

Africa's Leapfrogging Opportunity to an Inclusive, Low Carbon and Resource Efficient Economy

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Context

The unprecedented global economic growth witnessed since the middle of the 20th century resulted in major improvement in human wellbeing as witnessed in key human development indicators. But, it also resulted in significant rise of environmental pollution, natural resource degradation and widening income inequality both within and between countries. The environmental and social challenges that are faced by the global community continued to build up over the last couple of decades leading to unprecedented confluence of economic, environmental and social challenges. This led to wide recognition of the need for broad transformational process at a global level, which resulted in the adoption of Agenda 2030 on Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change which called for a transition to an inclusive, low carbon and resource efficient economies.

Coming to the specific case of Africa, after decades of decline and stagnation, economies of African countries showed significant turnaround towards positive economic growth around the turn of the 21st century. This was captured in the Economist article, "The sun shines bright", in 2011 and Time magazine's piece, "Africa Rising", in 2012 ([UNECA 2016](#)). In specific terms, annual GDP growth in Africa has been 4.6 per cent on average between 2000 and 2014 ([UNCTAD STAT, 2015](#)) making it one of the fastest growing region in the world. As a result of this development trends, the region has been increasingly touted as the next frontier for global economic growth and Foreign Direct Investment (FDI). The Africa 2063 Agenda endorsed by the African Union Summit in 2015 expresses the collective aspiration of African countries to further promote sustainable development of the region.

While Africa is recognized as a continent that is on the rise, it is also faced with enormous environmental challenges that are posing major threats to the livelihood of its population. Despite the low level of development, the ecological footprint of the region increased by 240% between 1961 to 2008 both due to population growth and increased consumption and the overall

carbon footprint of the region increased by eight fold during the same four decades ([AfDB & WWF, 2012](#)). The challenges that are triggered by unsustainable uses of its natural resources is further aggravated by the effect of climate change that is seriously impacting different part of the continent. The ecological footprint of most of the African countries, which is still within the limit of their global bio-capacity average, is expected to double by 2040 under the business as usual scenario ([AfDB & WWF, 2012](#)). This will put almost all African countries in an ecological deficit zone.

Factors of leapfrogging

Even if Africa is equally, if not more, challenged by the emerging global drivers/pressures, including climate change, it has a unique opportunity of leapfrogging to a more inclusive, sustainable and resource efficient society that eradicates poverty and ensures an improved wellbeing to its population. The following are some of the key factors that favor Africa's leapfrogging to an inclusive, low carbon and resource efficient society.

- *Resource endowment*: despite its fragility, Africa is endowed with relatively abundant natural resource that provides a solid ecological foundation for its development. This includes the relatively abundant renewable energy resource of the continent.
- *Low lock-in inertia*: related to its early stage of development, it has the lowest lock-in inertia from unsustainable physical and institutional infrastructure. This gives it the opportunity to develop economic development infrastructure that are climate resilient and resource efficient.
- *Technology beneficiary*: most of the technical and technological solutions that are needed for the transition are already developed and available for use. Through an effective social innovation regime, Africa could be a primary beneficiary of these emerging and resource efficient technologies and techniques.
- *Affinity to sustainability*: the widely prevalent communal philosophy known as Ubuntu in Southern and Eastern Africa, which is based on the principle of "I am because of who you are", gives African societies better affinity to sustainability.

Strategic considerations

For Africa to realize its leapfrogging potential and benefit effectively from the global transition, it needs to be more innovative and follow an alternative economic development path that takes into account the global drivers of change and the specific leapfrogging opportunity of the region. The key factor that determines African countries ability to gain the maximum benefit from the existing leapfrogging opportunity is the strategic choice and decisions they make in building their economic infrastructure for the coming decades. In this context, the following are the key strategic considerations

that need to be made by all African countries in order to leapfrog to a more inclusive, low carbon and resource efficient society.

- Energy infrastructure: the transition in energy systems is one of the key determinants of the progress towards an inclusive, low carbon and resource efficient economy. The first step that need to be taken by each African country, in this regard, is ensuring the transition to sustainable energy systems in which renewable energy resources shall form the backbone of the energy infrastructure ([APP, 2016](#)). Besides the resource mix, the smart combination between grid and off-grid distributed energy systems will be a key factor for ensuring the distributive impact of the energy system. The later aspect is particularly critical for most countries in Africa as it plays a key role in promoting energy access and poverty eradication through an inclusive socio-economic development at the local level.
- Industrial infrastructure: efficient transformation of finite natural resources through industrial processing is a fundamental prerequisite to meet the basic needs of growing global population. However, such efficient transformation requires replacing the predominantly linear mode of industrial production with an industrial infrastructure that promotes circular economy. A key component of such infrastructure is the development of eco-industrial parks as the backbone of industrialization ([UNIDO, 2016](#)). Furthermore, concerted planning effort should be made to enhance the productive capacity of local communities as part of a sustainable value chain by effectively linking the development of distributive energy systems with value addition at the local level.
- Mobility infrastructure: the development of mobility infrastructure that facilitates effective and efficient flow and movement of resources, including material, information and labor, is another key factor of leapfrogging in Africa. Besides developing multi-modal mobility infrastructure that facilitate bulk and public movement of goods and people, countries need to utilize the transformational contribution of progress in information and communication technology to facilitate productive empowerment of local communities.
- Human resource: realizing all the opportunities that are highlighted earlier and utilizing the full potential of the region can only happen if countries have a working force that is equipped with the right set of skills and capability. This would require reorienting existing education and training programs by incorporating new set of knowledge and skills that are required for the transformational change. The new set of skills and knowledge need to be channeled towards promoting innovation at all levels of the society with a particular emphasis given to social innovation on which there is significant gap.

In general, the Global community is faced with a moment of another major social transformation in human history and Africa is uniquely positioned to be on the lead in this transformational process provided that we seize the emerging leapfrogging opportunity. This requires effectively utilizing the development possibilities that are created by key transformation drivers such as recent developments in renewable energy development and the changes driven by the development of information and communication technology. The progress to be made by African countries in this leapfrogging process will largely be determined by their success in creating the required physical

and knowledge infrastructure for the transition to an inclusive, low carbon and resource efficient economies.

References

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