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P. O. Box 3243, Addis Ababa, ETHIOPIA Tel.: Tel: +251-115- 517 700 Fax: +251-115- 517844 / 5182523

Website: [www.au.int](http://www.au.int)

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## **What Public Policies are Good for Productive Transformation in Africa?**

**African Union Commission  
Department of Economic Affairs \***

**2019**

\* Contact author Dr Ligane Massamba SENE, Email: [liganes@africa-union.org](mailto:liganes@africa-union.org); [jalimase@yahoo.fr](mailto:jalimase@yahoo.fr), for any question or suggestion  
African Union Commission / Department of Economic Affairs / Economic Policies & Research

This document is the discussion paper on the theme of the ministerial meeting. **This version is provisional and the document is still under development.** The upcoming economic report of the African Union "Africa's Development Dynamics", will be around this theme. The opinions and arguments expressed here do not necessarily reflect the official views of the Commission of the African Union.

# **What Public Policies are Good for Productive Transformation in Africa?**

## **Introduction**

Despite several years of strong growth of 4.7% between 2000 and 2017, and a strong position as the second most dynamic region during this period, Africa still has a weak manufacturing sector. In spite of the strong growth trend observed in recent years, Africa is yet to achieve productive transformation and continues to have a small share in global manufacturing, although it is widely recognized that the manufacturing sector has a great potential for job creation and growth. Its economic model, which is based on exporting unprocessed products, has finally revealed its limits.

Africa's development dynamic will be shaped by many megatrends, including the greater role played by emerging countries, the new production revolution, the demographic dividend, urban transition and the expansion of the middle class, as well as the stronger role of emerging countries and climate change, all of which must be considered in development strategies aimed at transforming economies (AUC/OECD, 2018). These major issues of our time, and a few others, will influence the paths African countries take in their march towards an optimal transformation of their production structures.

A new era began for the African Continent on 21 March 2018, when most of the Heads of State signed the historic African Continental Free Trade Agreement, which will lessen barriers and constraints associated with trade. Since then, 49 countries have signed the agreement<sup>1</sup>, 9 have ratified it and deposited their instruments of ratification, while 6 have ratified and will shortly be depositing their instruments, thus reducing the number of additional ratifications required for it to enter into force to

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<sup>1</sup> The remaining six countries are: Benin, Botswana, Eritrea, Guinea Bissau, Nigeria and Zambia in January 2019 but some are advanced in the process. Chad, Côte d'Ivoire, Ghana, Guinea, Kenya, Rwanda, Niger, eSwatini and Uganda have already deposited their instruments of ratification.

only 7. For this agreement to be effective and sustainable, Africa should diversify its production and its exports.

This document fits into this context. It aims to identify effective policies for productive transformation, especially by highlighting the role of a creative private sector and benefits of successful regional integration. However, in order to articulate these strategies, it is vital to understand the issues involved in the African Continental Free Trade Area (AfCFTA) and to analyse the concept of productive transformation and its status on the Continent. The document cannot fail to cite the major constraints inherent in changing the productive structure. Productive transformation and related public policies are fundamental aspects of economic development and an integral part of the African Union's Agenda 2063.

## **1. On the concept of productive transformation**

Within the framework of Agenda 2063, the African Union wants African countries to transform the structure of their economies in order to create strong, steady and inclusive growth, generating jobs and economic opportunities for all. Production structure matters for a country's economic development. Indeed, what a country produces and trades shapes not only its economic growth, but also the capacity of its economic system to generate and redistribute the benefits equitably. Productive transformation is the process by which countries can improve their activities by becoming more productive in a given sector or by reallocating resources to new activities. It manifests itself fundamentally in diversification towards new products and higher value added activities, as well as in technological upgrading, the creation of more productive and better jobs, and employment patterns that result in rising wages and poverty reduction (Nübler, 2014).

These characteristics of productive transformation have not been observed in Africa, as its economy relies mainly on exporting primary products. The industrial sector in Africa is still at the embryonic stage and unable to absorb surplus labour, although it should be at the core of the transformation process, given its forward and backward linkages with other sectors. Indeed, while it is true that the manufacturing industry should play a central role in economic transformation, particularly through technology

diffusion, it is also acknowledged that it is imperative to consider existing complementarities with the services sector and the agricultural sector. Investments in the manufacturing sector can create ripple effects for the rest of the economy in terms of growth and job creation (Marconi, Borja Reis and De Araujo, 2016). The manufacturing sector created 470 million jobs worldwide in 2009, representing 16% of the workforce (UNIDO, 2013).

In the new generations of development plans, a key role should be assigned to the manufacturing industry, which is deemed to be the sector with the best potential in terms of content and dissemination of technical progress. Additional efforts are needed for productive transformation in Africa as most countries tend to produce and export unprocessed raw products. Product diversification is of paramount importance, as it has been established that measures of diversity make strong predictions about future GDP growth (Hausmann, 2011). It is also widely recognized that increased productivity is achieved in countries that were able to modernise their activities and create advanced export goods (Rodrik, 2009).

Many megatrends may shape Africa's development dynamics and must be considered in development strategies aimed at transforming economies. Prospects include the stronger role of emerging countries, the new production revolution, the youth population boom and the demographic dividend, the urban transition and the expansion of the middle class and the climate change (AUC/OECD 2018). Africa's emerging digital transformation with the availability of technologies such as robotics, cloud computing, artificial intelligence and high-speed Internet offers African enterprises tremendous opportunities to create new goods and services, improve productivity and growth, and to diversify their business activities. However, the new industrial structures can also exclude African firms if they do not possess the appropriate technological and social infrastructure or sufficient and skilled human resources.

Africa is a very young continent, with 19% of the world's population and this figure is expected to double by 2030 (UNDESA, 2015). This youth boom can be a tremendous asset and provide an opportunity to drive economic, technological and

social transformation, if appropriate policies are put in place to fully exploit their potential.

Private firms are the main drivers of Africa's productive transformation, as they are essential for creating jobs, providing competitive goods and services, mobilizing revenues, stimulating innovation and technical progress that are important drivers of economic development and overall productivity growth. Public policies are fundamental to enable the full participation of the private sector needed for productive transformation. The African Union's Agenda 2063 calls on African countries to transform the structure of their economies by promoting quality growth that generates decent jobs and reduces poverty, by supporting the fight against inequality and by diversifying economies to make them more resistant to exogenous shocks. Public policies for productive transformation are therefore essential to the realization of the African Union's Agenda 2063.

## **2. Status of Productive Transformation in Africa**

The most widely used measures of productive transformation are indicators of export diversification and sophistication. This is based on the fact that changes in the structure of exports inevitably result from the change in the structure of production.

### **2.1. Presentation of the productive structure**

#### **a) Structure of production according to activities**

An initial appraisal of the status of the productive structure in Africa can be made by analysing the evolution of sectoral contributions to the GDP. The continent has achieved high growth rates in recent decades. However, this growth has not been able to reduce inequalities or generate an adequate number of jobs. In order to generate quality growth, it is essential to better understand the factors that determine it and the sectors driving it. Chart 1 shows the dynamics of sectoral contributions to growth in Africa and presents the trend in the different geographic regions. Agriculture accounted for about 16% in 2016, Industry 28% and Services 56% on

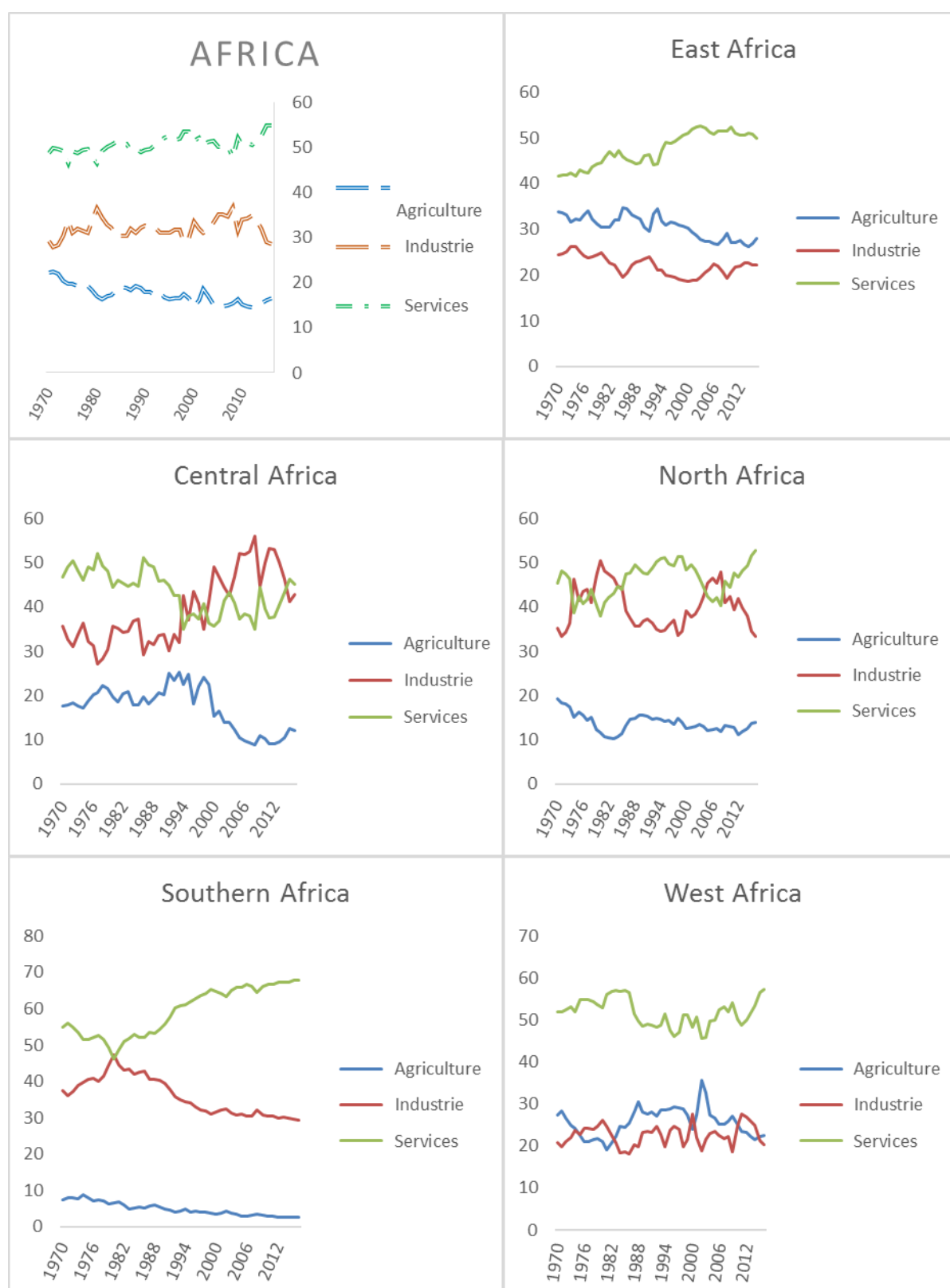
average at the continental level. While the contribution of Agriculture<sup>2</sup> and Industry stagnated or even declined, that of Services increased over the years. The average share of Agriculture is lower than that of Asian and Latin American countries with similar income levels. It is only in East and West Africa that the average contribution of the agricultural sector in countries is almost consistently higher than that of industry since 1970. In East Africa, The agricultural sector accounted for about 28% between 2000 and 2016, while that of industry was 21% for the same period. For West Africa, these figures were 26% and 23%, respectively. The most agrarian economies are found in these two regions.

There have been periods during which the industrial sector has tended to significantly and durably dominate the services sector in terms of contribution: in Central Africa during the period 1998 - 2014 and in North Africa from 2005 - 2008 and from 1974 - 1983. The contribution of the industrial sector is unfortunately not related to the creation of high added value products but rather to a strong oil sector. These imbalances between these sectors reflect the delay in the process of productive transformation and are among the causes of the lack of inclusion in growth. Consequently, there is a need to give greater weight to the industrial sector and to ensure agricultural and rural transformation.

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<sup>2</sup> The share of agricultural jobs has also declined over the years.

Chart 1: Changes in sectoral contribution to GDP in% (1970 - 2016)

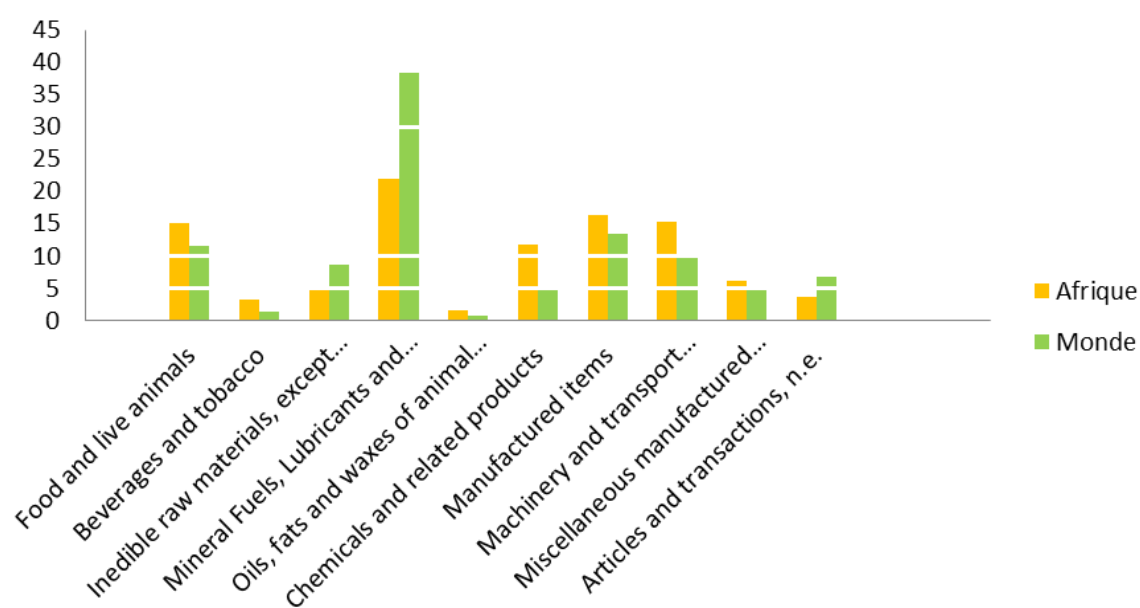


Source: Author's calculations based on data from UNCTAD database

## b) Export structure

The chart provides a brief outline of a general export profile of the Continent. There is a high concentration of unprocessed products in total exports. Mineral fuels, lubricants and related products dominate overall exports worldwide as well as intra-African exports, accounting for 38% and 22%, respectively. Manufactured goods<sup>3</sup> are, on average, more represented in intra-African trade (49% during the period from 2015 -2018 and 45% during the preceding 5-year period) than in overall trade (32% during the 2015 - 2018 period and 23% during the preceding 5-year period), although China is increasingly becoming an important destination as illustrated in Chart 2.

Chart 2: Distribution of Africa's merchandise exports - overall and within the continent during the period from 2015 - 2017



Source: Author's calculations based on data from UNCTAD database

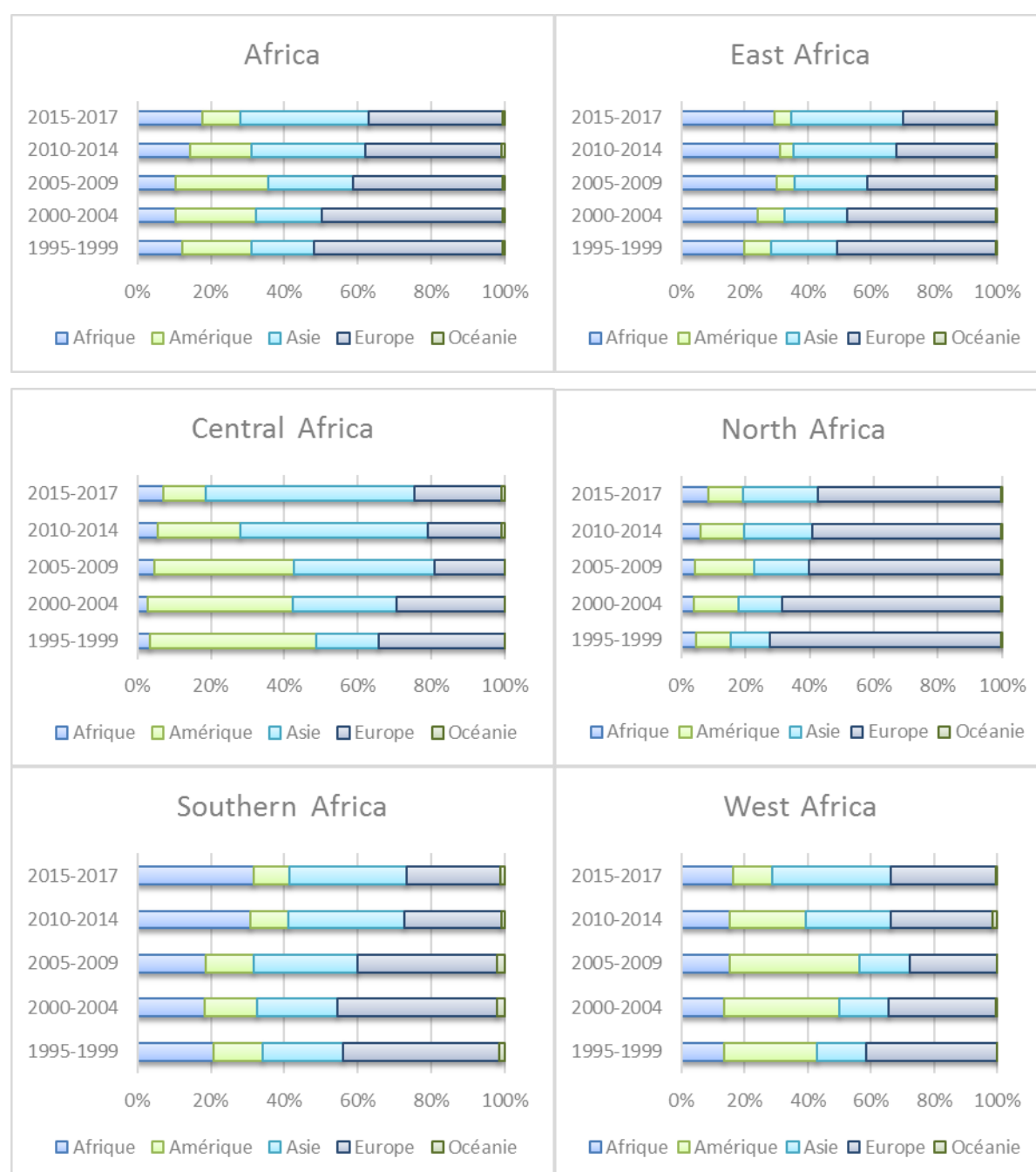
There is a shift in the structure of exports in Africa with the demand for products exported to Europe dwindling as a result of increased Chinese demand. The average share of exports of African products to Europe, which was 51% during 1995-1999, dropped to 36% in 2015-2017. Asia is gradually becoming an export market for the Continent with a share that has increased significantly from 17% in 1995-1999 to

<sup>3</sup> Manufactured products include chemicals, basic manufactures, machinery and transport equipment and miscellaneous manufactured products under the SITC system, excluding non-ferrous metals.



34% in 2015-2018. Intra-African trade also benefited from the decline in the relative weight of Europe with a five-year average of 12% rising to almost 18% over the 2015-2018 period. It is in the East and Southern Africa, where there is a greater decline in exports to Europe, particularly in favour of exports to Asia. Indeed, the average share of exports to Europe fell by 21 percentage points for East Africa between 1995-1999 and 2015-2017 and by 17% percentage points for Southern Africa. Europe has been and continues to be the privileged destination for North African products with a still significant share of 57%. Geographical proximity, neighbourhood agreements with the European Union and therefore relatively low transaction costs could explain the fact that Europe is a privileged partner for North Africa. Exports from North Africa and Central Africa are less present in African domestic markets, with rates of 7% and 8%, respectively. Central African exports which, for a long time, had been oriented towards America, are now focused more towards Asia. America, especially to the United States which dominated with 45% over the period 1995-1999 while Asia, that is China mainly, being the main trading partner over the 2015-2017 period with about 57%.

Chart 3: Export Dynamics in Africa



Source: Author's calculations based on data from UNCTAD database

## 2.2. Productive Transformation in Africa

### a) Products diversification

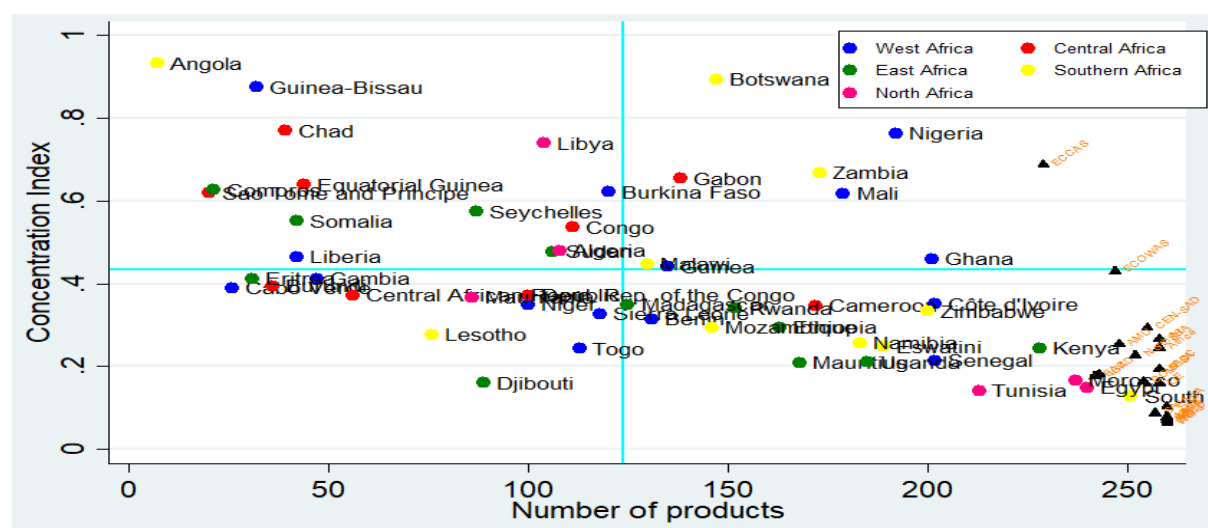
The level of diversification can be estimated from two perspectives, namely: the concentration of exported products and the variety of exports, which refers to the number of distinct products exported. Concentration is measured through the sectoral distribution of production and exports. Diversification is highly promoted in development strategies as there is a reliance on single sector economic activity in several countries, making them vulnerable to several shocks. Chart 4 shows the level of export concentration measured by the Herfindahl-Hirschmann index<sup>4</sup> and the number of products exported by the different countries. The number of products exported to Africa is 258. There is a convergence of the variety of products exported between economic entities of the world. However, there is great heterogeneity among countries within Africa, geographical regions and regional communities. The export baskets of Angola (7), Sao Tome and Principe, Comoros, Cape Verde and Eritrea have the least variety with less than 30 products. South Africa (151), Egypt (240), Morocco (237) and Kenya (228) have the widest range of products exported. In terms of concentration Chart 4 shows that Angola, Botswana, Guinea-Bissau, Chad, Nigeria and Libya are the countries where exports are most concentrated on a number of products while South Africa, Tunisia, Egypt, Djibouti and Morocco have the least concentrated exports. The Economic Communities of ECOWAS and ECCAS are clearly those with the most concentrated exports.

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<sup>4</sup> The concentration index, also known as the Herfindahl-Hirschmann index, measures the degree of concentration of products. It has been normalised to take a value between 0 and 1, with 1 representing more

concentration.  $H_j = \frac{\sqrt{\sum_{i=1}^n (x_{ij}/X_j)^2} - \sqrt{1/n}}{1 - \sqrt{1/n}}$ , where  $H_j$  = country or country group index and  $x_{ij}$  = value of exports of country  $j$  for product  $i$ ,  $X_j$  its total exports and  $n$  the number of products.

Chart 4: Economic Diversification in Africa - Concentration and Variety in 2017

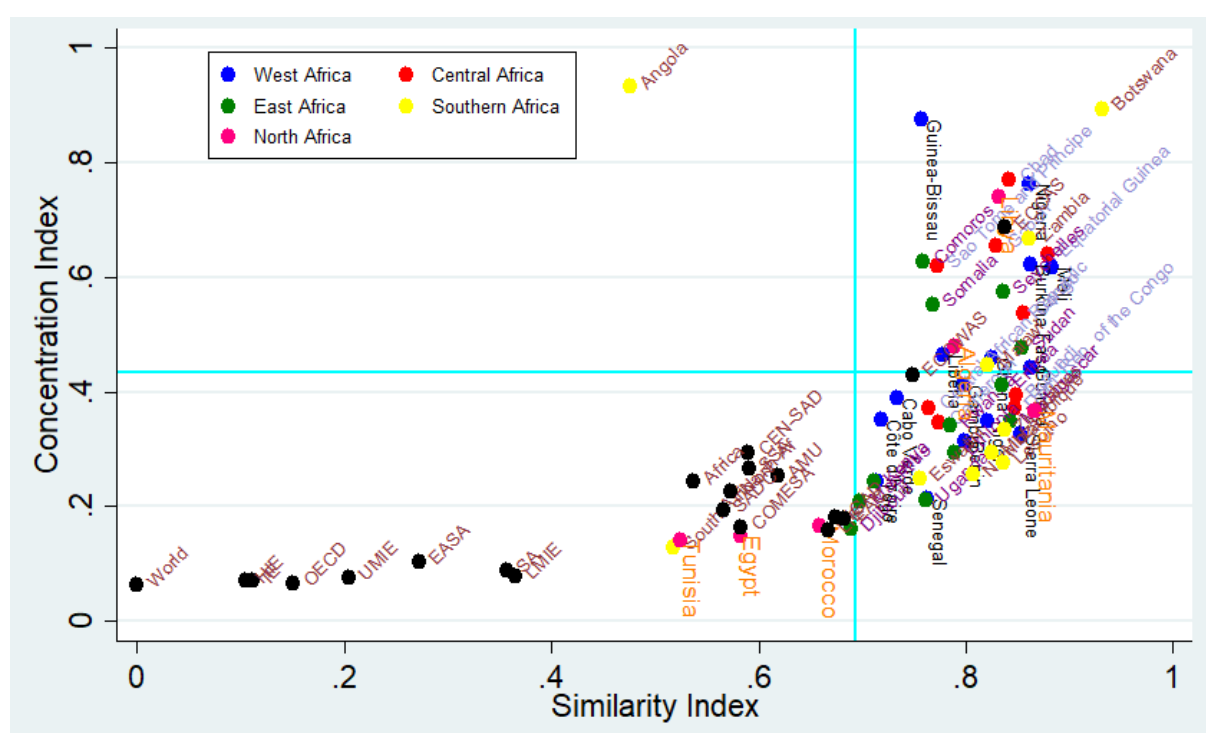


Source: Author's calculations based on data from UNCTAD database

The most diversified countries are therefore those which are located in the south-east quadrant of Chart 4, namely South Africa, Morocco, Tunisia, Kenya, among others. These countries have an export structure that is also closest to the average structure prevailing in the world and that of developed countries, which also have the most diversified productive structures, as shown in Chart 5 which highlights the similarity index<sup>5</sup>. The countries of South-East Asia also have more diversified economies than those of Africa, since they have been able to enter into the manufacturing sector.

<sup>5</sup> The similarity index is a diversification index which measures the absolute deviation of the country structure with regard to the global structure. The value of the diversification index lies between 0 and 1, with a value closer to 1 representing greater divergence with respect to the global structure. 
$$S_j = \frac{\sum_i |H_{ij} - H_i|}{2}$$
 With  $h_{ij}$  = share of product  $i$  in total exports of the country or country group  $j$  and  $h_i$  = share of product  $i$  in total world exports.

Chart 5: Diversification in Africa – Similarity and concentration of exports



Source: Author's calculations based on data from UNCTAD database

Note: Low Income Countries = LIC; Low Middle-Income Countries = LMIC; Low Middle Income Countries = UMIC; High Income Countries = HIC; Industrialised Countries (UNIDO) = IC; Sub-Saharan Africa = SSA; South America and Central America = SA; East Asia and South-East Asia = EASA;

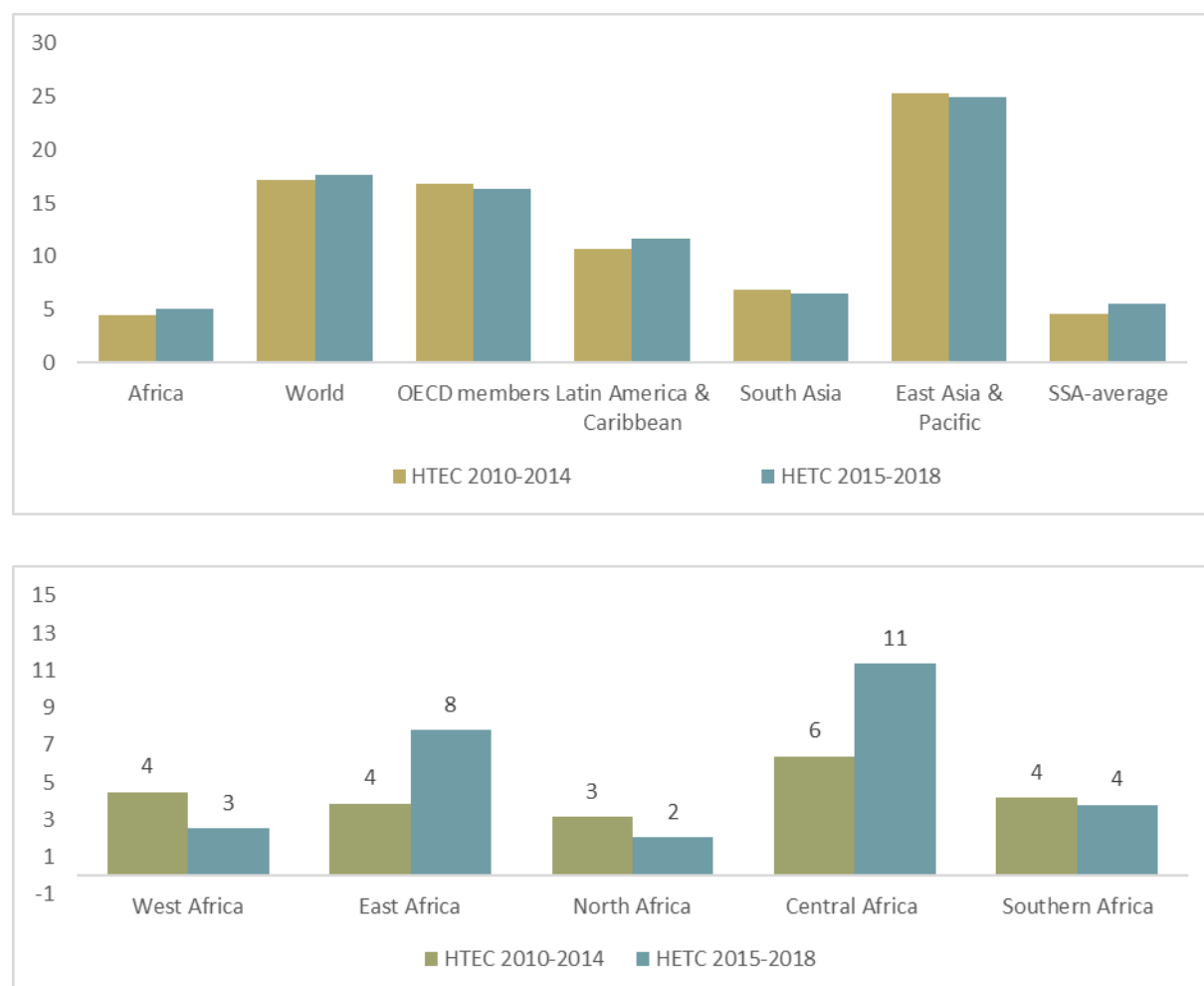
## b) Products complexity

To measure the level of sophistication of countries, we refer to the Economic Complexity Index which is based on the notion of product ubiquity. A product with low ubiquity is exported by a very small number of countries as a result of its complex production process. Thus, countries with high levels of complexity in their economies will be those that have managed to diversify into low ubiquity products. Indeed, products with high ubiquity are produced by several countries because they require technology that is more easily accessible and almost no complex capabilities (see Hausmann *et al*, 2011). This indicator connects the concept of concentration to that of ubiquity to eliminate any attempt to use production factor scarcity instead of production process complexity to imply low ubiquity. The North African and East African regions, on average, export the most sophisticated products, while the Central African region has the lowest average level of sophistication. The three



Nevertheless, there was some improvement in this regard between the 2010-2014 period and that of 2015-2018, in East Africa and in Central Africa.

Chart 7: Share of high-tech products in exports of manufactures (%)



Source: Author's calculations based on data from COMTRADE database

To achieve productive transformation in Africa, it is essential that countries develop capabilities to produce complex goods with very high added value. More sophistication in the manufacturing sector, informal services but also in agribusiness would increase revenues through an increase in value of an export unit but also have a considerable impact on intra-African trade in this current context. In addition, the full expansion of the middle class of consumers, increased demand for high value-added products with rapid urbanization, increased levels of education and convergence of diets, without neglecting the demographic transition, are creating a new dynamic for productive transformation with market opportunities in several

sectors. The proliferation of supermarkets with the revolution in food supply chains<sup>6</sup> will also offer opportunities for sophistication and diversification between and within sectors. For example, there is a shift in dietary habits with an increasing substitution of basic grains for horticultural products and meat products. This transition therefore also calls for a change in the agricultural production structure. In addition, the establishment of the AfCFTA, combined with the current demographic transition, would allow the expansion of regional markets and could contribute substantially to the transformation. Indeed, the share of the population will increase from a level of 17% in 2010 to 24% in 2050 and 35% in 2100. In 2015, Africa already had 226 million young people, or 19% of the population. However, there are constraints that prevent the development of the manufacturing sector, agricultural processing and moving upmarket in general, since they impede the creation of new products essential for productive transformation.

### **c) Obstacles to Productive Transformation**

Productive transformation and the industrialization process are slow on the continent. The lack of technical innovation and skilled manpower, the low level of integration, the underdeveloped infrastructure and high transaction costs, the non-optimal public interventions, among others, have a part to play in this delay. The magnitude of some of these challenges is illustrated below.

#### **Slow pace of innovation**

The Innovation Index shows a big gap to be filled by Africa (Chart 9). Expenditure levels for research & development (R&D), quantities of high- and medium-technology products, exports of creative goods and level of collaboration between universities and industries in African countries are very low compared to other countries, as shown in Chart 9.

Whatever the measure of innovation used, there is an imbalance to the disadvantage of Africa. Conditions are still unfavourable for reversing the trend, as shown by the

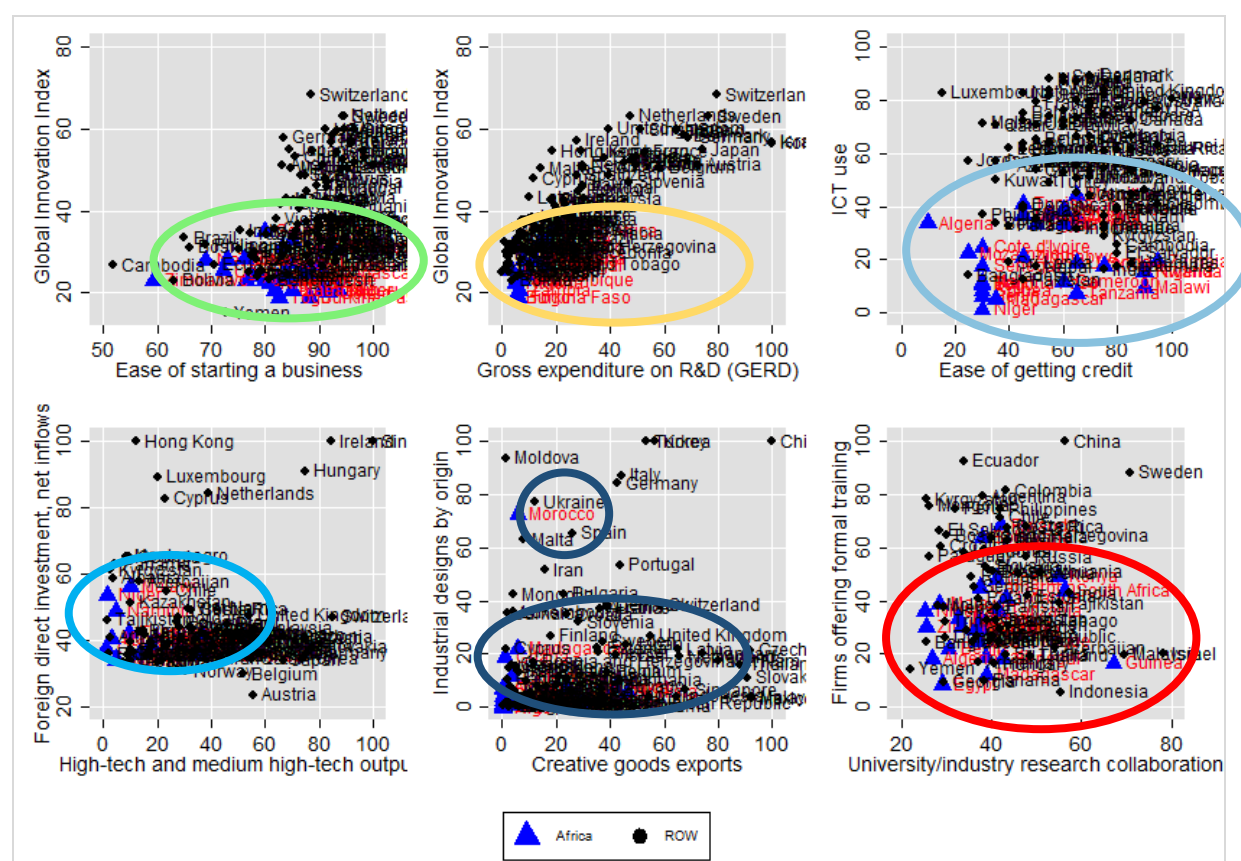
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<sup>6</sup> Rapid changes in grain supply chains, including millet, and local fruit products in Senegal, chicken in Nigeria, teff in Ethiopia, and maize in Tanzania are examples (Badiane, O. and Makombe, T., 2015).



levels of the business environment and access to credit which, all the same, are improving thanks to existing technologies.

Chart 9: Innovation in Africa in 2018



Source: Author's calculation based on data from GII; Note: African countries are represented by blue triangles with red labels

## Low level of integration and constraints on business development

As the most recent initiative for integrating projects on the continent, the process of establishing the African Continental Free Trade Area offers a great opportunity for productive transformation in many sectors. While it is recognized that there are some trade-related gains despite the still low level of intra-African trade<sup>7</sup> (Chart A1

<sup>7</sup> The level of intra-community trade is generally lower in Africa than in the rest of the world. The share of intra-African trade in Africa's total trade is estimated at 14.5% on average during 2010-2015 and remains very low in comparison to other economic regions which are not only potential partners but also competitors on the global trade arena. The countries of EAC (18.7% on average in 2010-2015) and SADC (18.4%) are those which trade the most, while those of ECCAS (1.5%) and AMU (3.4%) trade the least.

annexed hereto), it is less obvious to find such consensus within the other dimensions of integration.

The development of networks of communication infrastructure would make national and regional markets more accessible to the populations, especially in rural areas. This would help to create immediate jobs, support community trade in products, foster the development of very labour intensive non-extractive activities, as a result of increased demand and expanded scales of operation, and finally generate growth and job-creating transformation.

Efforts have been made in the areas of free movement of persons. However, the challenge remains. Africans need visas in more than half of the Continent's countries, and they are only 10 countries which have waived entry visa requirements. In January 2019, only one (1) ratification was recorded (Rwanda), while 32 countries had signed the Protocol to the Treaty establishing the African Economic Community Relating to Free Movement of Persons, Right of Residence and Right of Establishment in Africa.

Average rates of access to electricity are very low in Africa (49%) compared to the other regions. The imbalance is more visible in rural areas with a 34% access rate compared to 94% for the Latin America & Caribbean group, for example. Just like the people, firms also worry about access to electricity.

Electricity supply, in the same manner as access to finance, is a major obstacle which is generally cited by firms in relation to their development dynamics. Indeed, 19.2% and 18.6% of enterprises operating in Africa report the one and the other as the biggest obstacle to the smooth running of their activities. Access to finance is recognized as the major obstacle in Southern Africa (24.9%), while electricity is mostly mentioned by firms in Central Africa (26.8%), in West Africa (26.5%) and in East Africa (15.7%). Political instability has the greatest impact on business dynamics in North Africa (24.6%). The challenge is therefore to lessen macroeconomic, political and security risks (cross-border terrorism, protest movement, migration crisis, etc.) through pre-emptive measures to enable firms to explore their production potential to the fullest.

Table 1: Firms subject to constraints on their development dynamic, 2005-2017

Constraints	West	East	North	Central	Southern	Africa
Finance	22.5	12.7	17.0	18.5	24.9	19.2
Electricity	26.5	15.7	9.1	26.8	10.9	18.6
Informal Practices	9.0	8.4	13.2	9.3	11.2	9.8
Political Instability	5.5	7.9	24.6	10.1	7.6	9.4
Tax rates	9.3	10.5	5.5	6.7	7.0	8.3
Corruption	5.7	8.7	4.1	6.2	8.7	7.0
Crime, theft and disorder	2.7	6.5	6.2	3.5	4.9	4.7
Land	2.9	4.7	1.9	3.7	7.5	4.4
Customs and Trade						
Regulations	4.0	4.8	3.0	4.9	3.4	4.1
Transport	4.0	4.8	3.7	2.9	2.8	3.7
Administration Taxes	4.2	4.0	2.1	3.3	3.1	3.5
Insufficiently trained workforce	1.7	4.2	5.4	1.9	3.2	3.1
Business Licences and permits	1.0	4.5	2.4	1.1	2.4	2.4
Labour laws and regulations	0.6	1.8	1.8	0.4	1.2	1.1

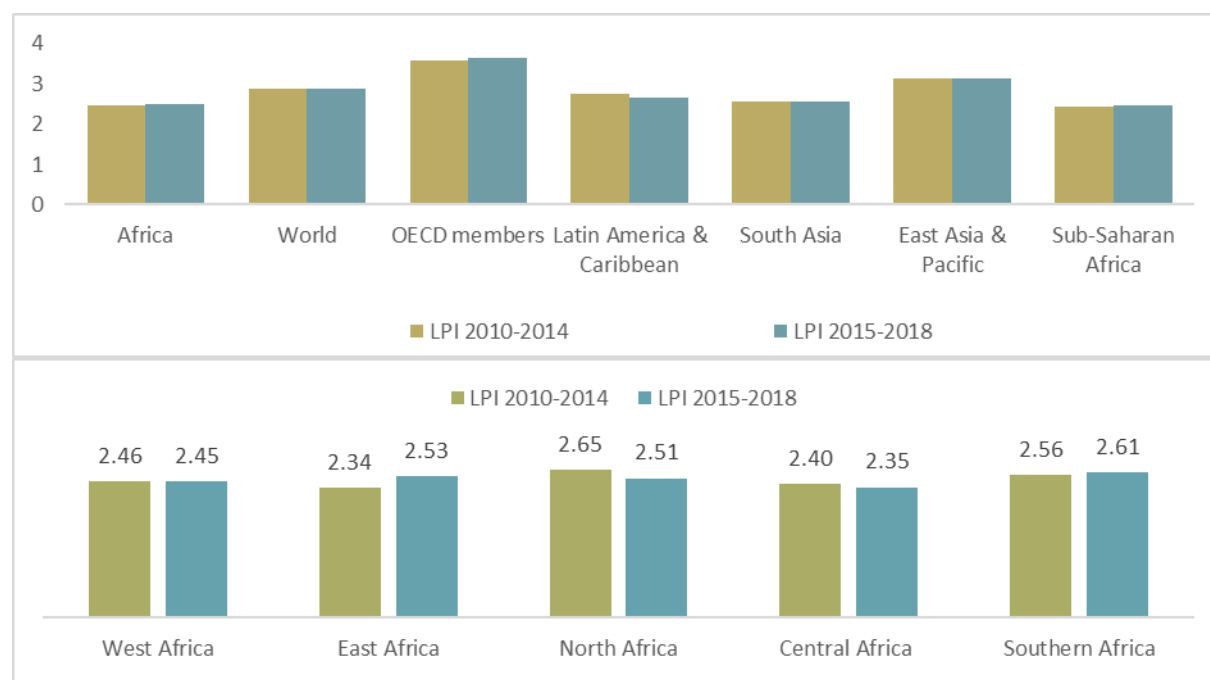
Source: Author's calculations based on WB Enterprise Surveys

Energy management in Africa also requires more robust regional cooperation so as to mobilize sufficient resources for construction and maintenance of hydropower structures. For example, the completion of the Pan-African hydroelectric project at Grand INGA, whose capacity is over 40,000 MW, will certainly increase the Continent's rate of electrification. The Noor Ouarzazate Solar Complex in Morocco is a good example in the field of renewable energies and could inspire several countries on the continent. Structures of this kind would provide long-term solutions to issues of inefficiency inherent in small production structures, most of which face energy shortages or generally exorbitant operating costs.

## Inadequate logistics and high transaction costs

The efficiency of the logistics services, as captured by the Global Logistics Performance Index<sup>8</sup>, remains low in Africa compared to Latin America and the Caribbean and has hardly improved between 2010-2014 and 2015-2018. In some regions, such as North Africa, a slight decline has even been observed. Somalia, Sierra Leone, Equatorial Guinea and Mauritania have the lowest scores during the 2015-2018 period, while South Africa, Kenya, Botswana and Egypt have the highest scores.

Chart 8: Overview of logistics performance



Source: Author based on data from WB Logistics Performance Index Surveys

Firms operating in Africa also report being subject to many other obstacles, such as informality, the burden of taxation, corruption, crimes and theft, access to land, customs and trade regulations, as shown in Table 1 above. It is essential to address these problems encountered by firms in order to accelerate the process of transformation in Africa.

<sup>8</sup> The Logistics Performance Index is produced by the World Bank and reflects perceptions of a country's logistics performance based on the efficiency of the customs clearance process, the quality of the trade and transport infrastructure, the ease of making international shipments at competitive prices, the quality of logistics services, the ability to track shipments and the frequency with which shipments reach the consignee promptly. The index goes from 1 to 5, with a higher score representing a better performance.

### 3. Conclusion and Strategies for Productive Transformation in Africa

Given all these constraints, major initiatives should be taken by public authorities to achieve productive transformation on the continent. There is a great diversity of contexts and obstacles to productive transformation in Africa. This calls for policies for productive transformation which take into account this multiplicity of contexts.

#### ***Strengthening regional integration***

Integration is essential in an environment where the continent is fragmented into small countries that do not have, for the most part, market sizes likely to make their economies fairly competitive and to find outlets for new products. In such a context, an acceleration of the process of productive transformation begins with the development of regional and continental projects, and then requires effective alignment of national programmes with continental programmes. However, many integration programmes, which are remarkable and innovative at their conception, have their implementation or their effectiveness questioned because of limited financial resources and non-optimal political choices. Bankable, coordinated and smart investments in regional physical infrastructure would provide an enabling environment for improving competitiveness and the development of manufacturing and agribusiness. **In this sense, we must capitalise on past experiences from implementing the Programme for Infrastructure Development in Africa (PIDA), a strategic framework for the development of regional and continental infrastructure on the continent in the field of transport, energy, information and communication technologies (ICT) and trans-boundary waters, to better prepare the second phase of the Programme for Infrastructure Development in Africa's Priority Action Plan (PIDA PAP 2 2020-2030) and to accelerate its implementation in an inclusive manner.**

Nineteen of the twenty-five worst performing countries in the infrastructure sector are in Africa, according to the Global Competitiveness Index of the World Economic Forum Report 2017-2018. In addition, infrastructure development in Africa requires a huge budget of 130 to 170 billion dollars a year (AEO, 2018). Hence the need, in this

context of scarce financial resources at country level, to start with implementation of unifying projects to provide the continent with the necessary infrastructure so as to reduce production costs, increase competitiveness, create jobs and thus, accelerate the process of productive transformation. The renewed interest in integration in Africa will offer many and diverse investment opportunities in construction of high quality infrastructure (roads, railways, sea and air transport, regional projects in the water and energy sectors, etc.).

**It would be necessary to speed up the establishment of the AfCFTA and to boost intra-regional trade by eliminating tariff and non-tariff barriers, including harassment on the highways that prevent economies from enjoying the benefits of tariff elimination. Support for the development of regional value chains should also be strengthened.** In the same vein, the process of gradually phasing out visas between African countries should be continued. **Advocacy is necessary to speed up the process of ratification, entry into force and domestication of the AfCFTA and the Protocol to the Treaty Establishing the African Economic Community Relating to Free Movement of Persons, Right of Residence and Right of Establishment.** The same is true of African financial institutions (African Central Bank, African Investment Bank, African Monetary Fund, and Pan-African Stock Exchange) which would provide the continent with strong and credible institutions, enabling it, on the one hand, to achieve self-sufficiency and financial autonomy, and on the other hand, to support it in the implementation of strategies for productive transformation.

***Supporting the private sector and promoting entrepreneurship by popularizing the entrepreneurship mindset and building capacities for productive transformation.***

Productive transformation requires industrial policies that promote technology in order to enable local organizations to increase their level of productivity and turn towards more sophisticated products. **Industrialization policies should take advantage of the innovation potential of local entrepreneurs.** The number of entrepreneurs that can be stimulated to engage in cost discovery in the modern sectors of the economy determines the range of goods that an economy ends up

producing and exporting (Hausmann, Hwang and Rodrick, 2007). From this point of view, private initiatives must be integrated into public policies for productive transformation.

Industrial value chains offer many opportunities for entrepreneurship; they nevertheless require more structuring and support from the authorities to ensure their development. **This requires training and stimulation of the entrepreneurial spirit as well as easing access to credit for entrepreneurs, a source of blockage for many people with innovative ideas, who lack sufficient financial resources leading to delayed implementation.** Heavy industries, like the rest of the private sector, must provide opportunities for new products and take full advantage of the innovative potential of entrepreneurs, so that they can develop their ideas and unleash their talents by developing new products in win-win partnerships. Support for entrepreneurship should cover all sectors of economic activity, from agribusiness, particularly non-traditional sectors, to digital technology sectors, including start-ups, which are currently expanding in several African countries. This would lay the foundation for a diversified economy and balanced growth, driven by many sectors, unlike the growth model in the past that was practically driven by the extractive sectors. Large agribusiness companies will need to link with smallholder farmers, who will also have to modernize, transform their products, and project themselves into an entrepreneurial approach rather than remaining in subsistence farming.

Thus, to ensure viable productive transformation and sustained growth, it is essential to promote a circular economy and develop cheaper technical processes in terms of environmental impact, especially since the manufacturing sector is one of the major sources of greenhouse gas emissions. Local entrepreneurs can make a significant contribution to this as they are best placed to understand the local context and propose appropriate green solutions while drawing on experiences from countries that have made progress in green industry. **Governments should make good use of the tremendous productive potential of the youth by creating more incubators and providing incentives to design new businesses and products or to adapt products and processes that exist elsewhere.**

## ***Developing trade logistics by taking advantage of the emergence of logistics 4.0***

Development of logistics, particularly road and maritime, would enable firms to be competitive by minimizing transaction costs and reducing delivery timeframes. This would enable them to access new regional and global markets more easily in order to scale up their activities and explore new products and services. **We should harness the opportunities offered by digitalization with the emergence of Logistics 4.0, which could further enhance the efficiency of logistics and customs management systems and ensure better visibility, predictability and traceability of products by connecting companies, containers, goods, national distribution centres, regional hubs and consumers, and this in real time.**

## ***Improving the business environment to attract FDI and to develop the manufacturing sector, and promoting responsible investment strategies that combine the strengths of external, national and local investors and which are based on pre-feasibility studies***

Favourable prospects for growth and regional integration, increasing wages in China and the improving business climate, among others, should be opportunities to attract investment in high value-added manufacturing sectors and even in other modern sectors. In the past investments were concentrated in the non-processed natural resources sector<sup>9</sup>. Due to their potential, domestic and regional markets attracted 53.4% of FDI for new projects in Africa between 2013 and 2017. This share is close to that of Asia (55.7%) and 10 percentage points higher than that of Latin America & the Caribbean (44.8%) (AUC/OECD, 2018). Several Specialized Economic Zones have been set up throughout the continent and garner enthusiasm and hope to attract FDI and stimulate the innovation necessary for industrialization. The Tanger Free Zone, which is specialized in the automotive industry, the textile-oriented ones in Mauritius and Madagascar, and the economic zones built by China in Ethiopia,

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<sup>9</sup> Between 2003 and 2014, 36% of FDI was spent on resource extraction.



Egypt, Nigeria and Zambia are perfect examples. Many other countries like Senegal, Gabon, Djibouti, Tanzania etc. are already at work or intend to follow this trend.

**Responsible investment strategies, resulting in mutual benefits between investors and national SMEs and which take into account the interests of local communities without unreasonable protectionism, should be adopted on the basis of sound and respected legal, regulatory and institutional frameworks as well as on socio-economic, environmental and financial impacts studies.** The African Union's Pan-African Investment Code (PAIC), as non-binding as it may be, can have positive impacts on the efficiency of investments in Africa.

### ***Improving the productivity of firms in all sectors***

- ***Developing a skilled workforce and aligning training offers with market needs.***

The era of the Fourth Industrial Revolution (4IR) which we are entering requires skills in the technological field whose demand by manufacturing industries is growing increasingly. **Training programmes should be based on labour market needs and should lead to diversified and locally relevant skills that would enhance the productivity, innovative capacity and competitiveness of the industrial and agro-industrial sector, with particular reference to the skills required to develop products with proven or latent comparative advantages.** Governments should provide more funding for research and development, ensure good quality education, protect intellectual property rights and support vocational and technical training institutes, particularly in the fields of science, technology, engineering and mathematics (STEM) and agribusiness. To this end, it is necessary for public authorities and education system actors to support collaboration between universities, private and public training institutes, the manufacturing sector and the private sector through joint initiatives for research and learning, and internship programmes. Better harmonization of university programmes and mutual recognition of diplomas awarded could facilitate the free movement of workers and ensure an efficient distribution of skills. Firms should, in addition to recruiting well-trained and

competent people, strengthen the capacities of their employees and help them adapt in order to meet the requirements of modern industries.

- ***Successful Integration into Value Chains***

**Industrial development policies should be anchored in global value chains that offer enormous opportunities for transformation. Nevertheless, this should be done with the broad participation of local operators, in particular young people and women.** Indeed, the way countries participate in global value chains and the source of their transformation challenges is critical to sustainable and inclusive productive transformation. Economic globalization has led to a fragmentation of production systems with the creation of value chains that offer enormous opportunities for diversification. However, this form of specialization would not necessarily reflect the real state of the productive transformation process, as it could show a gap between exported manufactured goods and the value added chain within local economies. The phenomenon of the impoverishing specialization, which may result from non-strategic participation in global value chains, should be avoided because of its low impact on overall productivity, wages, the intensification of skilled labour and local development in general.

- ***Access to funding***

The difficulty in mobilizing adequate resources to invest in developing new products explains in part the current state of productive transformation in Africa.

**African Union Member States should further promote the accessibility of banking services to SMEs and the population in general through actions such as monitoring the prices of services offered by banking institutions, the streamlining of administrative procedures, providing financial education, the reduction of barriers to entry in the banking sector and the wide dissemination of mobile payment instruments and FinTechs to give several operators the opportunity to have a better presence on the markets and more opportunities to experiment in a lasting manner with new products and processes.**

Progress has been made in access and use of mobile payment methods. In East Africa, for example, the average mobile money penetration is 35% and reaches 58% in Kenya, while the percentage of account holders in a formal institution is 26% and has remained virtually unchanged (GSMA, 2015). In Kenya, the M-PESA/Safaricom money transfer and payment system now serves more than 17 million customers. Recent partnerships such as the one between M-PESA-Western Union augur well for a wider use of mobile money transactions. Populations and small economic groups, previously excluded from the traditional banking system, will therefore have easier access to financial services. Other countries such as Côte d'Ivoire, Somalia, Tanzania, Uganda and Zimbabwe have also made progress in this area (GSMA, 2015). Further financial integration initiatives should reduce dependence on correspondent and intermediary banks and significantly reduce transaction costs in the coming years.

In this context of scarce budgetary resources, **it would also be useful to continue to promote productive public-private partnership and to find a balance between public investment with own resources and debts in order to ensure the sustainability of the productive transformation process.**

**Public procurement procedures should be simplified, competitive and transparent, based on large-scale calls for tenders and at the same time by reducing the risk of systematically excluding small-scale local bidding firms, and by encouraging them to gradually migrate to high value-added activities.**

#### **- *Making the Most of the Digital Revolution***

There are real prospects for digital dividends with macroeconomic and political stability, improved economic governance and business facilitation in Africa. The digital revolution in Africa is an opportunity for the development of new activities and products in all sectors. Digital transformation can improve productivity and competitiveness to boost economic activity in Africa. It will also be worth its weight in the development of faster, more stable, secure and reliable payment and settlement systems that reduce transaction costs and risks for firms. The level of data transmission, which has improved with the increase in Internet access and the

installation of new optical fibres, portends good prospects. There are many opportunities at a time when Africa is not yet producing enough digital tools, software and applications. Thus, **governments should support technological development and the ICT sector, including programmes for the provision of e-learning facilities, in order to strengthen and to sufficiently decentralize the capabilities needed for productive transformation.**

Massive investment in the ICT sector would reduce the digital divide. In a context of limited financial resources and the often exorbitant cost of building physical infrastructure, technologies can be perfect complements or even shortcuts in some circumstances to provide market information to operators and populations residing in both urban and rural areas.

**The potential of satellite data, artificial intelligence, 3D printing and nanotechnologies should be explored.** The new production revolution under way, driven by technological change, albeit slow, and increasingly widespread digitization practices, would allow African firms to access new markets, to diversify and to go up market more rapidly and at lower cost.

- ***Facilitating productivity gains through greater support for implementation of programmes that provide better health coverage***

Social protection tools offer great power for increasing productivity and promoting inclusive productive transformation. Although many countries have made progress in adopting and successfully implementing social protection programmes such as conditional cash transfers, much remains to be done to establish more effective social protection systems. Social protection coverage is still low in many African countries and, where it exists, it is limited to providing benefits to a small group of people. **Governments should increase the provision of social protection, especially for informal economy actors and rural workers, given their significant weight in Africa, by reforming and increasing traditional coverage options or by promoting community protection systems based on solidarity and self-financing. Incentives and strategies should be provided to further support the migration from informal to formal enterprises. In addition, it is**

**essential to invest in urban planning (health, sanitation, supply of water and electricity, housing, smart cities, etc.) in anticipation of more intense population movements and the urbanization challenges that the transformation process could inevitably bring.** Informal services and labour-intensive manufacturing industries are generally the destination sectors for rural-to-urban migration. Productive transformation policies must therefore take into account this intersectoral and spatial dynamic by seeking to increase productivity and to stimulate innovation within all sectors, as well as to ensure that the movement of surplus manpower is directed towards the more productive sectors.

With regard to social protection, the African Union has already recognized it as a key factor in poverty reduction at the African Union (AU) Extraordinary Summit on Employment and Poverty Reduction held in Ouagadougou, Burkina Faso in 2004. Also recognizing the importance of the informal economy and rural workers in transformation and sustainable development, the AU approved the Social Protection Plan for the Informal Economy and Rural Workers (SPIREWORK)<sup>10</sup> in July 2011. Most people in the informal sector and in rural areas are vulnerable and highly exposed to income insecurity, due to the lack of decent, well-paying and stable jobs, and are highly exposed to the risks associated with climate change, catastrophic health expenditures, natural disasters, etc. The programme aims to increase the resilience of vulnerable people and has the potential to increase productivity, particularly for rural workers, including those in the agricultural sector. Governments, through expanded partnerships with the private sector, including micro-industry institutions, should further domesticate and support continental social protection programmes, as well as the Declaration and Plan of Action on Employment, Poverty Eradication and Inclusive Development.

***Improving policy coherence for productive transformation, promoting partnership between sectors, collaboration between firms and suppliers to build strong knowledge networks and strengthen mutual accountability***

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<sup>10</sup> SPIREWORK is based on fundamental guiding principles, a minimum package to be defined by countries, as well as a set of factors to meet the challenge of empowering targeted groups.

**Governments should more clearly define a comprehensive response that takes into account all existing trade-offs in order to make interventions effective, avoid competition on resources between sectors and economic activities, private and public spheres, different development objectives, the cancellation of the impacts produced by different incentives and policies, and finally the waste of resources. Therefore, national legislation and plans for industrialization and transformation should be more harmonized and should better reflect regional and continental initiatives and protocols.**

Productive transformation policies are composite packages of various types of interventions that have different impacts on growth and socio-economic outcomes. A coherent strategy, articulated around a common, resilient and sustainable vision, is needed in the design of these policies in order to achieve an effective and sustainable transformation, which is crucial for Africa's future.

A productive partnership with different suppliers and collaboration between firms from different sectors would allow manufacturing industries to develop networks in which they can work in symbiosis to improve the attractiveness of existing products or innovate and create new products and services that can also be placed on the market as quickly as possible.

**Governments should establish productive transformation policies with clear and achievable deadlines for action. The continuity of industrialisation plans, the strengthening of the participatory approach, mutual accountability and transparency in implementation are also crucial for the success of these policies.**

**Thus, the African Union Commission could, in collaboration with the Regional Economic Communities, provide support to Member States in identifying and replicating successful projects in new areas within countries and across the continent.**

Harnessing the full potential of transformation on the continent requires an innovative private sector, strong institutions and capacities, regional and continental collaboration, all within a favourable macroeconomic framework.

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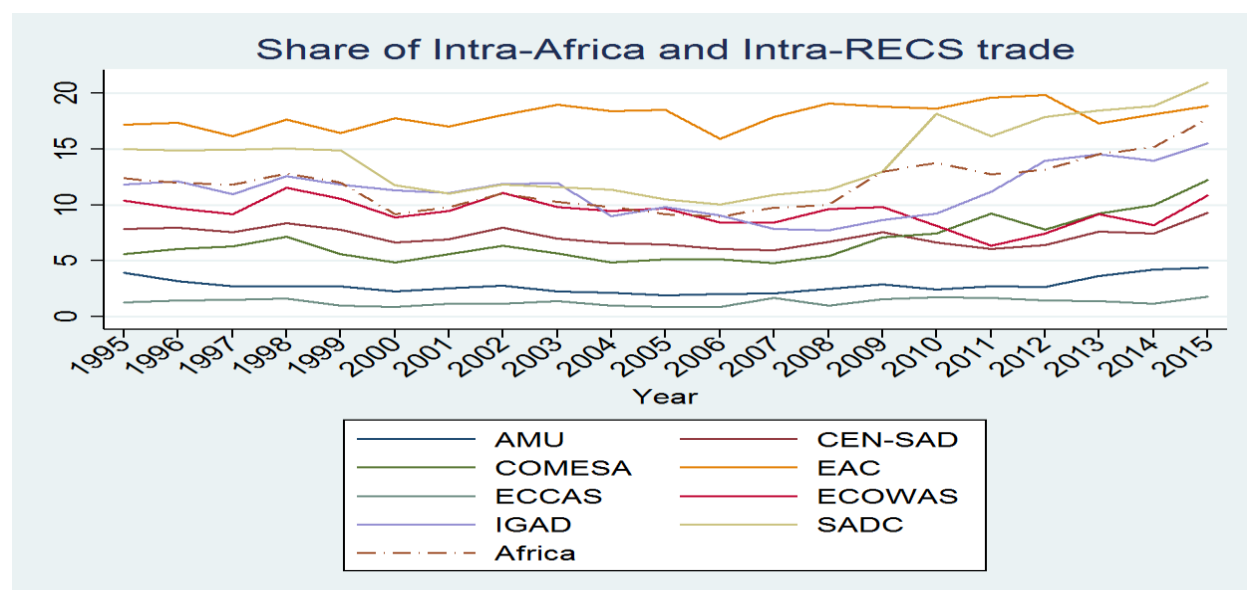
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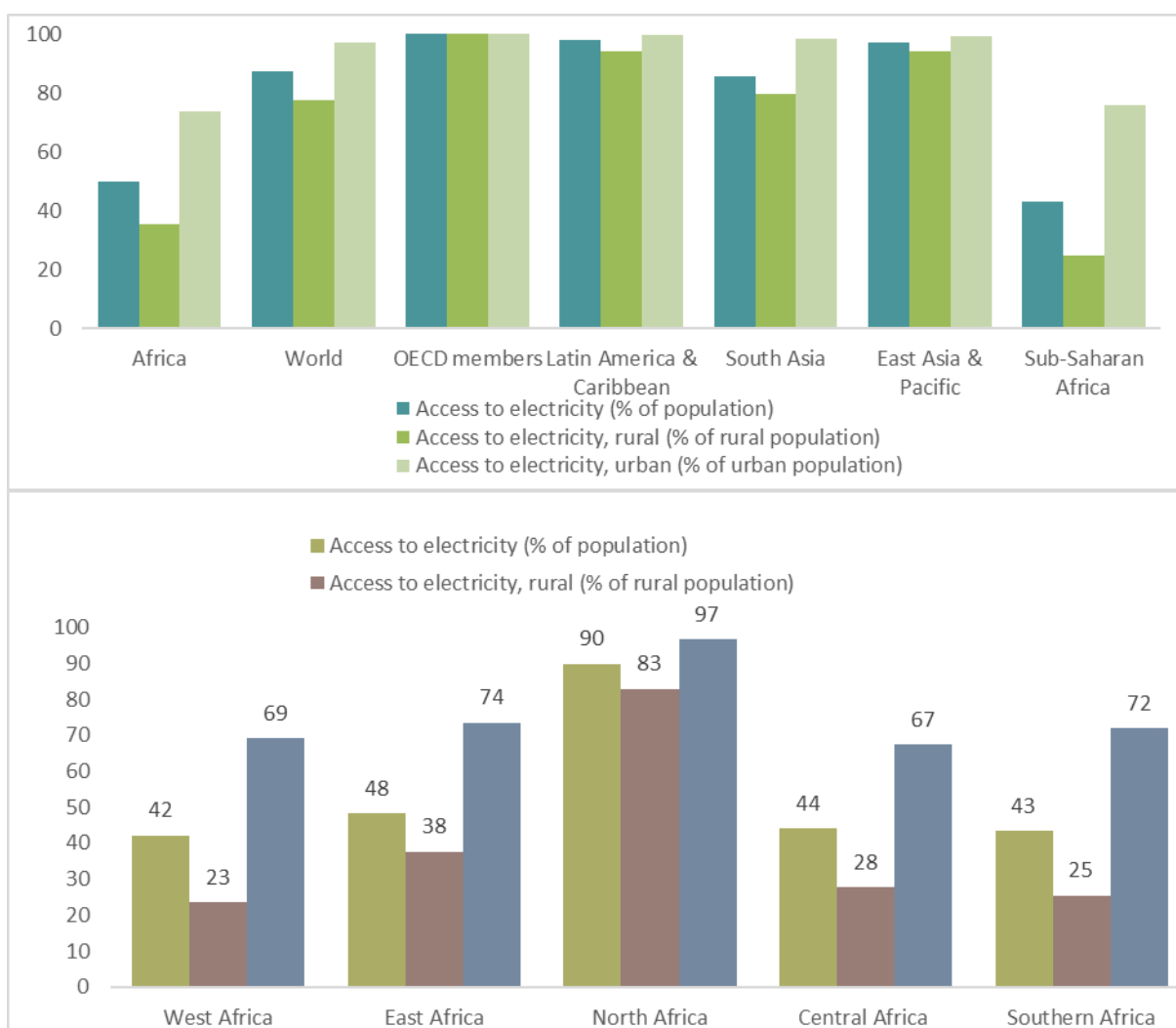
## Annexes

Chart A1: Share of Intra-African and Intra-Community trade



Source: Author's calculations based on data from UNCTADStat

Chart A2: Access to electricity in the World and in Africa



Source: Author's calculations based on data from WDI database