Marubeni
Marubeni Research Institute

Sub-Saharan Report

These reports are by Mr. Ryota Kikkawa, an expatriate employee working in Johannesburg with a view across the region.

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In order for the Marubeni Research Institute to acquire first hand information from the field and contribute to the Company's strategy, young Marubeni staff well-versed in economic and industry analysis have been posted to the region.

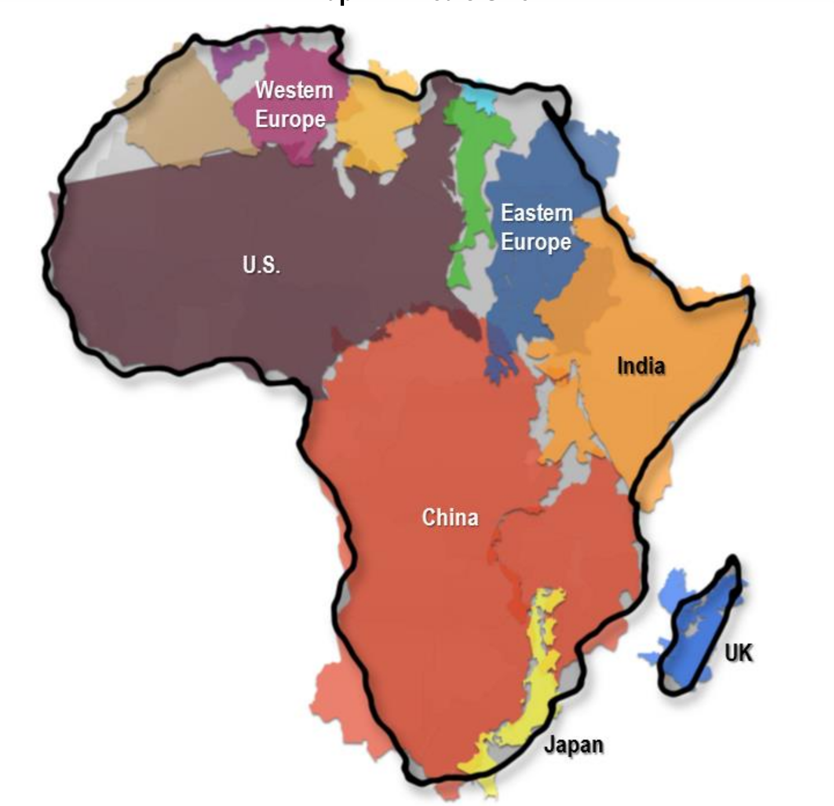
For the most part, for our sub-Saharan Africa reports we have been writing on the political and macro-economic situations of individual sub-Saharan African countries. This time though, I would like to look at and summarize Africa, including sub-Saharan Africa, as a whole.

So here, I would like to introduce Africa from 4 perspectives; inner-region demand, natural resources, industry diversification and regional integration.

● Africa's Potential (Inner-Region Demand)

Africa's total land area is vast at more the 29 million square kilometers, which is larger than the combined total of China (9.4 million km²), the U.S. (9.1 million km²), the EU (4.2 million km²), India (3.0 million km²) and Japan 400 thousand km²) (map 1). On a Mercator projected map, Africa below the equator looks rather small, but in fact is quite massive, much larger than it looks.

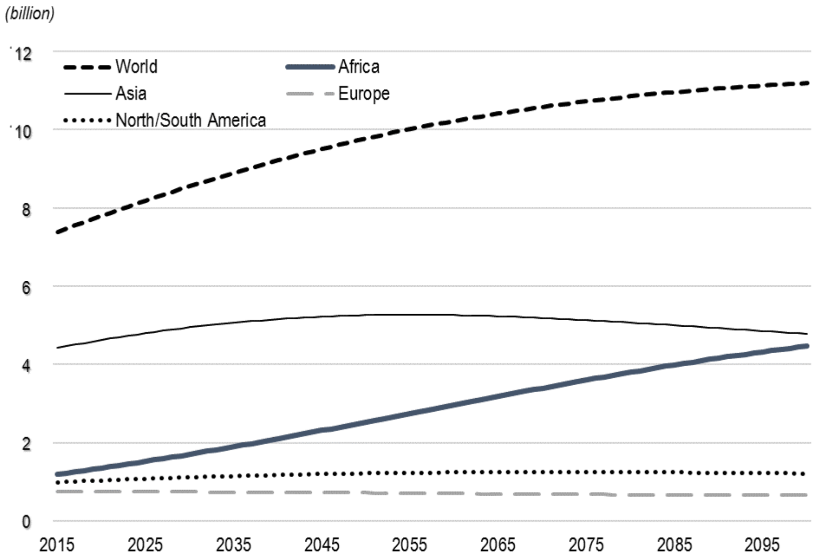
Map 1: Africa's Size



While having already mentioned the massive size of Africa's land area, the foremost source of demand in Africa is its explosively rising population. Currently, Africa has a population of about 1.2 billion people (950 million in sub-Saharan Africa).

With the population growing at 2% plus per year, the United Nations predicts Africa's popualtion will jump to 1.7 billion by 2030 (1.4 billion in sub-Saharan Africa), 2.5 billion in 2050 (2.2 billion in sub-Saharan Africa) and 4.5 billion by 2100 (4.0 billion in sub-Saharan Africa). Already, in 2030, 20% of the world's population will be African, and by 2100 it will be 40%

Graph 1: World's Population by Region



Source: United Nation's median estimate

Expanding consumption accompanying a rising population will be the driving force of African economic growth. Total household consumption in Africa in 2015 was $1.4 trillion which is expected to increase by 1.5 times to $2.1 trillion by 2025. In particular, a rapidly growing middle class will be the engine powering consumption. The middle class already makes up more than one-third of the population and it's estimated the scale of their consumption will double from $500 billion in 2015 to $1 trillion in the 10 years to 2025 (note 1).

Demand for infrastructure also strengthens as the population grows. For example, in terms of electric power, the electrification rate in Africa is below 50% with 650 million people without access to electricity. To meet Africa's infrastructure needs, including water supply, transportation and other infrastructure, $50 billion in annual investment is currently required. And, in 10 years time, demand for infrastructure investment could reach a scale of $150 billion per year

● The Attraction of Natural Resources

As you are probably aware, Africa has an abundance of oil and metal and mineral resource reserves. Up until now many of Africa's economies have been dependent on natural resources and have suffered slowdowns due to the slump in the natural resource and commodity markets. As this economic structure remains in place, as the world economy is moderately recovering, it is likely that resource and commodity prices as a whole will pick-up somewhat with natural resources continuing to function as an important growth driver for many African economies.

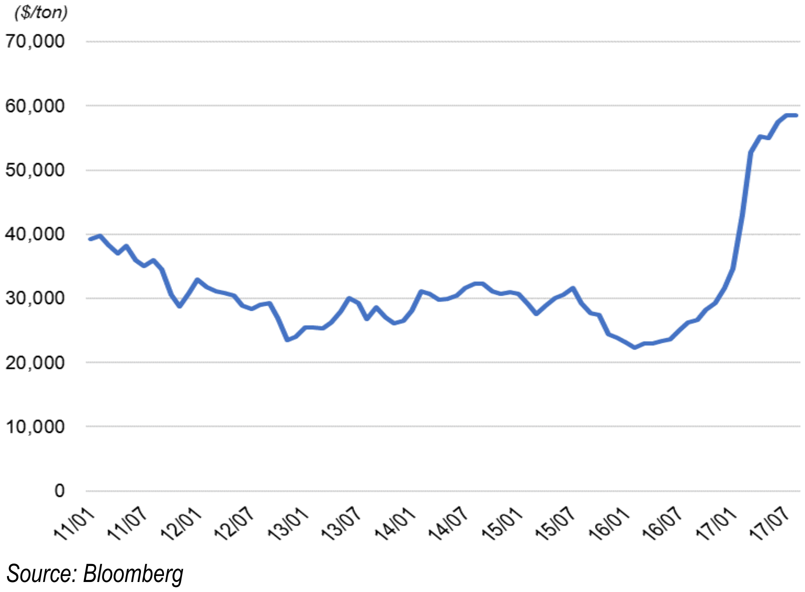
Meanwhile, attention is now being paid to the potential increase in metal and mineral resource demand accompanying the possible shift toward electric vehicles (EVs) in the future. Due to this shift, the demand for copper and other metals and minerals needed for electric motors, wiring, batteries and so on connected to EVs is expected to increase.

According to the International Copper Association, EV-related copper demand over the next 10 years will expand by 9 times, from 180,000 tons per year to 1.74 million tons per annum (note 2). The largest producer of copper after Chile, China, Peru and the U.S. is the Democratic Republic of the Congo (DRC), with South Africa, Zambia and Botswana also being major producers. Africa accounts for 10% of the world's copper production, so a rise in copper demand would be a strong economic tailwind.

In addition, the demand for cobalt, which is used in EV batteries, is also expected to grow. More than 10 kilograms of cobalt is needed for just 1 EV battery, so it is estimated that cobalt demand could rise by as much as 30 times in the not too distant future. Last year, due to poor production in some cobalt producing regions and increased demand there was a more than 1,000 ton shortage of cobalt and a sharp rise in cobalt prices which exceeded $58,000 per ton (graph 2). Much of the world's cobalt reserves are found in Africa. According to the U.S. Geological Survey (USGS), the majority of the world's cobalt reserves are found in Africa (7.1 million tons) with the DRC having 3.4 million tons, Zambia with 270 thousand tons, Madagascar with 130 thousand tons and South Africa with 30 thousand tons, so it is an important resource for them.

It is certainly true that over-dependence on natural resources can lead to instability. On the other hand, if prices rise on the backdrop of new resource demand expansion, it will no doubt act to bolster many African economies.

Graph 2: Cobalt Prices

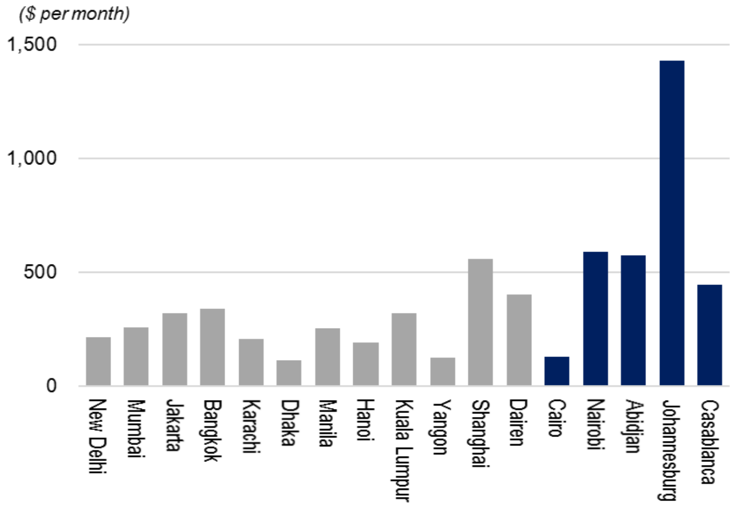


Source: Bloomberg

● Industry Diversification and Resources: A One-Legged Stool

In the meantime, for African countries to break away from their dependence on natural resources, they must focus on industry diversification. As an example, with various countries first promoting their domestic manufacturing industries, Asia has achieved rapid economic growth as a global manufacturing base. Fostering the manufacturing industry creates higher value-added and leads to greater employment and is therefore an important issue for many African countries. However, currently, in many African countries personnel costs in manufacturing are very high against a backdrop of a shortage of skilled workers, so the idea of manufacturing becoming predominant enough to become a manufacturing base is questionable (graph 3). In fact, developing a large-scale manufacturing industry, which is now undeveloped, remains an enormous challenge for African countries.

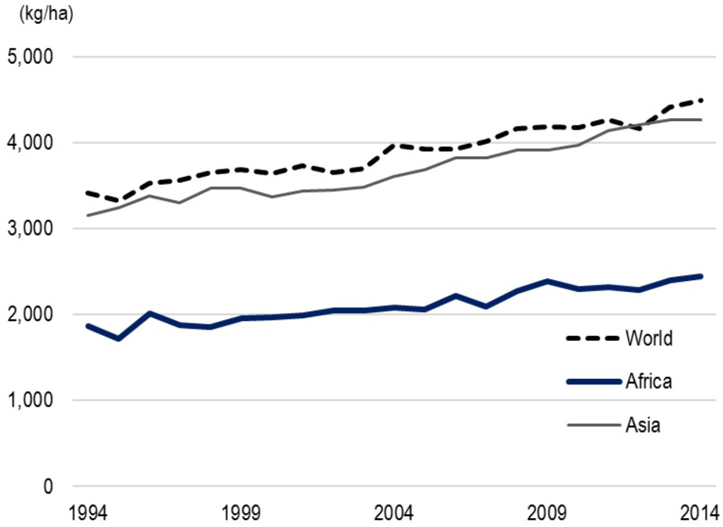
Graph 3: Labor Wages in Asia and Africa



Source: JETRO

There is one non-resource sector that is a driving force in Africa's economy though, and that is the agricultural sector. Agriculture is a major industry in Africa, with the majority of the working population engaged in the industry. Nevertheless, agricultural productivity in Africa is extremely low. For example, yields are only about half the world average (graph 4). As for the reasons for such low productivity, the industry is mainly made up of small-scale farmers without access to capital, with fertilizer usage low and irrigation not widespread in a region subject to droughts (note 3). Also, since many countries became awash in oil and other natural resource investment, agriculture was not emphasized or prioritized. The economic structure has relied on natural resource exports to procure food, but with growing populations and low agricultural productivity food production is not keeping pace.

Graph 4: Grain Yields by Region



Source: FAO, average rice, wheat and corn yields

As a result, food self-sufficiency ratios are falling. Even if you want to advance the manufacturing industry it is hindered by high labor costs which can be further exacerbated by the susceptibility to rises in food prices from economic structures that rely on food imports. However, in Nigeria as a result of strengthened government support for farmers, rice production was successfully increased by 1.5 times in one year with the effect of investment in the agriculture sector in Nigeria high and growing. In many countries in Africa, they are exporting agricultural crops as primary products (raw material). However, the number of countries that have started to restrict the export of crops as primary products and introduce policies to promote domestic food processing is increasing. By promoting the domestic processing of agricultural products, they are industrializing the agricultural sector with expectations of incomes rising due to the higher value-added.

Agriculture still has much potential in Africa and it can be said that improving value-added and the food self-sufficiency rate in agriculture is indispensable as a prerequisite to the future development of the manufacturing industry

● Mini-Column

This is a completely arbitrary and biased ranking of tourist spots for our expatriates to visit during their vacations.

1. **Cape Town (South Africa)**
   Cape Town is blessed with many tourist resources and good tourist spots, such as the Cape of Good Hope and Table Mountain. The food is quite refined and security and safety are comparatively good, so you tend to forget you are in Africa.

2. **Victoria Falls (Zimbabwe and Zambia)**
   One of the world's 3 largest waterfalls, it is a once in a lifetime experience. It is located near a national park, so going on a safari while there is also recommended

3. **Masai Mara National Reserve (Kenya)**
   This is Africa. A majestic natural setting highlighted by roaming herds of wild animals. It makes you feel glad you were born on earth.

   If you are going to visit Africa, remember wild animals in their natural habitat defines Africa, it is a must see.

● A Giant Regional Federation: The African Economic Community

Africa's regional integration began in 1963 with the formation of the Organization of African Unity (OAU). In 1991, at the OAU Summit, the Abidjan Treaty was signed creating the African Economic Community (AEC) in which, among other things, a commitment was made to form a central bank and introduce a single currency, the Afro, by 2028. In 2002, the OAU remade itself into the African Union (AU) and enlarged its authority. The AU is modelling African integration using the example of the EU. The process is based on the formation of regional economic communities (RECs) in Africa, and

Chart 1: African Integration Flow Chart

~ 1994 Begin establishing regional economic communities (RECs)
↓
~ 2007 Strengthen integration in each REC, coordination between each REC
↓
~ 2017 Establish free trade zones/customs unions in each REC
↓
~ 2019 Tariff system for an African customs union, coordination on non-tariff barriers
↓
~ 2023 Establishment of an African common market
↓
~ 2028 Establishment of an African economic and monetary union, African parliament

once they have been formed connecting these RECS with each other. However, integration in Europe was actually promoted through one body, the European Coal and Steel Community (ECSC), so the formation processes are distinctively different.

Currently, regional integration is progressing, albeit slowly, through such RECs as the East African Community (EAC), the Common Market for Eastern and Southern Africa (COMESA), the Economic Community of West African States (ECOWAS), and the South African Development Community (SADC) (table 1). The EAC though, is a model case for the AEC having already abolished regional tariffs and created a customs union. This, along with improved logistics infrastructure, has led to very robust inner-region trade. Furthermore, a mega-FTA between the 3 RECs, the EAC, COMESA and SADC (COMESA-EAC-SADC Tripartite FTA) has been agreed to and is waiting ratification which should substantially advance integration between Africa's RECs.

Table 1: Africa's Regional Integration

REC Name	Member Country	Trade Situation	Currency Situation, Other
Economic Community of West African States (ECOWAS)	Nigeria/Ghana Ivory Coast/Senegal Burkina Faso/Mali Benin/Niger Guinea/Sierra Leone Togo/Liberia Cape Verde/Gambia Guinea Bissau	Inner-region tariffs exempted in accorfance with procuremnet ratios and rules of origin. Common external tariff established in 2015. EPA with the EU under negotiation.	The CFA franc is the currency of the West African Monetary Union (UEMOA) and is pegged to the Euro. The West African Monetary Zone (WAMZ) employs an floating exchange rate system ⇒ the UEMOA and WAMZ aim to integrate. ECOWAS has adopted a poverty reduction plan, etc. with the aim to actively integrate with other regions.
East African Community (EAC)	Kenya/Tanzania Uganda/Rwanda Burundi		In 1997 the Kenyan, Ugandan and Tanzanian shillings became interchangeable and they aim to create a currency union by 2023.
South African Development Community (SADC)	South Africa/Angola Tanzania/DR Congo Zambia/Mozambique Botswana/Zimbabwe Nambia/Mauritius Madagascar/Swaziland Malawi/Lesoto/Seychelles	Elimination of inner-region tariffs, creation of a customs union delayed, put on hold. (However, the South African Customs Union (SACU) has eliminated inner-region tariffs and set-up a customs union.) An EPA with the EU was entered into in 2016.	Single (unified) currency target for 2018 (ambitious).
Common Market for Eastern and Southern Africa (COMESA)	Burundi/Comoros DR Congo/Djibouti Egypt/Eritrea Ethiopia/Kenya/Libya Madagascar/Malawi Mauritius/Rwanda Seychelles/Sudan Swaziland/Uganda Zambia/Zimbabwe	Have set-up a free trade zone and customs union. Have established a preferential tariff system based on rules of origin. Aim to liberalize the movement of people, goods and services and capital by 2025.	Aim to create a monetary union in 2018.

African integration is progressing from the hardware perspective as well. To improve inner-region logistics infrastructure, the sub-Saharan Africa Transport Policy Program has been initiated led by Trans-African Highways, the World Bank and the UN Economic Commission for Africa as part of regional economic corridor and more than 20 international economic corridor development plans and concepts, with investment in such infrastructure as roads, railways, ports, bridges, airports and electric power facilities being advanced.

However, regional integration is not at all easy. As there are wide economic disparities between countries not all countries see it in their interest to integrate right away, it will take time to adapt and work out the concerns of all the participating countries. The current Abidjan Treaty is limited to a 40 year timeframe in which to complete integration, which means that each country's concerns must be satisfied and the necessary adjustments made by 2034.

● Summary

The image of Africa is still that of political instability and infrastructure shortages. Also, due to the fleeting and short-lived nature of the "African Boom" spurred by the surge in natural resource prices, some of the excitement and enthusiasm directed at Africa seems to have cooled off.

However, it still goes without saying that Africa, given its vigorous and growing domestic demand, abundant natural resources, steps to foster industry led by agriculture and moves toward regional integration, has enormous potential. I think that through these sub-Saharan reports you can see the potential for rapid growth in a variety of fields in many countries and should understand that the seeds of business are waiting to sprout in many places.

I am currently in Morocco (September 10th) to help prepare for Marubeni's Africa top managers meeting. At this meeting Marubeni's strategy for Africa will be discussed from various angles. In a new series of reports, I would like to provide a different picture of the actual situation in sub-Saharan Africa based on Marubeni's actual business by introducing these businesses and their local perspectives.

Note 1: *According the African Development Bank's definition, daily consumption of $2 or more is considered middle class.*

Note 2: *Under the assumption that EV ownership will increase from 3 million vehicles in 2017 to 27 million in 2027.*

Note 3: *The world average for fertilizer use is 126 kilograms (kg) per hectare (ha). The average in Africa is a very low 21kg/ha.*

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