is quite welcome.
- Energy friendly appliances unfortunately are currently quite expensive. While M-Kopa's initiative seems to be cheap on a daily basis, over a two-year period the client (who is typically a member of the poor segment) pays more than a thousand dollars for a 100 litre refrigerator, which is quite small. A 510 litre refrigerator is available for less than half that price in the developed world! The wealthy will have options and will definitely not pay that much for an appliance they can buy for much less.

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