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Contents

1. Developments in Agriculture

Food production remains a serious issue for African governments. Another deserving challenge is adding value to agriculture exports, instead of exporting the basic commodity. Equitable sharing of value also needs attention. As always, farmers need all the support they can get. This report addresses some recent developments in the agriculture sector.

FINANCIAL SUPPORT FOR FARMERS

Ecobank Nigeria launched an initiative to promote entrepreneurship in the agricultural sector. The Bank will provide special loans to over 70,000 Nigerian farmers. This will increase their capacity and yields during the current planting season. This is part of the bank's alliance with the Maize Growers, Processors and Marketers Association of Nigeria to support the Central Bank of Nigeria's Anchor Borrowers programme for the 2020 season. This Ecobank initiative also aims to support the Nigerian government's strategy to help smallholder farmers increase food production, by creating an ecosystem that provides access to funding and support. This will connect smallholder farmers to processors and offtakers along the agriculture value chain. The goal is to help smallholder farmers expand their production and employ more workers through adoption of modern farming techniques, while improving the Nigerian economy.[1]

INCREASING PRODUCTIVITY THROUGH SOLAR

In the Sahara-surrounded Northern State of Sudan, a US$4.4 million Global Environmental Facility (GEF) grant enabled the UNDP to trial 29 solar-pumped farms. This trial project will demonstrate the potential for renewable energy in the agriculture sector. The grant will lead to rolling out an additional 1,440 water pumps by 2022. Also, the Korea International Cooperation Agency (KOICA) plans to fund another 450 solar powered water pumps in the River Nile State.

The vibrant agriculture sector in Sudan often relies on diesel-powered water pumps. Introduction of solar technology increased land use and productivity by nearly 50%. The use of solar water pumps significantly raised the productivity of farmers, while reducing overhead costs. For one farm, irrigating the same area of land now cultivated using solar energy reportedly required 16-17 barrels of gasoline.[2]

In the trial area, the success of solar pumps was replicated across 29 farms, with 257kWp of solar-generated energy cultivating 463 acres in total. This constant supply of reliable electricity eliminated the threat of losses from incomplete farming cycles due to a lack of fuel. Cultivated land subsequently increased by 46%. In addition, a continuous supply of water, reductions in fuel shortages and reduced maintenance downtime have increased crop yields and growing time per season, allowing farmers to produce throughout the year and introduce new, higher-value crops like cotton, lemons, and mangos.

Combined, these benefits increased food and cash crop production by up to 47%, and improved the income and cash flow of participating farmers. The project is expected to eliminate 860,100 metric tons of carbon dioxide over the solar pumps' 20-year lifespan and save 268,800 metric tons of diesel.

Expanding the project requires innovative financing, tax breaks, and quality control of the technology. Conversion to solar water pumps will cost farmers from US$5,000 to US$7,000, and reach breakeven in about four to six years, depending on the scale of the farm and capacity of the solar system.[3]

BOOSTING SISAL PRODUCTION

According to Panning and Research Officer of Tanzania Sisal Board (TSB) Frederick Sospeter, only 4% of the sisal cash crop in Tanzania is utilized. He believes that a lack of modern technology to produce products from this material is why 96% of the crop is not utilised.

While very few products are now made from sisal, diverse industries such as the automobile, agriculture and medicine industries can use it. Sisal fibre goes into making interior parts of cars, aeroplanes and ships, while animal feed and fertilizer may contain sisal residues.

The TSB is considering the following initiatives to raise sisal production and improve productivity:

- Convincing more investors to venture into technology that adds value to sisal,
- Acquiring state-of-the-art machinery to process sisal into various products ranging from carpets to decorations,
- Reviving annual sisal production from the current 36,000 tons to 120,000 tons by 2025,
- Acquiring 20,000 hectares of sisal farms abandoned by investors and distributing the land to smallholder farmers, and
- Increasing the number of smallholder farmers from the current 7,551 to at least 150,000.

During peak production in Tanzania in the 1960s, sisal earned significant foreign exchange for the country. Production has since then deteriorated, mainly due to poor management. Tanzania Mercantile Exchange (TMX) will start trading sisal for smallholder farmers by December 2020 to encourage farmers to invest more in the crop.

According to Prime Minister Kassim Majaliwa, the revival of sisal production in Tanzania was part of the government's plan to revive the production of all strategic crops, including cashew nuts, tea, tobacco, cotton, coffee and palm oil.[4]

LINKING PRODUCERS TO MARKETS

Tanzania's Export and Processing Zones Authority (EPZA) encourages farmers to supply raw materials to industries in the country, by linking them to reliable markets that offer high returns for their products.

Examples of such linkages include:

- The EPZA used the Dar es Salaam International Trade Fair (DITF) to link farmers and other potential producers of avocados with industry in Arusha.
- Linking producers of pigeon peas meant for India and Asian markets
- Assisting sesame seeds processors in buying the crop from farmers and processing it for foreign markets, focusing on Asia and some European countries.

Tanzania also created a logistics centre as the base for an international tea and coffee-trading centre. This will capitalise on the immense opportunities for the two products. Tanzania's tea is currently sold through the Mombasa auction, then rebranded and sold to other global markets. This path to market misses out on opportunities to benefit from value addition and earn substantial additional revenues.[5]

AFRICA NEEDS VALUE ADDITION

Very few companies in the agriculture sector in Nigeria are involved in value addition of their products. Value addition has the benefit of boosting agricultural productivity and promoting import substitution. Agriculture in Nigeria contributes about 21% to the GDP, and adding value represents a low hanging fruit for the diversification and development of the economy. The country currently exports agricultural commodities like sesame, ginger and cocoa that bring in billions of Naira each year. Nigeria's top ten agricultural exports are estimated to have earned about N289.3 billion (~US$755.1 million) from April 2019 to March 2020. However, the exports of these commodities undergo minimal or zero value addition processes. The failure to add value to their produce represents a substantial lost opportunity.

Two examples indicate the current situation:

- Nigeria and other major cocoa exporting countries are losing out on trends toward high-margin premium products in the US$82 billion-plus global cocoa/chocolate industry
- Cashew farmers and marketers in Nigeria lose about 900% of what they would have realised by fully processing and packaging these nuts to international standards

Many importers of primary agricultural commodities add little value to products, which are processed and exported back to commodity producing countries at very high prices. The Netherlands, for example, has one of the world's largest cocoa processing industries. In 2016, processing and export of cocoa derivatives added US$4.2 billion to the Dutch economy.

Developed countries reportedly add over US$150 of value when processing one ton of agricultural product. Developing countries add less than US$50. Furthermore, while 98% of agricultural production in developed countries undergoes industrial processing, barely 30% is processed in developing countries.[6]

POINTS OF INTEREST

- Countries with undiversified economies tend to rely too heavily on basic products. The prices of such products are vulnerable to volatile international markets. Adding value requires substantial investments and time to reconfigure value chains and develop infrastructure. Other areas requiring development include knowledge transfer, financial mechanisms, technology, and market-making capabilities. Governments must accept that adding value is no longer a choice. It is now an imperative. Successful initiatives will enable import substitution. They will also generate export revenues and create new jobs.
- The cocoa sector has long been a controversial topic. Several analysts point to value addition. Others believe the melting point of chocolate is so low that producing chocolate in tropical countries was impractical, and that processing should be done closer to the market. Irrespective of the fact that some companies now produce chocolate with a higher melting point, over 90% of value-added ends up in the purses of MNCs from developed countries in Europe and elsewhere. Not only is the country of origin losing out, but many farmers in these countries receive only a pittance for their product. Some commentators believe these farmers are relatively well off in comparison to farmers in other sub-sectors of their country. While this may be true, relative to their peers in developed countries they live in poverty and will continue to do so until they receive a fair share of the total value created.
- Creating linkages between farmers and markets is a huge step toward supporting farmers. There is an old marketing adage that states it is easier to find a product for a market than it is to find a market for a product. In the absence of a good fit, products end up in markets that either have little demand or a lot of competition. This leads to saturation and low prices, while other markets experience shortages and high prices. Institutions that help farmers get their product to a good market play an important role, in not only the agriculture sector, but across the economy. Farmers are not marketeers and need all the support they can get.
- Electricity is increasingly a high cost factor in agriculture, especially with modern farming techniques. Financial constraints tend to inhibit the adoption of techniques such as modern irrigation practices. Using solar energy is an affordable approach to provide electricity to farmers, and provides the benefit of higher productivity. Micro- and nano-grids are the path for electricity generation in Africa. The huge national grids are too expensive, too slow to expand into rural areas, and too unwieldy to establish and maintain in inhospitable remote areas.

2. Developments in the Digital Technology Sector

Digital technology is an important driver of development in Africa, permeating strategic industries such as financial services, agriculture, education, health and tourism, to name but a few. This report addresses some of the recent developments in this sector.

AGRITECH APPS GROWING IN AFRICA

Digital solutions are finding traction in Ghana, Nigeria, Kenya and other African countries. Emerging agritech applications (apps) promise to restructure the region's agricultural value chains. Some apps are responses to pandemic-related lockdowns and needs for social distancing. Others address the massive challenges created by years of underinvestment in the continent's agriculture sector. The World Bank sees Africa's crowdfunding market reaching US$2.5 billion by 2025. This trend reflects growing interest from a rising domestic middle class, combined with an African diaspora hungering for alternative investment opportunities.

The well-known Nigeria-based Farmcrowdy connects potential investors, farmers and markets. To help smallholder farmers with their financing challenges, Farmcrowdy raised over US$15 million for 25,000 farmers in four years, while providing several other benefits.

Livestock Wealth from South Africa connects online investors with cattle farmers. The minimum investment is US$100 per cow, and stocks can fluctuate depending on the market price of beef and rainfall. This application aims to connect urban South Africans with traditional agricultural practices.

In Ghana, crowd-farming firm Agripool links farmers to investors. Online users invest roughly US$62 per unit – each unit measures 40m^2 with after-harvest returns of about US$11 per unit. For every 300 units that are purchased, one more farmer is employed, while investors get to choose which crop to grow, and Agripool chooses the best seeds to plant.

However, these innovations face a number of challenges:

- Shortages of inputs affect the planting and harvesting seasons,
- Opaque land rights and creeping foreign ownership of prime arable land,
- Investor lack of access to funded farms to check on the progress of their investment,
- Many smallholder farmers that hold land under customary land tenant systems, without legal protection through title deeds, making them cautious about investing in developing the land, because it could be taken from them at any time

The potential to help farmers scale operations in the long term is a major benefit of these apps. Some agritech applications operators are exploring the potential to expand beyond their original borders.[7]

NEW AIRBNB FOR AFRICA

In May 2020, startup Nwanndo launched its web app, offering users access to an "Airbnb for Africa". Founded by Nigerian entrepreneurs Okereke Ikenna and Venetia Grant, Nwanndo enables individuals to monetise their extra living space and travel expertise.

In the spirit of Airbnb, the founders intend to develop a new type of tourism trade in Africa, bypassing the need for travel agents and helping local individuals earn. In the process, Nwanndo shows off Africa's tourism gems. The platform charges hosts a 10% commission on any booking.

Nwanndo offers the following benefits:

- Providing travellers with less expensive options,
- Allowing local tenants to mitigate the high costs of rent and to more financial flexibility,
- Helping small investors that want more involvement than a traditional landlord.

The company currently operates in Nigeria, Ghana, Kenya and Tanzania, and looks to expand to the rest of Africa and abroad.

It would be difficult for Nwanndo to have found a less auspicious time to launch, with the Covid-19 pandemic leading to lockdowns and international travel bans. The spread of the coronavirus massively affected the global tourism industry, with many countries introducing travel restrictions in attempts to contain its spread. However, the local tourism sub-sector may be a viable target.[8]

DIGITAL SUPPORT FOR INFORMAL TRADERS

In East Africa, fast-growing tech company Sokowatch intends to use its e-commerce platform to provide access to goods and services to millions of informal shop owners. The size of the essential goods market in the region's informal sector is around US$180 billion, plus an estimated market size of US$600 billion across the rest of Africa.

These informal shop owners serve the large population that lives on less than US$2 per day. The poor are rarely able to benefit from the growing range of online delivery and shopping platforms that market higher-end goods. Sokowatch will deliver essential goods like oil, rice and soap to over 16,000 informal shops across Kenya, Tanzania, Uganda and Rwanda. These will sell on to the population.

Their revenue model is based on the margin between the wholesale purchase price for items and the revenue from sale of those goods to each individual business. Delivery is free and orders are made through an app or SMS. Sokowatch has more than 200 delivery tuk-tuks to ensure speedy delivery.

An additional benefit for shop owners is that they no longer need to physically visit the wholesale markets nor pay for transport to and fro. The Covid-19 pandemic makes visiting the markets unsafe.

The company teamed up with KCB Bank and several foundations to distribute digital food vouchers to thousands of families in need of assistance. These vouchers can be redeemed at Sokowatch-affiliated outlets, helping support local stores while reducing food insecurity for over 10,000 people.

Sokowatch provides a credit facility to its small business customers. Around 15% of Sokowatch's order book is supported by credit. In contrast, most lenders in the marketplace dramatically reduced lending in response to Covid-19. The firm also creates additional financial products for its customers.[9]

DIGITAL STARTUP COLLABORATING WITH VISA

Sparkle, a Nigerian digital banking startup founded in 2020, will collaborate with Visa to benefit consumers, entrepreneurs, and SMEs across Nigeria. Sparkle can now issue Visa cards to its users, thus expanding their payment options,

Founder and chief of Sparkle Uzoma Dozie views the partnership as a major milestone for the new firm, as well for the Nigerian ecommerce industry and local SMEs. Sparkle sees the partnership with Visa as using technology and data to remove barriers to business, thus redefining e-commerce. The collaboration with Visa allows it to "deliver a bespoke and personalised service for their customers by tapping into large networks so they can fulfil their full potential."

Benefits for Sparkle customers include:

- Greater freedom and flexibility in how they make payments, such as making in-app payments with an embedded Visa virtual card
- Paying either with eCom or mCom using their Visa virtual card with Visa-branded companion cards linked to their Sparkle profile
- Gaining access to a range of other digital payments services from Visa
- Sparkle clients can also receive cross-border remittances into their Sparkle account from family and friends who are Visa cardholders[10]

HEALTH SERVICES GOING DIGITAL

The new Disrupt Africa report, "High Tech Health: Exploring the African E-health Startup Ecosystem Report 2020," reveals strong health tech growth in Africa, with continuing growth in investment in e-health startups. The number of active startups in the health tech sub-sector in Africa grew by 56.5% over the last three years, reaching a record total of 180 active companies. Fueling this growth in companies, investments in the sub-sector reached a record total of US$90 million in the first half of 2020, despite the COVID-19 pandemic. More than half of all funding in this sector in the past five years took place in the first half of 2020.

The report views the current period as a very opportune time to invest in Africa's health-tech sector, offering significant opportunities to prove new concepts, gain traction, and achieve lasting change in healthcare.[11]

The Kenyan government recently announced plans to have all 369 level four to level six hospitals in the country interconnected by the end of 2022. This digitization initiative by the Ministry of ICT, Innovations and Youth Affairs will support health facilities across Kenya and ensure effective and efficient service delivery. As part of this programme, Kenya installed Local Area Networks (LAN) in 50 public hospitals across the country.

According to the Ministry, the investment in infrastructure development will enable the public access government services online. The accompanying development of digital skills will help meet the government's objective to mainstream ICT at the grassroots level. The intention is to make Kenya a leader in the digital economy.[12]

POINTS OF INTEREST

- Digital tech startups in Africa are joining global institutions, not only in financial services and agriculture, but also in the health sector. Visa and MasterCard reached out to form partnership agreements with a number of digital app providers in various countries in Africa. The growing African middle class and the huge African population, projected to double in size to 2.4 billion by 2050, serve as major drivers for this trend. For local tech startups, the advantages of such collaborations lie in the increased range of services available to their customers, both locally and internationally.
- New health sector apps that greatly benefit Africa's poor population segments are on the rise. Africa has a high disease burden. Many patients need to travel long distances to seek often-unaffordable medical care. Digitalisation of this sector's offering will make an important contribution to resolution of this situation.
- Africa's informal sector will benefit significantly from emerging institutions such as Sokowatch. The informal sector on the continent is huge and provides employment to hundreds of millions of people who would otherwise be unemployed and destitute. In addition to access to products that otherwise would be difficult to obtain, free delivery eliminates the need to leave their businesses to travel to their suppliers, thus saving time and money. Even though the scale of their purchases may be quite small, the large number of informal traders will collectively provide the scale that would make this initiative viable for Sokowatch.
- Airbnb's African equivalent, Nwanndo, will regain access to the market once the pandemic is under control, It will be interesting to see which segments of the tourist population will embrace the new operator as a local player, and which prefer to stick to well-known Airbnb. Similarly, it will be equally interesting to see whether homeowners will migrate from Airbnb, a trusted global entity, to Nwanndo, an unknown player with African roots. Given the fear of the unknown, it seems likely Nwanndo will face an uphill battle to wrest market share from Airbnb.

3. Developments in the Energy Sector

Africa's energy sector is prone to overpromising but under delivering. However, a few governments now incentivise global players to invest locally, meanwhile launching energy development projects in their countries. This report addresses some recent trends and developments in this important sector.

BOOSTING ECONOMIC DIVERSIFICATION THROUGH POWER SECTOR DEVELOPMENT

Energy is a key element in the development of Angola's productive sector. In June of 2020, its government reaffirmed its commitment to free the country's economy from its dependence on oil revenues. Angola's government plans major investments in power infrastructure. This will deliver cheap, reliable and affordable electricity, both to the population and to industry.

The Angolan government's energy strategies include:

- Investing US$500 million over the next two years in solar energy projects to increase clean energy generation and bring electricity to the entire country,
- Implementing a two-phase US$400 million clean energy project to improve electricity distribution in four key provinces, and
- Reforming the structure of public companies in the sector to increase access to affordable energy for Angola's underserved populations.

Solenova, a joint venture between Angolan state oil company Sonangol and Italian major ENI, will assess and develop renewable energy opportunities in Angola. The two parent entities also agreed to jointly develop the 50 MW Caraculo Solar Plant in the Namibe province in southwest Angola. Another 300 MW of solar energy will come online in the coming months. The Angolan government is serious about leveraging affordable energy to boost industrialisation and has several energy projects in the pipeline. The presence of major international oil companies in the country is an added advantage to Angola, as the majors need to invest in clean energy projects to increase their non-carbon footprint. The country works with Africa50, a pan-African infrastructure investment platform created to promote infrastructure investments. Angola can potentially become an exporter of energy to the region.

Business opportunities in the power sector will emerge, given that 50% of the Angolan population still lacks reliable access to electricity. Energy development plans target construction of about 600 MW of solar energy capacity by 2022. This will require installing about 30,000 individual solar PV systems. The government intends to open up its energy sector to competition from the national and international private sectors.[13]

BOOSTING OIL PRODUCTION IN THE POST-COVID-19 PERIOD

COVID-19-related declines in demand led to a sharp drop in crude oil prices, while the oil price war between Saudi Arabia and Russia severely impacted Africa's main oil producers. Countries that depend on crude oil exports for a large portion of their revenue include Nigeria, Angola and Ghana.

NJ Ayuk, author of "Billions at Play: The Future of African Energy and Doing Deals" offers suggestions to governments preparing for a post-Covid-19 recovery and increasing demand for oil:

- They must now work on regulations to provide a healthier enabling environment for investors and businesses;
- They should fine-tune their local content policies;
- They should adopt technologies that will contribute to a leaner, more profitable petroleum sector. This includes innovations such as the development of new ways to drill wells and handle equipment, the design of new seismic data collection programs, the management of petroleum data systems, and the monitoring and protection of internet-connected equipment;

- Africa needs to involve indigenous companies so employees, business partners, and suppliers can benefit from the recovery;
- The continent needs foreign companies that are willing to share knowledge and technology and to create economic opportunities in the communities where they operate;
- Governments need to remove obstacles to new production, such as red tape, lengthy delays and excessive taxes;
- Governments should support smaller independent production companies by breaking exploration maps into smaller sections;
- There is a need for better fiscal terms for producers, including breaks on import duties;
- African countries need to develop fair, balanced local content policies that create economic and educational opportunities for Africans without overly burdening foreign investors;
- African oil and gas companies should work with one another and with local tech firms to augment their technological capacities; and
- African companies should also pursue partnerships with foreign investors that are open to technical knowledge and skills transfers[14]

TANZANIA SETTING ITSELF UP AS REGIONAL ENERGY POWERHOUSE

Tanzania will reportedly become the leading power producer and supplier in the East African region within the next three years. This will follow the launch of the Julius Nyerere Hydropower project along Rufiji River in the Coast Region. This project will transform the energy sector and guarantee Tanzania the energy needed to speed the development of other economic sectors, especially the country's industrialisation drive. The power project, constructed by a joint venture between Egyptian contractors, Arab contractors and El Sewedy Electric Co, is expected to double electricity generation capacity.

The Tanzanian government financed the 2,115 MW power project in its entirety, at a cost of TZS6.55 trillion (~US$2.8 billion). Launched in June 2019, the project is set for completion in 2022. The construction of the main and the diversion tunnels is underway.

This will be the fourth largest dam in Africa and ninth largest in the world. Two of the three biggest African dams are in East Africa:

- Africa's largest dam is the Grand Ethiopian Renaissance Dam at 6,450 MW, with completion expected in 2022
- The Mambira Dam in Nigeria is second with 3,050 megawatts
- Ethiopia's Shaika Dam is third at 2,160 MW

Tanzania's parliament recently announced that electricity generation in the country rose to 1,602 MW in April 2020, up from 1,308 MW in 2015.

Hydropower has dominated the power sector of Tanzania over the years. Currently, about 45% of power generated in the country flows from hydropower dams.

The electricity generated by the Julius Nyerere Dam will save almost 400 hectares of trees felled annually for charcoal and firewood, and improve currently unsustainable agricultural practices.[15]

POWER SHIPS HAVE THE POTENTIAL TO ADDRESS SOUTH AFRICA'S POWER CHALLENGE

South Africa's ongoing electricity challenges recently led Karpowership South Africa, a subsidiary of the Karadeniz Energy Group from Turkey, to propose a plan to supply South Africa with power generated on ships that would dock in harbours along the country's coastline. The company believes it can provide South Africa with cheaper electricity, at a cost of R1.70 per kWh. This price is reportedly significantly below Eskom offerings. Lead time to bring their ships online to deliver between 700 and 800 MW is only two months.

Powerships are second-hand cargo ships, converted to generate and supply electricity. A grid substation on board is linked to the transmission towers of a country's grid. These ships are not intended to replace a country's power supplier, but to supplement existing grid capacity.

Karpowership South Africa's recent ship proposal was in response to the Department of Mineral Resources and Energy's 2019 Request for Information (RFI) to procure power from independent producers.

The company runs similar projects in coastal countries across Africa including Senegal, Gambia, Ghana, Mozambique and Guinea-Bissau.[16]

DEVELOPING A SAFE OPERATING ENVIRONMENT IN MOZAMBIQUE

French oil giant Total recently signed a security agreement with the Mozambican government. This will enhance security arrangements for a US$20 billion LNG project. Mozambique experienced renewed militant attacks in recent months, including deadly attacks in Cabo Delgado province, which is home to the LNG project led by Total. According to Total, the project will begin delivering LNG in 2024.

Gunmen killed eight workers for a firm subcontracted by Total to work on its LNG project in June 2020. A terrorist organization that claims affiliation with Islamic State claims responsibility, for this and other attacks in Mozambique since 2017. Despite this threat, Total will not give up on the project, nor will other companies. The security agreement between Total and the Mozambique government aims to boost security measures and ensure a safe operating environment for partners such as Total, reaffirming their ongoing commitment to Mozambican industry.[17]

POINTS OF INTEREST

- It is good to see oil producers such as Angola embracing renewable energy to diversify their energy supply. Nigeria is another African oil producer that is launching renewable energy projects to complement its electricity generation capacity. In this regard, they join large oil producers such as the UAE and Saudi Arabia in developing solar energy projects. ACWA Power, a Saudi power generation company, is actively involved in multi-billion solar energy power plants throughout the GCC region. Africa oil and gas producers would do well to study the drivers for this trend.
- Tanzania is not the only African country that seeks to position itself as a regional power player. Ethiopia has similar aspirations. This country has also been engaged in negotiations with Morocco, a major solar energy producer in North Africa, to collaborate on the production of energy for themselves and within their neighbouring countries. Ethiopia is also negotiating to provide it with electricity to Saudi Arabia. A number of other East African countries are in discussions with Russia and China to obtain nuclear energy, which would dent the aspirations of countries such as Ethiopia and Tanzania to become regional powerhouses in energy supply . A contrary view holds that there is no need for nuclear energy in Africa, given the potential to tap into the vast renewable energy resources available on the continent.
- South Africa's energy supply company, Eskom, has become a national embarrassment with its inability to provide consistent and affordable electricity to keep the lights on in the country. It is currently again involved in litigation to increase the cost of the already expensive electricity. Much of the present woes of this Eskom can be ascribed to a lack of governmental focus, severe corruption, lack of management competence and poor maintenance. Two huge power stations are presently still under construction, years behind schedule and billions of dollars over budget, with corruption playing a major role. Whether powerships will help Eskom keep the lights on until it its stations come online remains to be seen. They appear unlikely to serve as a long-term source of supplementary power.

- Total's commitment to securing a safe operating environment in the northeast of Mozambique in the Cabo Delgado province is laudable. The terror group launched its first activities in 2017, although the media only recently began reporting on their atrocities in a meaningful way. One asks why it took close to three years for this situation to reach the global stage. As stated before, Mozambique has a treasure trove of minerals, including gold, coal, titanium and rubies, amongst others. The profitable development of these deposits requires a safe operating environment, which is not currently the case. The main victims remain the Mozambican population, who are not only dying at the hands of terrorists, but losing out on benefits flowing from the exploitation of these rich ore reserves. It is time for the African Union and the SADC to step in and do something about the situation.

4. Developments in the Manufacturing Sector

The manufacturing sector in Africa, offering the potential to create meaningful jobs on a continent rife with unemployment, is important. The sector can stimulate import substitution and generate export revenues. Unfortunately, the contribution of the manufacturing sector to national GDP on the continent appears to be in decline, leading to premature deindustrialisation. Africa is losing out on jobs and GDP growth. Yet, several positive developments on the continent bode well for African economies. This report addresses some recent developments in this sector.

AVAILABILITY OF GRAPHITE DEPOSITS BOOSTS ELECTRIC CAR MANUFACTURING

South Africa and its neighbours have the materials needed to produce batteries for electric cars. Graphite has never been considered an important source of power for car enthusiasts. However, it is currently becoming increasingly valuable. This is due to the growing popularity of electric vehicles. Lithium-ion is currently the battery composition of choice for companies such as Tesla. One of the most important elements in any modern automotive powertrain battery is graphite. Many legacy vehicle companies are launching their own battery research and large-scale production projects.

Demand for quality graphite may reach 125m tons by 2030, a 2400% increase. This represents a unique and huge opportunity for South Africa's auto manufacturing sector. Adjacent Mozambique sits on 30% of the world's proven premium-grade graphite. It is also a huge opportunity for local mining companies. Access to Mozambican graphite can make South Africa a more attractive destination for global vehicle manufacturing. This will increase its chances to succeed in transitioning from traditional fossil fuel-based vehicle to electric vehicle production.

Global automotive players that do business in South Africa (such as BMW, Mercedes-Benz and VW) are committed to transitioning from internal combustion engines and radically accelerating their electric vehicle product integration. Battery production capacity will be crucial to retain production of these brands in South Africa. The deposits of high-quality graphite in Mozambique and South Africa increase the likelihood of this outcome.[18]

MANUFACTURING SOLAR EQUIPMENT

Spanish contractor Mondragon Assembly recently completed construction of a solar panel manufacturing plant with a daily capacity of 100 MWp for the Teriak Industrial Group in Cairo, Egypt. The plant will manufacture several varieties of solar panels. It is the second solar panel manufacturing plant built by Mondragon in Egypt. Its first plant in Egypt was for Arab International Optronics, with a capacity to make up to 50 MWp of solar panels each day.

The Teriak Industrial Group previously focused on the manufacture of automotive spare parts for Egypt and the Middle East. Teriak invested in a solar panel manufacturing plant as an element of its diversification strategy. This also complements Egypt's strategy to diversify the country's electricity mix by producing electricity from renewable solar energy. Egypt reportedly has the highest quantity of PV solar projects under development in Africa.

The inauguration of this plant follows the launch of Teriak's project to build a solar equipment assembly plant in Algeria. The production from this plant will go to the Algerian and African markets.[19]

BOOSTING ELECTRIC VEHICLE ASSEMBLY

Ethiopia's Marathon Motor Engineering announced that electric cars would soon be available in the country, after finalising its preparations to assemble 36 ultramodern, cost-effective and environment-friendly electric vehicles daily. These vehicles will sell at affordable price for individual and enterprise customers, tapping into tax and other incentives for the automotive industry.

According to the CEO of Marathon Motor Founding, Melaku Assefa, the assembly of the new electric cars is aligned to the Ethiopian government's priority goal to boost a climate-friendly economy. The production of the electric vehicles will also reduce the foreign currency required to import petroleum and diesel fuel.

The Ethiopian government incentivized automotive firms by reducing excise tax on new cars from 50 to 30%, making the vehicles more affordable for its growing middle-class. This step also aims to discourage imports of second-hand cars that are costly to maintain. It also saves foreign exchange for importing spare parts.

Ethiopia's growing middle-class, coupled with the government's huge investment in hydroelectric projects that will make electricity more accessible and affordable, will reportedly boost local demand for electric vehicles. The assembly of the electric cars will transfer knowledge, skills and technology, while creating meaningful jobs for youth.[20]

Kiira Motors Corporation from Uganda aims for annual production of 5,000 electric vehicles, including buses, by 2021. CHTC Motor Co, a manufacturing subsidiary of Chinese state-owned Sinomach Automobile Co, will support this venture. The construction of the car production plant situated near Kampala is well advanced. The project aims to modernise the car fleet in Ugandan cities, create new jobs, and combat air pollution.

Kiira Motors entered into a partnership with CHTC to help scale the project. CHTC will provide most of the equipment needed to produce Kiira Motors Corp.'s electric cars. The project aims to manufacture 90% of the components locally in Uganda. The plan is that this plant will produce windows, air filters, the frame and the 12-volt batteries to power the radio.

It is foreseen that the annual production of 5,000 electric cars will be sufficient to satisfy both the Ugandan and sub-regional markets. This factory has the potential to position Uganda as one of the dominant players in the still developing electric vehicle market in sub-Saharan Africa.[21]

PHARMACEUTICAL PRODUCTION IN RWANDA SCHEDULED TO START SOON

Apex Biotech is the first pharmaceutical company licensed to manufacture various types of medication in Rwanda. Apex postponed the launch of commercial production due to the logistical disruption and delayed hiring of staff. These resulted from the restrictions of movement in response to the Covid-19 pandemic. Originally scheduled to start in April, production will now commence at a later date (Apex aims for mid-September).

The Rwandan and Bangladeshi owned factory will operate in the Kigali Special Economic Zone. The company brought containers of raw materials to the port of Dar-es-Salaam in Tanzania, and is currently in the process of hiring workers. They plan to hire 80% Rwandans and 20% expatriates who will also train locals to support the transfer of knowledge and skills.

The plant will have an optimum production capacity for 800 million packets of tablets, 200 million capsules, 8 million bottles and 5 million Oral Rehydration Therapy (ORT) sachets annually. These products will help prevent and treat a wide range of medical conditions, including malaria, HIV/AIDS, Tuberculosis, Hepatitis, heart diseases, diabetes, malnutrition, and women's and children's health and chronic pain conditions.

Rwanda currently imports all medical drugs consumed on the local market. This contributes to its rising trade deficit. Apex Biotech's production will reportedly reduce Rwanda's drug import bill by 10 to 20%. The first phase of production will include antibiotics. The plant also has the potential to generate foreign revenues once it can export to neighbouring countries. The company sees the DRC, Congo Brazzaville, Central African Republic, Angola, and Mozambique as potential markets.

Apex Biotech believes Rwanda should focus on producing high added value products such as anti-cancer products; yet balance this by producing basic products for the population, such as antibiotics.[22]

MANUFACTURING COVID-19 TEST KITS

Ethiopia's Ministry of Health recently announced the country would start manufacturing its own Covid-19 test kits with support from China. Ethiopia's testing campaign recently passed the mark of one million tests, the third highest in Africa after South Africa and Morocco. Manufacturing these test kits locally will help Ethiopia boost its national Covid-19 testing capacity. Ethiopia will completely stop importing test kits, and plans to export the test kits to other African nations. Manufacturing is scheduled to begin in September.[23]

POINTS OF INTEREST

- Electrical vehicle production in several African states receives increasing attention from investors. The cases of Ethiopia and Uganda are noted above. South Africa, Morocco and Egypt also come to mind. Rwanda and Nigeria reached the news with its adoption of electric bikes. While yet to produce its own electric vehicles, Kenya is developing the policies needed to produce both electric vehicles and charging stations that will use renewable energy. Another East African country embracing the adoption of electrical vehicles is Tanzania. China actively supports such developments in several countries, including Egypt and Ethiopia.
- The launch of pharmaceutical production in Rwanda is a huge step in the right direction. Like many other countries in Africa, Rwanda imports generic medication from abroad at high cost. Most, if not all, of these medicines, can be manufactured locally. Many foreign pharmaceutical manufacturers are capable of supporting the development of local pharmaceutical sectors. Even small players such as Beacons in Singapore have adopted a business model that licenses foreign factories, which plays a major role in its expansion plans. Such plans include access to formulas and training of personnel. Ethiopia and Nigeria are other countries that seriously embrace the idea of local production of generic medication. There is no actual need for Africa to import generic forms of medication from abroad.
- Solar equipment production in Africa is a logical next step in the growth and development of its solar industry. All major components, such as panels, inverters and batteries, are currently imported, mainly from China and Germany. While Chinese components are far cheaper, the perception that German quality is higher persists. Yet, by producing such components locally, Africa could save considerable amounts of foreign exchange, while creating meaningful jobs.

5. Developments in the Mining Sector

The mining sector offers the potential to meaningfully contribute to the GDP of African countries. It also create significant employment opportunities. However, there appears to be little interest in adding value to these basic commodities. Diversification is lower on the agenda than it should be. Yet, we see some promising opportunities in the sector. This report addresses some recent developments.

MINING DIVERSIFICATION ADDING VALUE

Zambia's vast reserves of natural resources are attracting new investors. Zambian government-majority owned mining conglomerate ZCCM Investments Holdings indicated its intent to lead Zambia's economic recovery. ZCCM-IH will partner with Array Metals, a new strategic mining company. Array holds an estimated reserve of 3 million tons of gold ore in Mumbwa, with an estimated yield of 7,500 kgs of gold valued at more than US$450 million (at September 2020 prices).

The ZCCM-IH decision to partner with Array Metals through Consolidated Gold Company (CGCZ) is a promising indicator of the recovery of strategic investment trends in Zambia, despite the turbulent economic times resulting from the Covid-19 pandemic.

This development flows from the coming to fruition of several key long-term economic strategies:

- Diversification from copper to gold creates resilience, inspires greater investor confidence and supports sustainable long-term growth.
- The project will immediately create 300 local jobs, and add more as mining activities expand.
- ZCCM-IH's partnership with Array Metals should encourage mid-sized mining firms to move into exploration and mining activities.
- The Zambian government now seeks to support smaller players in exploiting new discoveries. Medium-sized companies are seen as nimbler, flexible and more innovative. Many also focus on deploying cutting-edge technology to streamline exploration and production.
- Fresh competition also encourages miners to increase outputs and efficiency, thus driving greater investment and progress.
- Larger, more established companies will no longer command monopolies, so the government can improve revenue generation and distribution of the benefits from mining in a more egalitarian manner.

The above developments reveal the emergence of an environment that encourages broader investment in Zambia. The growing production of copper and gold, the creation of jobs for Zambians, the increase in the country's GDP and the introduction of fresh competition in key sectors will add value in both the short and over the long-term.[24]

BOOSTING MINING IN THE DRC

The DRC sits on a treasure trove of mineral reserves. It produces more than 60% of the world's cobalt. Demand for cobalt increased significantly in recent years, due to its use in mobile phone and electric vehicle batteries. It also has some of the world's richest untapped copper reserves, which is key to the energy transition infrastructure chain. Reportedly, the cost of doing business in the DRC is two and a half times higher than anywhere else in the world, and the risks can be enormous.

Mining investors interested in the DRC heard at a number of webinars hosted by the Digital DRC Mining Week in June 2020 that they should to be prepared to invest in downstream processing and local job creation and to refrain from striking partnerships with politically exposed persons if they wanted to succeed in that country

The DRC's new mining code governs taxes and makes clear stipulations on downstream processing, offering incentives for investment in this area. Analysts indicated that the intention was to retain revenues in the country. It was also important to scale up activities in downstream integration with a phased exposure to financing to ease investor concerns. Scaling up requires building good relations with local communities. Working with the local community involves an ongoing process of discussion and negotiation. The creation of as many local employment opportunities as possible, forest clearance, road construction and agricultural projects for the local community were deemed to be essential to maintaining good relations.

Safety and security issues were also explored, with certain areas seen as "no-go" zones. Also, investors were advised to avoid engaging with politically exposed persons, known as PEPs, who bring their own complexities. A thorough due diligence is essential when seeking a local partner.[25]

MINING INVESTMENTS IN SOUTH AFRICA ON HOLD

South Africa's mining industry faces the serious risk of severe contraction. Prospective investments are under pressure. A number of large projects risk cancellation, with investments in the platinum sector under the greatest threat. With about 170,000 people employed in the platinum sector, this is bad news for South Africa. Its economy is experiencing the biggest economic contraction since the Second World War. This takes place as the demise of South Africa's gold mines enters its final phase.

The productivity of South Africa's gold industry decreased over the past thirty years, as the challenges of safely operating the world's deepest mines drove up costs. The same applies to the country's platinum deposits. While both sub-sectors have plentiful reserves, these are deeper and require more capital expenditure, lowering the prospects for attractive returns.

Platinum output peaked in 2006. The lack of investment in deep-level shafts will result in further sharp declines in production over the next 10 years. Increasing palladium prices benefitted local producers over the past 18 months, but even this is insufficient to justify large capital expenditure projects.

- Implats recently refused to invest about R12 billion (~US$717 million) on a new mine in the Limpopo Province, as its management believed the future outlook for the industry did not warrant heavy investment over the next decade;
- Anglo American Platinum recently delayed a decision on whether to spend US$1.5 billion (~R26.5 billion) on expanding output at its key Mogalakwena mine to the second half of 2021;
- Ivanhoe Mines from Canada delayed evaluation of finance for its new project, which may require about US$1.5 billion of investment.

Despite this, the platinum sector is apparently in better shape than South Africa's gold industry as some of its mines reportedly still have a 30-year lifespan.

However, an uncertain regulatory and policy environment, among other challenges complicates investment decisions. Also, with the Covid-19 pandemic creating doubts over future demand, the development of new, lower-cost mines is on hold.[26]

ADDING VALUE THROUGH REFINING GOLD IN UGANDA

In Uganda, gold export earnings increased in recent years. In 2012, Uganda's gold exports amounted to just US$9.1 million. This figure shot up to US$1.25 billion in 2019.

There are several reasons for the increase in gold export over the decade. A business-enabling policy environment is one. In addition, construction of gold refineries played a significant role. In 2014, the African Gold Refinery Limited (AGR) was set up, which saw Uganda turning around its gold export fortunes. Only one year after setting up AGR, the value of Uganda's gold exports jumped to US$312 million in 2016. By 2019 the total crossed the billion-dollar mark, as indicated above.

The strong increase in reported export volumes and revenues may be ascribed to the phenomenon that while many gold traders previously exported their product without declaring it, they found that they could do the same through a formal mechanism such as the AGR. At the AGR, dealers with proper certified paperwork now bring in their gold for refining, melting, assaying and logistics. In doing so, AGR has done a lot to streamline the processes in Uganda's gold industry. This has also increased transparency in the mining sector along the entire value chain, not only in Uganda but also in the entire region.

With the setting up of the AGR as the biggest gold refinery in East Africa, many traders now come to Uganda to formally conduct business with the company. AGR has created employment opportunities for Ugandans and promoted its gold to the international market as Ugandan products. The wealthy in Uganda are potential customers for locally produced jewellery.[27]

POINTS OF INTEREST

- Uganda joins Tanzania as an East Africa country that seeks to create opportunities for value addition to the gold industry by developing refineries and providing the opportunity for local players to add value before exporting it. In Tanzania, the government went so far as to compel locals to refine the gold ore locally before exporting. This value addition has a clear benefit as indicated by the Ugandan example. All mineral-producing countries on the continent should embrace this policy stance to maximise the benefits from value addition. In addition to creating jobs, this policy offers the benefit of import substitution and the potential for export revenue generation.
- South Africa's mining sector has deteriorated over the past few decades, placing export revenues and job creation in jeopardy. As it is, South Africa has lost its position as the largest gold producer in Africa to Ghana. Mozambique reportedly is also threatening South Africa's place as the second largest producer of gold. As can be seen in the case study above, South Africa’s platinum industry is also under threat. The lack of clear mineral policies aggravates the geological challenges of producing ore from deep mines. This led to decisions to withdraw from South Africa by a number of large mining houses, such as Anglo Gold Ashanti. Anglo American also closed a number of its divisions. This phenomenon is for obvious reasons a major headache for the South African government. It will lead to major job losses in a country with an unemployment rate that currently surpasses 40%. However, it appears that there is little real interest in developing the country’s remaining ore reserves in a meaningful way. Labour unions appear to have an inordinate amount of influence; decisions frequently seek to appease unions rather than to ensure a productive and profitable mining sector.
- The DRC offers vast mineral potential. However, the country also presents serious security challenges. Only a brave person would invest in this country's mining sector. First, they would need to manage security risks in a meaningful way to benefit from the rich DRC reserves. The directive that potential investors should address opportunities in the downstream value chain is an important guideline. This applies not only to the DRC mining sector, but also to every mining sector in Africa. Africa loses too many opportunities for value addition through export of its basic commodities. It appears African stakeholders find it easier to export the basic commodity than to add value. To benefit from job creation, import substitution and export revenue generation, African governments should mandate investments across the entire mining sector value chain.

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