

A Swot's Analysis of Africa's SWOT Analysis _ Ethnics to Economic Ethics _ An Advanced Research Saga & A Deemed Thesis

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Abstract

Africans cannot afford to remain in backyard or left behind by any international conglomerates of trade, commerce and industry in the changing times of economic growth and economic welfare of African Societies in their transition from ethnics to economic ethics on the domestic front. That is the fundamental reason why this Paper focuses on the SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis at grass-root-basics but significant of economic strength and economic opportunity *prima facie*.

'Weaknesses & Threats', paired together, though not bereft of economic significance, in this Paper are taken up with keen interest connected with ethnics in Africa that has come up of age as a political entity tagged with politicides, genocides and democides but in a very non-detailed manner only. This is so (because) not only for brevity-sake but also for insuring Africans, a civilized lot now in the 21st century, from damage afresh to the African pride and individual image. The author is biased with a conflict of interest, if not done so, since he is a caring student-researcher in Africa Area Studies at the Centre for African Studies (CAS) at the University of Mumbai, Western India, having learnt that there remain 8 more decades of the 21st century to elapse for the sake of futuristically settling their (Africans') claim to the 21st Century with conclusive writings to realize that to stumble is not to fall but to go forward faster like Africa!

Keywords: Africans, Economic, Ethics, Ethnics, SWOT, Insuring, Civilized, Pride, Image.

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1. Introduction

A swot’s analysis of SWOT Analysis of Africa might cause confusion of similarity in the dissimilarity of meanings of the word swot and the abbreviation SWOT in the title. In clarification, swot means a student who studies assiduously, especially to the exclusion of other activities or interests engrossed in hard study or hard work and concentrated effort. SWOT means the abbreviation for Strengths, Weaknesses, Opportunities, and Threats analysis of Africa. The SWOT Africa study’s contextual diagram below just this line will clear the confusion, if any, still persists.

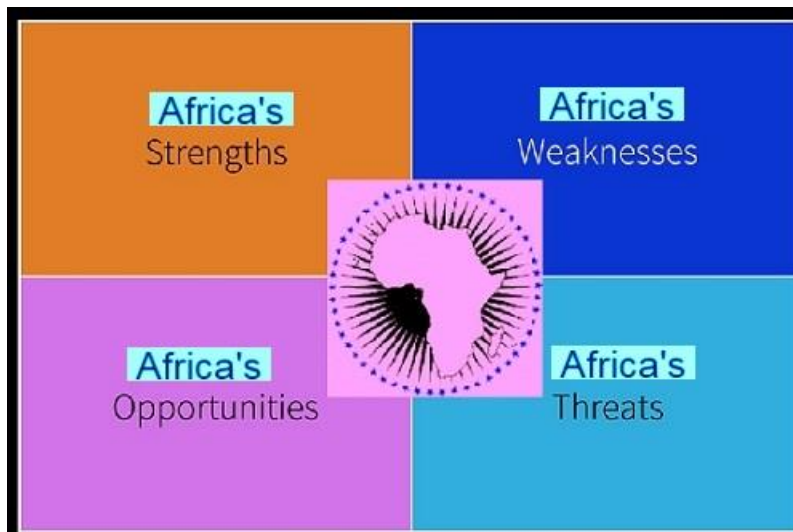


fig. SWOT Africa Study contextual diagram

A contextual SWOT generates analytically meaningful information on strengths, weaknesses, opportunities and threats to make the SWOT-analysis a useful and timely exercise-not-in-vain. SWOT gives rise to organization of knowledge into two classifiable internal and external factors. Internal factors are called to be the strengths and weaknesses internal to Africa depending upon their effect on Africa’s objectives whereas the external factors called to be the opportunities and threats exposed by the environment external to Africa. The external factors include macroeconomic matters, technological threats/change, legislation and sociocultural changes that take place outside Africa.

2. Characterization

Within the scope of this research Paper, Africa’s natural resources and transformation of production besides exports & imports are considered to be the strengths while Africa’s communal differences, domestic terrorists, God’s languages /linguistic partialities, genocides, politicides and domestic violence are its weaknesses. At the same time, consumerism in and outside Africa with growth in population in addition to globalization are the opportunities while the threats being technological, international relations and terrorism clouded by colonial African genetic camouflage. SWOT tabulation emerges as seen below.

Table . showing ‘SWOT’

SWOT AT A GLANCE			
Strengths	Weaknesses	Opportunities	Threats
Natural Resources	Communal differences /domestic terrorists	Consumerism	Colonial genetic camouflage
Transformation of production	God’s languages /linguistic partialities	Population growth /Demographic dividend	Technological
Imports-Exports	Genocide Theories /domestic violence	Globalization	International Relations /Terrorism

From the above, two characteristically distinct pairs in the interests of African Research are carved out. The two pairs are-

The first pair is [Strengths + Opportunities]

Strengths	Opportunities
Natural Resources	Consumerism
Transformation of production	Population growth /Demographic dividend
Imports-Exports	Globalization

The second pair is [Weaknesses + Threats]

Weaknesses	Threats
Communal differences /domestic terrorists	Colonial genetic camouflage
God's languages /linguistic partialities	Technological
Genocide Theories /domestic violence	International Relations /Terrorism

3. Elaboration

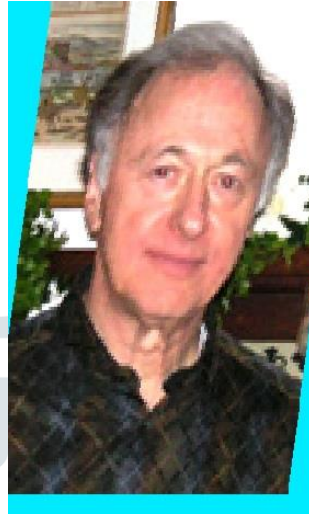
Social scientists say there are three types of nations:

First Type: The Civic Nation of 18th-century French philosophers as being centered in a willingness to live together, thereby producing a nation that results from an act of affirmation.

Second Type: The Ethnic Nation exemplified by the German tradition originating with early 19th-century philosophers referred to people sharing a common language, religion, culture, history and ethnic origins that differentiate them from people of other nations.

Third Type: In the 21st century times, the typification tends to be based in *socio-historical-area studies* about the building of national identity sentiments. An area is a highly complex, multi-minded and non-equilibrium system that has an individuality meaning a style. It is to be defined as multiple intersections of fields like Geography , History , Socio-cultures and individual-creative-ones inclusive of language brands and bonds , ancient background , tribal societies and activities of tribal-nation-building .

In Area Studies, an area /country/ nation/nation-state/continent can be used interchangeably. Szanton (2003) says that Area Studies needs disciplines for the concepts and methods they can contribute to understanding and translating another culture or society. It might be said that the main purpose of Area Studies is to give a complete picture of the culture of a specified region. Therefore, Area Studies are also called Regional Studies pertaining to particular geography, culture, history, economics, security and society in several Regions of the world comprehensive of politics, economic cooperation, inter-state relations, oriental cultures and traditional societies of the various Regions of the world.



Prof. David L Szanton, University of California, USA

Other accruing resources are global migration, human rights and democracy-building with inter-national affairs for economic diplomacy and nature of the political world from the perspective of social mentalities and cultural identities. Whoever believes that a country can be understood mono-disciplinarily or juxtapositionally is committing a mistake! It is important to note that social science research in Area studies and international relations provide international economics, global governance, ethics of war & peace, Law & conflict resolution, multi-culturalism and regional integration.

In the Africa Area Studies, later human generations of the post-cold-war world, find that colonialism is of great interest. At times, the same colonialism has come to be known as colonial imperialism or racial discrimination as well as European colonialism in the African continent.

The development of the concept of racial superiority received great impetus from the institutions of colonialism and slavery. The slave trade became a lucrative business and the traders had to find rationalization for business of their masters who thought black people were inferior and non-human. The masters exploited the opportunity into formation of institution of slavery with *objectives of economic motives*.

Thus, the role of the institution of colonialism laid its branches of racial prejudice and discrimination. The real motive was the *economic gain* which the Europeans were looking for. To derive the economic gain, they held on to the territories- otherwise called colonies, and that that were not like the Europeans in skin-coloration especially and race particularly did not deserve equality of treatment. So, the European powers justified their colonial rule, saying that, as civilized people, it was their moral duty to uplift African people and convert them to Christianity. The Racists of South Africa gradually achieved racial superiority.

Table:Area in sq.miles of Africa under colonial power

Colonial power	Territories*	Sq. Miles
1 France	Tunisia, Algeria, Morocco, French West Africa, French Congo, French Somaliland	4,086,950
2 Britain	Union of South Africa, Basutoland, Bechuanaland, Nyasaland, Rhodesia, British East Africa, Uganda, Zanzibar, Somaliland, Nigeria, Gold Coast, Sierra Leone, Gambia, Egypt, Anglo-Egyptian Sudan	3,701,411
3 Germany	East Africa, South-West Africa, Cameroon, Togoland	910,150
4 Belgium	Congo State	900,000
5 Portugal	Guinea, West Africa, East Africa	787,500
6 Italy	Eritrea, Italian Somaliland, Libya	600,000
7 Spain	Rio de Oro, Mini river Settlements	79,800
8 Independent states	Liberia, Ethiopia	393,000
Total		11,458,811

France and Africa, through the French-assimilation policies for Africans in the 19th century and early 20th century had several implications against the British-indirect-policies for Africans which were not allowing the merger of British natives with the black-colored native Africans. France always tried to ensure that its colonies in Africa were ruled by the pro-French rulers from among the native Africans. The areas where the British rulers and French colonialists dominated are respectively designated as the ‘Anglo-phone’ and the ‘Franco-phone’ countries to deal with human beings, human nature, man’s environment, human behavior, pressing human problems, social responsibility and to find facts relevant to the solution and promotion of social welfare through traditions, customs and values in which there was great subjectivity and less objectivity.

4. Flashback

Gone are the days of fateful destiny in the nature of pre-colonial , colonial , post-colonial , first world war , second world war , pre-cold-war , cold war , non-alignment post-cold-war , bi-polar , multi-polar and uni-polar times of the World’s and Africa’s transformational phases into the stories of History Chapters for partial and impartial Historians to variously interpret in light of evidences or in their absence through their authored and co-authored writings. African independence and uplift on a worldwide dimension have been the well-known truths. It is no exaggeration to say that Africans are regenerated in America and on the African Continent or wherever they may be but certainly is a 100% contradiction opposing the laymen’s popular and non-academic perception “Why are Africa and African people at the bottom of the world order, when they gave the world its first civilization, created the first religion, science and all of the high technology now in use”. Therefore, all of the African peoples are no more functioning at the mercy of whites all over the World even in the odd sense of somewhat racially partial thinkers on the Globe. Those familiar with the Harold Cruse’s Crisis of the Negro Intellectual will harbor no surprise that at this moment in our history An African Answer as the key to global productivity is being presented at this moment not by a well-known astrologer or soothsayer but by millions , billions and trillions of new breed of African thinkers with special

exposure to and involvement with the ripe and flourishing Continent of African States numbering as the 54 active populous units as well as the gargantuan corporate structures that populate America and the West . In the current 21st century, the African States' emergence on the world stage holds the key to a more benign enhancement of corporate and political life the world over. Africa's world leadership is guaranteed by the Sciences which have proven facts beyond rectification such as the following ones.

Fact One: Dr. Elso S. Barghoorn , a Harvard University's Paleontologist ,discovered microscopic one-celled microfossils that are 4.6 billion years old embedded in rocks in South Africa . This discovery pushes back the age of the oldest known evidence of life by 100 million years .

Fact Two: Anthropologist Timothy White at the University of California at Berkeley has completed an analysis of skeletal remains of four million-year-old fossils that were found on the banks of an African river. These fossils predate by a million years the famous three million-year-old "Lucy "skeleton found in Ethiopia in 1974.

Fact Three: Allan Wilson, a professor of biochemistry at the University of California at Berkeley, has discovered in his DNA research that all of today's humans descended from one woman who lived in Africa from 140,000-280,000 years ago. This was based on the estimated rate of mutation of DNA in human cells. Wilson's conclusion bolsters the contention that Africa is the sole nursery foe ancestors of modern Homo sapiens.

Fact Four: A recent Study called a New Study says that Neanderthals or the archaic humans (Africans) were compassionate beings as per the University of York in the United Kingdom challenging our notions that they were brutish compared to modern humans.

Fact Five: The Journal of World Archaeology in its Research favorably argues that not helping others out of self-interest is their (refer to Fact Four above) attribute. A Senior Lecturer, Ms. Penny at the University of York confirms that they knew psychologies like feelings, love, suffering, efforts and non-expectations of reciprocity beforehand.

Fact Six: The worldly African and European participants had travelled great distances, spoke multiple languages, absorbed various forms of structural and directly-transacted violence's results and together negotiated the complex roles of rescuer and refugee.

Fact Seven: Most of the historians know practically nothing about the Africans prior to their enslavement. Scholars in large numbers have not shown keen interest to study the African scientifically in the direction of human family and early civilization just like that of the primitive Greeks or early Romans.

Fact Eight: In Art & Architecture, Africans had advanced far beyond the primitive stage even with the limited evidence available with the Archaeologists for sure as made available. The everlasting Architecture still exists, though in ruins in Africa.

Fact Nine: The modern Area Studier's Research gave weight and confidence that the African population asserting that they were indeed an integral part of the human family of practical men & women.

Fact Ten: The African Eve or The First Mother is African or Adam & Eve of African Soil

Proteins & Genes could change over time at a steady rate and thus act as a molecular clock. Applying this technique, the African Eve Hypothesis has been coined, which gave rise in 1987 to what was popularly known as the African Eve hypothesis. Dr. Wilson and his colleagues based their research on the analysis of genetic material, mitochondrial DNA that is passed only from women to their offspring. The mitochondrion is an energy-producing organ inside every cell and contains its own complement of genes separate from the genes in the cell nucleus.

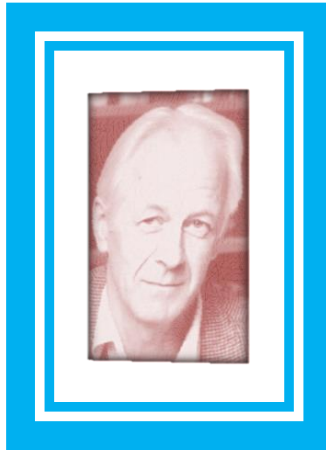


fig . Dr.Wilson (1934-1991)

After examining mitochondrial DNA from people of various races, the scientists hypothesized that all humans living today have mitochondria traceable to a common ancestor, a woman who was described as "the mother of us all." The theory also held that her descendants, the first modern humans, spread out of Africa 50,000 to 100,000 years ago. Dr. Wilson hailed from the University of California at Berkeley, America.

Fact Eleven: Africa is home to the world's earliest known use of measuring and calculation, confirming the Continent as the birth-place as well as the birth-hall-of-fame of both the basic and advanced mathematics.

5. *Review of Literature*

My focus is on examining the academic work of earlier times for an insight into the advanced research saga. Literature review is the art of looking into available studies on Africa to build a platform for investigative purposes, interests and inspiration.

A. Grinker, R.R. and Steiner, C.B. (Ed) (1997). Perspectives on Africa.

“Africa - at one level, refers to an actual geological unity (the second largest continent after Asia) but at another level it refers to much more -the term “continent” implied something that holds or retains since Africa has been a powerful and fundamental force in world history long before the rise of European civilizations”.

Leopold Sedar Senghor (1948) stresses that “the indigenous wisdom of African peoples and argues that beneath the superficial cultural idiosyncrasies that distinguish one society from another, Africans are united by a profound commonality which is expressed in their democratic social structures, their religions, their work practices, their arts and in the rhythm of African life itself”.

Terence Ranger (1983) maintains that “the 1870s 1880s and 1890s were the time of the European rush into Africa and were the time of a great flowering of European invented tradition –ecclesiastical, educational, military, republican and monarchical. In Africa, therefore, the whole apparatus of invented school and professional and regimental traditions became much more starkly a matter of command and control than it was within Europe itself. Deployed in Africa, however, the new traditions took on a peculiar character, distinguishing them from both their European and Asian Imperial forms. All this is part of the history of European ideas but it is so also very much part of the history of modern Africa.”

B. Saxena, S.C. (2001). Africa Beyond 2000

The future of Africa in the 21st century is a hotly debated issue: Africa and the Democratic Tradition, Africa and Political Stability, Good Governance and Development as Africa's Majors among academic scholars including economists, political scientists and sociologists all over the world (Dr. S.C. Saxena, 2001).

C. Robertson, C. (2012). The Fastest Billion: The Story behind Africa's Economic Revolution

Africa will rule the 21st Century and has economic, social and political development given the geo-economic structure of the world and poised to grow along at a faster pace, due to its advantages in possessing vast natural resources, huge tracts of cultivable land and a population structure in which productive youth will outnumber the elderly or the very young.

D. Cheru, F. (2008). Africa's Development in the 21st Century: Reshaping the Research Agenda

As Africa enters the 21st century, it faces mounting challenges as well as new opportunities. Unlike in the 1980s and the 1990s, however, the conditions for Africa's sustained growth and development are more favorable today than ever before. As a result of economic reforms the overall growth has been in excess of 4.5 percent annually since the mid-1990s. There is greater consensus among Africans now than at any previous time on what needs to be done to accelerate growth, reduce poverty and promote sustainable development. The positive response of Africa's international partners enhances the prospects for sustaining the progress. Africa is also benefiting from a commodity boom and increased investment in infrastructure and the extractive industry sector.

F. Zuma, J. (2015). The Rise of Africa in the Twenty-First Century

It is a fillip in discussing the rise of Africa, Jacob Zuma being the President of South Africa himself writes as the head of the government that much has been said about the rise of Africa in the twenty-first century and as home to seven of the 10 fastest growing economies in the world, the continent has in the past few years received a slew of attention from investors, commentators, developers and philosophers alike.

G. Lust, E.M. and Ndegwa, S.N (2012). Governing Africa's Changing Societies: Dynamics of Reform

What is the cumulative impact of the immense social, economic, and political changes that Africa has undergone in recent decades? What opportunities do those changes present to improve the lives of the continent's citizens? Countering the prevailing mood of pessimism in the face of disappointed expectations, the authors of *Governing Africa's Changing Societies* demonstrate the significance of even incomplete reforms in the areas of competitive elections and democratization, gender relations, property rights, the public sector, and privatization, among others. In the aggregate, their work reveals how seemingly small or sluggish changes are accumulating to fundamentally, and positively, transform Africa's governance environment.

H. Tim, K. (2013). Business, Politics, and the State in Africa Challenging the Orthodoxies on Growth and Transformation.

In recent years Africa appears to have turned a corner economically. It is posting increased growth rates and is no longer the world's slowest growing region. This book goes behind the headlines to examine the conditions necessary not just for growth in Africa but for a wider business and economic transformation.

I. Jones, A. (2006). Genocide A Comprehensive Introduction

Genocide: A Comprehensive Introduction is the most wide-ranging textbook on genocide as a primer for non-specialists and general readers interested in learning about one of humanity's enduring blights and reflects the latest thinking. Provides an introduction to genocide as both a historical phenomenon and an analytical-legal concept, including the concept of genocidal intent, and the dynamism and contingency of genocidal processes. Discusses the role of state-building, imperialism, war, and social revolution in fuelling genocide and supplies a wide range of full-length case studies of genocides worldwide.

Explores perspectives on genocide from the social sciences, including psychology, sociology, anthropology, political science/international relations, and gender studies.

Considers "The Future of Genocide," with attention to historical memory and genocide denial; initiatives for truth/justice/redress; strategies of intervention and prevention; Nigeria/Biafra as a "contested case" of genocide; extensive new material on the Kurds, Islamic State/ISIS; civil wars/genocide in Iraq and Syria; conflict/atrocities in

the world's newest state of South Sudan; role, activities, and constraints of the United Nations Office (UNO) of Genocide Prevention; new testimonies from genocide victims, survivors, witnesses and perpetrators.

J. Khapoya , V.B. (1994) . The African Experience

The African Experience is a masterpiece written by a passionate African scholar, His Excellency Vincent B. Khapoya . This book is a must-read for any student of Africa.

Khapoya deftly integrates the particular and the general to present a compelling scholarly view of Africa's past and present in this Book which is pro-researching endlessly on the two largest colonial powers in Africa , namely France and the Great Britain.

Colonization of Africa by European countries was a monumental milestone in the development of Africa. The Africans consider the impact of colonization on them to be perhaps the most important factor in understanding the present condition of the African continent and of the African people. Therefore, a close scrutiny of the phenomenon of colonialism is necessary to appreciate the degree to which it influenced not only the economic and political development of Africa but also the African people's perception of themselves.

This Book focuses on the major European colonial powers in Africa. It will begin by comparing and contrasting in some detail the racial attitudes of the British, the French, and the Portuguese. Their respective political administrative styles in their colonies and their economic policies and practices with some assessment of the effect of all these factors on the political and economic evolution of African countries are highlighted.

6. Advanced Research Methodology

Research in a layman's language is search for knowledge. For the educated, Research is a scientific and systematic effort to search for information. Chiefly, it is an art of scientific enquiry or investigation. The term Research is made up of two words.

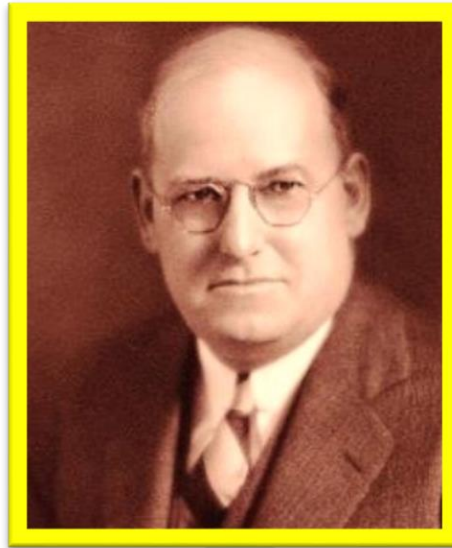
[Research = Re + Search]> ['Re' means again and again]> ['Search 'means to find out something]

The term Research is used to collect information about a particular subject. It forms means to finding out what one does not already have on record. Hence Research records certain things or gathered evidences. It promotes movement from the known to the unknown with a learning bent of mind in letter and spirit. So, Research becomes an organized learning for own benefit of store of knowledge. This is information hitherto unknown or a fact one doesn't have. Hence, Research or Research Activity or Research Productivity. For example, a Study about '21 Century: Africa's Century'.

In the words of Professor Clifford Woody of the Michigan University (Kunzangthinley BlogSpot, 2012 & Arvind Luhar, Meghan Somani & Shital Mehta 2014, p. 11)

“Research ideally is a careful unbiased investigation of a problem.”

-- Clifford Woody



Prof. Clifford Woody (1921-1948)

The Webster's International Dictionary defines research as the collecting of information about a particular subject (Online dictionary 1828). So, one can deduce that research is 'A careful critical examination in seeking facts or principles or diligent investigation in order to ascertain something'.

Research Tools

1. Primary Sources of Data

Organisations , People , unpublished .

2. Secondary Sources

Books , Articles ,

3. Evidences

4. Examples & Illustrations

5. Analogy and Comparison

6. Personal Experience

7. Observation

8. Interviews 9. Books. 10. Journals

11. Newspapers & Magazines & Webliography

12. Internet . 13. Statistics

14. Brainstorming to synthesize and analyse to find relationships between ideas and concepts.

15. Voluntary Consent Statements from governmental state actors and responsible non-state actors .

Research Process

Just as there are a wide variety of views as to what research consists of and great differences in actual practices as to what people research and how, so there are alternative perspectives of what the process of undertaking research should look like.

A diagrammatic representation of the research process called 'Spiral' can be seen below.

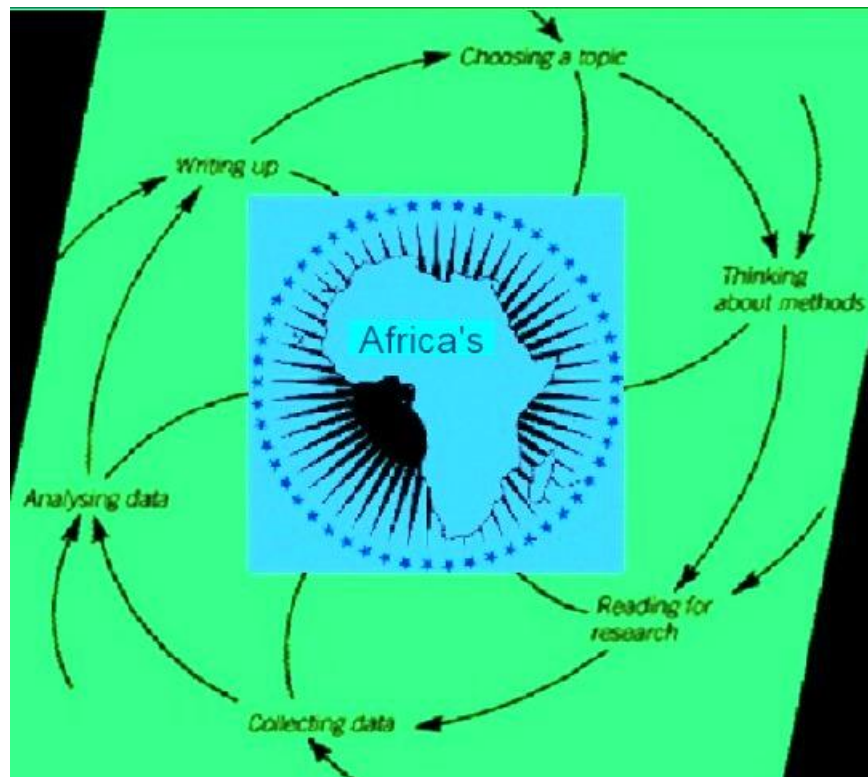
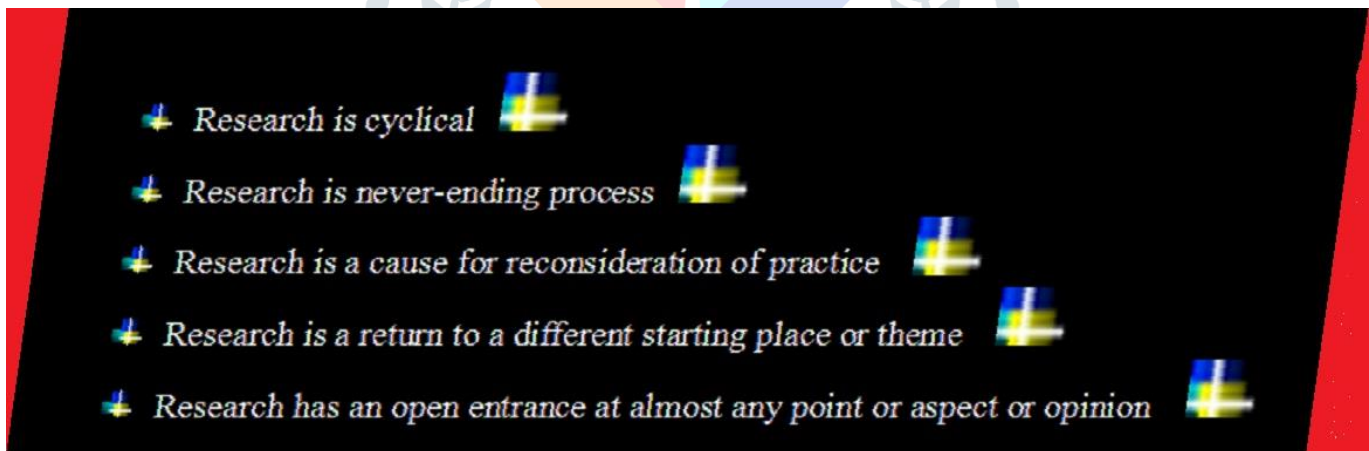


fig. A research spiral in Africology/Black Studies

Seen from the perspective of spiral, one can appreciate the intrinsic nature research has such as



Research Method

Formulation of the research hypothesis is the most important aspect of the research process.

Research Hypothesis:

It is a brilliant guess about the solution of a research proposal or a leap into the dark! The word hypothesis is made up of two Greek roots. 'Hypo' means that it is some sort of 'sub-statements', for it is the presumptive statement of a proposition. 'Thesis' is about solution of a problem which the investigation seeks to prove in a specific frame of reference.

One can infer so as that "Hypo + Thesis = Hypothesis".

It might be observed that a hypothesis can arise from personal experience, past records, observations, expert discussions, cultural values, folk wisdom, intuition, dreams, the sixth sense, unconsciousness or even a coma condition like sleep walking and /or nightmare dreaming!

A hypothesis formation is not mandatory in every research. However, it should emerge as naturally as possible in the discourses of research studies in area studies such as the Africa Area Studies. Take for example-- this Paper's research that bank on Africa's SWOT analysis provoked by Genocide Theories or God's languages.

Research Methodology is a way to systematically solve the research problem. In it one studies various logical steps adopted by a Researcher. The implication is that the entire gamut of logical efforts is a science of doing Research constructively or scientifically. In other words, it not only involves research methods but also logic behind the method one uses in the context of Research. Also, it will be known as *modus operandi* of a study. Research methods and research techniques are synonymous expressions used interchangeably within the same compass of research and refer to the popular methods the researchers use. When techniques are called analytical tools, it implies that that research has sole dependence on statistical methods entirely.

The below tabulation is easier means of making explicit the scope of method and methodology.

METHOD	METHODOLOGY
1. Conduction of research	Cause of research study
2. Gives solution to a problem	Definition of research problem
3. Fixation of objects	How and why of Hypothesis
4. Information relates to solution	Information collection methodically
5. Collection of new information opposite to inadequate information	Information collected organized technically and per time-line/chronological/glotto-chronological
6. Research activities	Research results or conclusions or synopsis
7. Research techniques within the scope of method	Chosen methods are used
8. Method constitutes part of Research methodology	Methodology has many dimensions

fig. Research Method & Methodology Basics

Thus, simplified definition of research methodology is a way to systematically solve the research problem involving a logical studying with various steps in addition to knowing research method. In other words, this means to say that a researcher needs to design a methodology for his/her research problem solving since all problems are not one and the same in their individual scope and limitation.

Ackoff Russell in the year 1961 said that research design is subject to economy in procedure relevant to research purpose on hand.

Martin Bulmer in the year 1974 said that research design is the specification of the problems, conceptual definitions , derivation of hypotheses and defining of population to be studied .

William Zikmund in the year 1988 described research design as a master plan of the methods and procedures for collecting and analyzing the needed information.

Under mentioned is a sample variety of research design of a research topic in simple sense.



fig. Research Design

7. Research Compartmentalization

The basis for research compartmentalization is the idea that clarity and relevance within organization of my presentation of the knowledge of research--- taken for both of the input and output---survive at all times. Yet, if someone has the highest clarity of thought , certain "compartmentalized" information, identified referring to particular types of detailed information, may still be organized and coordinated to certain standardizations , be it African or global.

Africa's SWOT analysis: Strengths with Opportunities & Weaknesses with Threats has to be researched, according to me, based on the point of view of Africa's claim to the 21st century as Africa has already prepared for the 21st century to live in peaceful coexistence with sustainable development of Africa.

In its post-independent period, Africa has the advantage of the youngest population in the world. It plays its roles on global issues and African issues at various international and national platforms/forums conforming to the principles of development and progress on the globe. Africanism as a resultant of the budding democracies in African States witnessed in the existing progressive social and economic developments and the new ones in offing , it is cultivated and harvested by the nascent generations of the people and leaders on the African soil- in other words, the real Africa owners.

All of the above to me being a student-researcher constitutes an advanced research saga. In other words, a deemed thesis, in my estimation and assessment, pertaining to one-- the 'human-world-of Africa ' while the other— the 'human-mind attracting origins from ethnicities to economic ethics , peacefulness to prosperity levels, unity to divinity scales, constitutional understanding to rule of law for equality to wisdom with happiness . All of this, in the 21st century times, symbolize stable macro-characteristics of the African international relations and global harmony amidst the one-up-man-ship of choplogical geo-politics, geo-cooperation and geo-strategies for and against Africa in current technologically threatening warfare and developmental progress of the industrialized Nations in the international community.

Let us not forget that the Peaceful coexistence and sustainable development have been the ideals of Africa which has already well-prepared for the 21st Century designation as the African Century.

Therefore, the Strengths with Opportunities become the mighty research-priority to formation of research compartments.

Against the heroic pair of Strengths & Opportunities of Africa, I consider the opposite pair of Weaknesses and Threats, rather put succinctly, the villainous pair of Weaknesses and Threats---appropriate to or characteristic of a villainous plot to kidnap Africa's ideals and claim to the 21st century , is dramatically abandoned by me in this Paper as a student-researcher thinking in an optimistic fashion that a research into the themes of villainous pair should be the job of a pessimist's hard research-mission of projection of the African Continental Status, Solidarity and Organization of African Unity in an anti-optimistic perspective opposing the 21st Century claim by the heroic Africans and African leaders. So, the less said the better is my stand on the gamut of Weaknesses & Threats villainous pair so far as Africa's global image is concerned in this uncertain and complex world .

For instance, the occurrences of genocides , politicides and democides amidst the spoken God's languages of Africa ordinarily left to Africa as issues and problems of internal affairs cannot make it entirely African matters in causes and effects . Such affairs are neither internal nor household. They must have been substantially on account of and in the nature of a pecking order prevailing in the then world of hosts of populations , languages, cultures, education and personalities that mattered most within Africa and the Africa-outer-world's conscious-connected African trustees and morale keepers undoubtedly . No doubt on this in this research saga!

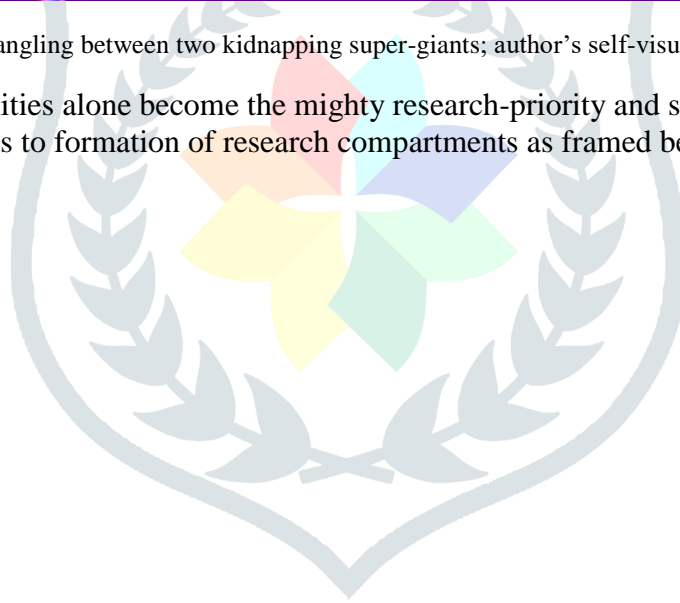
Despite the presence of the rest of the world and the United Nations Organization showing African Nations in UN-membership-majority, there was lack of policy initiative like early warning and prevention of the genocidal, political and democidal murders of the order of human catastrophe. In modern technological times, this means that power kills and absolute power kills absolutely! So, reiteratedly, the less said the better is my stand on the gamut of Weaknesses-Threats- villainous pair so far as Africa's global image is concerned surrounded and influenced by an

uncertain and complex world as can be visualized from the below world map in which Africa is shown as the shining heartland in bright complexion dangling between two kidnapping super-giants vying over the heartland.



fig. Africa dangling between two kidnapping super-giants; author's self-visualization map

So, the Strengths with Opportunities alone become the mighty research-priority and strong basis for research compartmentalization. This leads to formation of research compartments as framed below by me.



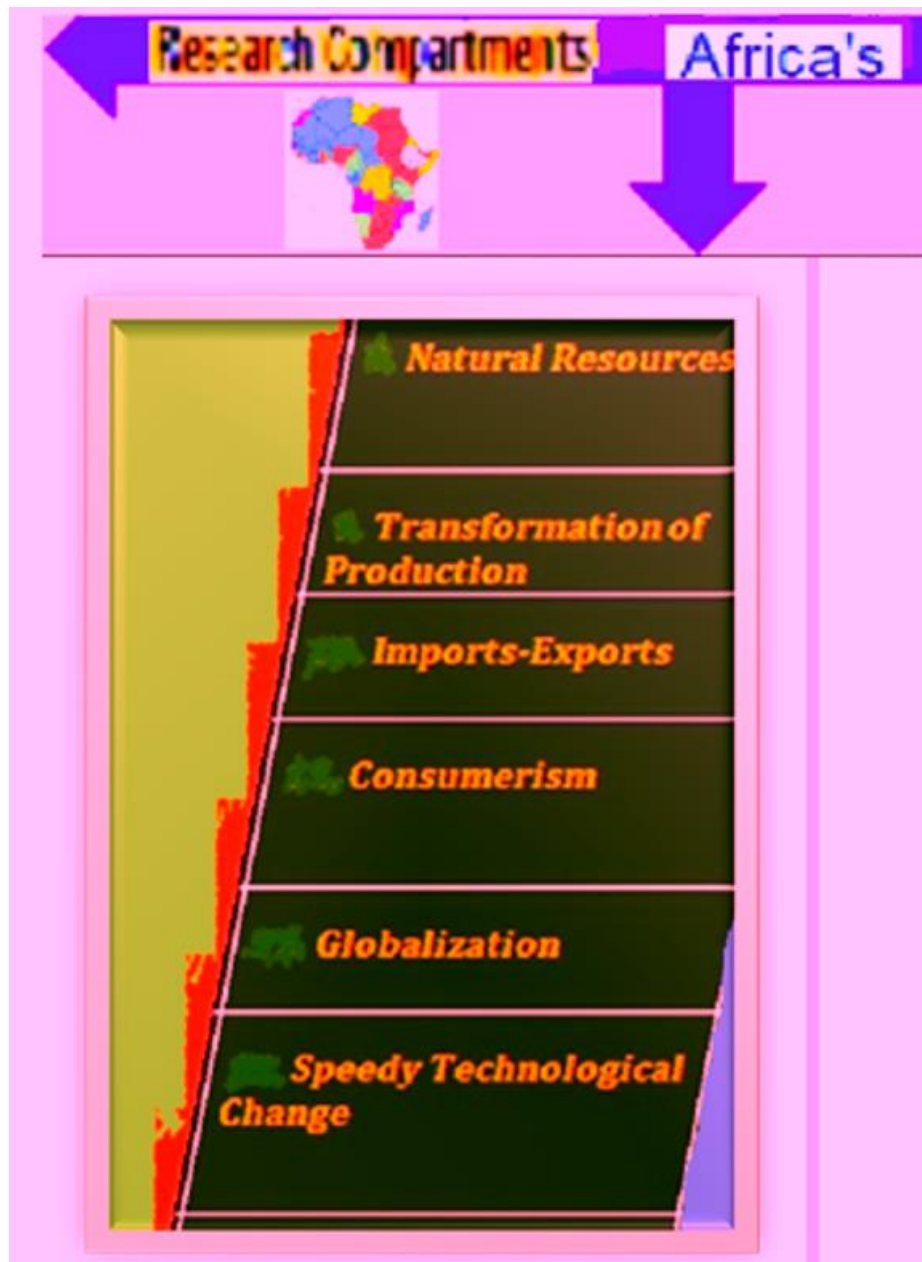


fig. Research compartments

8. *Natural Resources*

Africa's Natural Resources – from curse to blessing

The Africa of the 21st century has diversified her economy promoting competitiveness, innovation, and investment opportunities not only in the natural resources and human resources but also in capital goods and technology sectors of economy. As globally known, Sub-Saharan Africa has six of the world's 10 fastest-growing economies. In respect of Africa's Natural Resources, passage from a curse in pre-decades of Africans' Independence struggles to a blessing in the post-decades of virtually scientific and technological sovereign outlook of domestic and participatory global African economy.

Africa's Continental transformation from curse to blessing

There is an entire continental transformation from curse to blessing not restricted to natural resources alone since all over the Global World , Africa is not the single and aloof continent of curses to blessings , let alone natural resources taken as the Gift from the mother Nature .The natural resources curse is thus not specific to Africa and then the so-called African- curse-specificity uniquely arose from the interaction between erstwhile degenerative African institutions without advanced studies of scientific / economic character of research analyses and a very lowly exploited ready surface-deep-floating African natural resources in the bygone era of colonial masters .

Resource curse apparently implies that there are negative aspects to the possession of maximal or minimal assets of deposits of natural resources (oil and gas, petroleum, hydrocarbons , coal mines) by a single nation or association of nations of the world put together for partnering , sharing and distribution through trade , industry , and commerce amongst themselves garnering, preserving and utilizing with financial value exchange for economic well-being and social welfare at times of peace and war .

After the second world war, the phenomenon of resource curse has been analyzed by the World Bank in its Annual Report of 1994 that the Oil and Petroleum Exporting Countries (OPEC) though endowed with natural resources of oil and gas besides high export earnings thereof, yielded smaller per capita growth conforming to the resource curse evidently than that of the developing countries without natural resources.

The following tabulation is a chronological gist of the contributions by academic researchers who have successfully scrutinized the contextual relevance in economic democracies all over the world of the resource curse phenomenon impacting growth and development economically and politically.

Table : Researchers & Observations

Year	Researchers & Economists	Observations
1995	Sachs & Warner	More GDP contribution made by other industries than resource curse.
1997	Karl	Oil's paradox of plenty

Table : Researchers & Observations

Year	Researchers & Economists	Observations
1997	Sachs & Warner	Resource curse paradox created economic history for itself.
1999	Ross	Dutch disease & Resource Curse politically weaken governance and institution.
1999	Ross	Resource Curse causes risk of fluctuating market of resource commodities belittling foreign currency deposits value.
2001	Sachs & Warner	High Resource strength leads to slow economic growth.
2001	Sachs & Warner	Minimal natural resources give rise to high economic growth rates
2004	Larsen , E	Resource Curse and Dutch disease of similar traits, if avoided, will lead to good governance.
2005	Harford & Klein	Growing evidence of the problematic effect that exports of natural resources damage Governance & Legal System
2010	Perry	Resources wealth is negatively related to economic growth culminating into Resource Curse.
Note: Dutch Disease refers to the adverse effects on Dutch manufacturing of the natural gas discoveries of 1960s, in the Netherlands of appreciation of Dutch real exchange rate.		

In the post-independent Sovereign African countries, additional capacity to boost development and peace-building projects has been enabled by the blessing of Natural Resources. All citizen engagement in natural resources investment deals , operations and revenues helped to manage the space between communities, governments and companies on account of which the United Nations (UN) appreciated that the African States are best positioned to act for development.

The African Union (AU) is also looking to develop greater community participation in the extractive sector as it takes on more transparency for assertion of peace on the continent through initiatives for bolstering community empowerment around natural resources linking them to conflict-nipping in bud. Such community engagement leads to incremental social resilience with enhanced institutional coordination between companies, governments, private sector, public sector and communities without socially unwarranted tensions. Thus, from curse to blessing is a pointer to Africa's Natural Resources building Peace while natural resources development can generate economic prosperity.

The presence of Natural Resource is neither curse nor conflict-inculcator!

According to Prof. Wayne Nafziger of Kansas State University in the US, natural resources, by themselves, are not a curse.

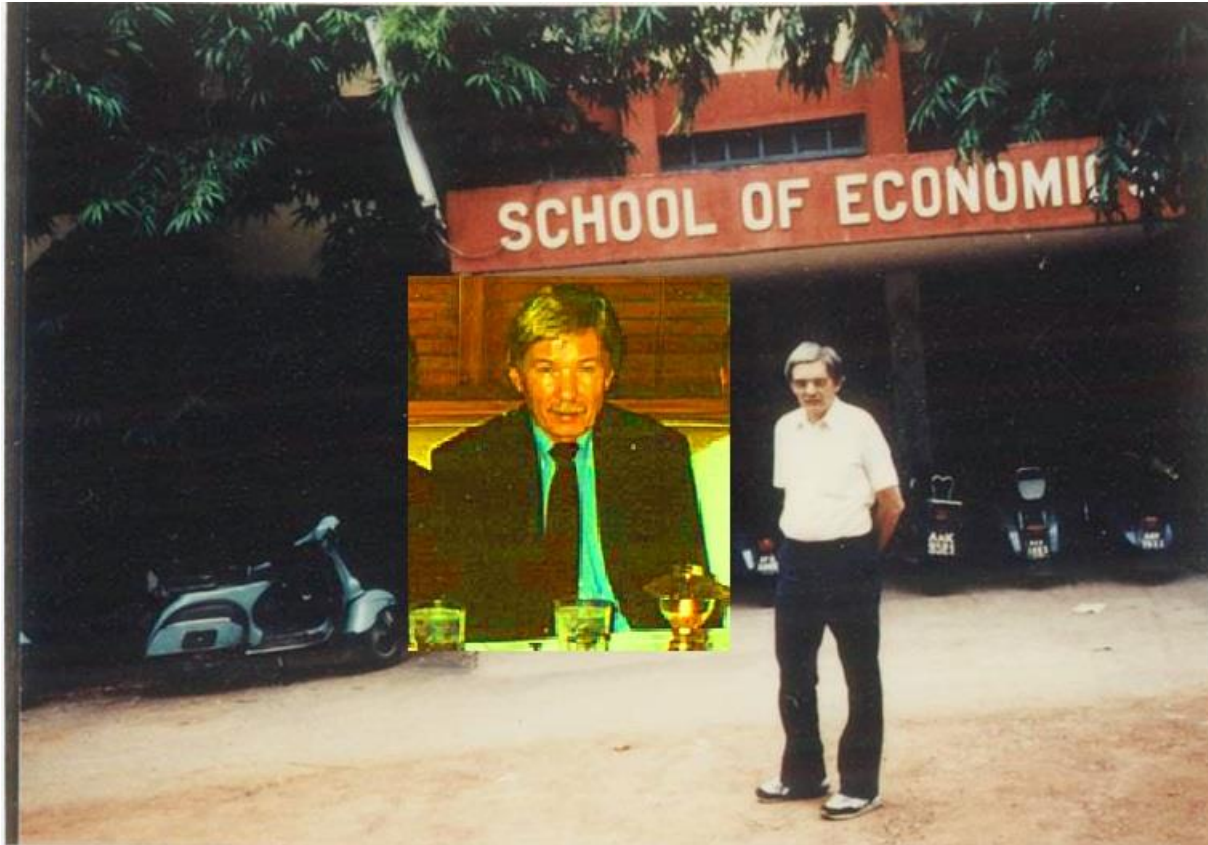


fig. Prof. Wayne Nafziger of Kansas State University, America

The Office of the Special Adviser for Africa (OSAA) in September 2007 emphasized that possessing diamonds or other minerals is not a curse citing as an example Botswana, a major African diamond producer, which is a “shining example” of good governance and judicious use of diamond revenues. OSAA issued an advisory : “Let’s stop blowing the gifts of nature and focus on what we’re doing with them.” The Under-Secretary-General of the OSAA added that “the curse is the people who abuse” natural resources . Also, the following named countries figured for consideration to know how they are put to hardship with respect to the problems and difficulties on account of the resource curse as well as Dutch disease , with the exception of Norway , Canada and Chile .

Table of experience of world nations

COUNTRY	EXPERIENCE
<i>Latin American Nations (Mexico)</i>	<i>Resource rich but suffered failure of resource-led development and resource-based sectors while commodity prices crashed in global market</i>
<i>South East Asian Nations (Korea, Taiwan, Singapore, Hong Kong & Japan)</i>	<i>Resource less but showed sustained growth @ per capita income during 1960s without reeling under the effect of vulnerable market of resource commodities , say, Petroleum</i>
<i>Switzerland & Japan</i>	<i>Tremendous growth in economy on account of non-resource based sectors</i>
<i>Russia, Whole of Africa , Nigeria in Africa & Venezuela</i>	<i>Lack of growth even though resource-led policy of economic development and victims of Dutch disease for being resource rich countries.</i>
<i>Norway</i>	<i>Economic growth with management of resource wealth succeeded called Norwegian Model of Sovereign Wealth Fund (NMSWF) and Resource Rent Use(RRU) .</i>
<i>Canada & Chile (Latin American Nations)</i>	<i>These countries beat the resource curse as contra example to the above</i>

Several Researchers and the Countries disclosed that there are four channels of transmission from abundant natural resources to stunted economic development, namely, Dutch Disease, Rent-seeking, Neglect of Education and Overconfidence across countries responsible for their economic growth varying inversely with the share of natural resources /capital in national wealth.

Africa's Special Natural Resources

Africa owns extraordinarily rich resources such as oil, natural gas, precious metals and mineral deposits which have been brought under the purview of the public domain by legislation by African elected people's representatives and law-makers to accelerate dynamic growth process of sovereign economy of the likewise developed countries elsewhere in World. That is to say, precautionary legal measures implemented to forestall the resource surplus and economic potential causing the paradox of curse of resource or other ethically unacceptable practices in resource management judicially paving the way for dislodgement of corruption, internal conflicts, armed struggles, societal rifts, military interventions and undemocratic malfunctions like staff-bribes and black money proliferation.

The Dutch Disease concept is set to explain the reasons for the underlined negative correlation between resource abundance and rate of growth. Despite the intellectual appeal and sound macroeconomic basis it accommodates, the Dutch Disease account of resource curse has generally been dismissed as being inconclusive. Additionally, the case of Africa has its own characteristics with regard to its social and economic structure, and geographical design and climate. Independent Africa cannot be confined in the 21st century to the limitations brought in by the Dutch Disease concept. North Africa has vast oil and natural gas deposits. The Saharan Africa holds the most strategic nuclear ores and resources such as coltan, gold, and copper which among many others, are abundant on the continent. African mineral reserves being globally valued are the top rated ones: Diamonds, Bauxite, Cobalt, and Phosphate rocks, Vermiculite, Zirconium and Platinum.

Africa has always been special because of the naturally endowed mineral wealth of the African soil and blessed with voluminous natural resources and minerals in certain lucky African country areas. Hence known to be a virgin continent as well as the Africa Home to substantial mineral deposits availability in the world and so we do find more African located and African situated flourishing mineral industries management in the world.

Natural Resources support African Prosperity

The democratic popular Governments of African States that are blessed with these minerals use them as a tool to better their economic prosperity through mineralization process industries and serviced by domestic African exporters. The African nations with the most mineral deposits have fared well with the treasures of these resources arising from the interaction between institutions and natural resources showing that better lawful institutions make resources more conducive to economic growth. This implies that institutional development eventually made the Africa-specific curses including the Dutch Disease dilute and vanish in terms of institutional quality of the legal arrangements disciplining the activities of the private sector and its interactions with the public and priority sectors based on legal systems with enforcement of property rights and social laws of limitation.

Terminological Resource Curse *vis-a-vis* Paradox of the Plenty

The resource curse (RC) refers to a situation whereby a country has an export-driven natural resources sector that generates large revenues for government but leads paradoxically to economic stagnation and political instability. It is commonly used to describe the negative development outcomes associated with the non-renewable extractive resources (petroleum & other minerals). Essentially, the RC refers to the inverse association between development and natural resource abundance.

It has often been asserted that petroleum, in particular brings trouble –waste, corruption, consumption, debt overhang, deterioration, falling apart of public services, wars and other forms of conflicts, among others. Thus, natural resources abundant countries tend to grow slower than expected—considering their resource wealth ---and, in many cases, actually grow slower than resource-scarce countries. A common thread in explaining the RC is the central role of government behavior. It means how governments administer resource wealth and how they use revenues out of natural resources. Historical accounts indicate that natural resources booms do not always worsen economic performance and can indeed catalyze economic transformation.

Take for example, the resource boom that led to growth expansion as demonstrated in the case of European industrial revolution's industrialization, the new economies of Australia, Canada & America and tropical subsistence agricultural economies without manufacturing.

Today, resource-rich countries like the United Arab Emirates, Kuwait and Qatar are using revenues from their resource wealth to construct mega cities out of desert land, thereby also generating considerable down-and side –stream economic activities and additional incomes. These countries have also undertaken large-scale foreign investments which not only promote economic development but also foster inter-generational equity. The key-point is that the often referred to natural-resource-curse can be avoided with the right knowledge, institutions and policies.

The African evidence of the RC pointed out the paradox of the plenty indicating that political and social factors enabled some resource-abundant countries to utilize their natural resources to promote development and prevented other resources-abundant countries from doing the same. The management of natural resources stunted the growth and development prospects of many resource-rich African economies. The volatility in the export value reduced contribution to volatility of growth in gross domestic product per capita and to growth and development in general. Therefore, the natural resources' abundance in Africa alternated between a curse and a blessing.

Dissection of Africa's Natural Resources

Africa's rich natural resource endowment has long been at the heart of both the continent's many violent conflicts and its hopes for prosperity, so the stakes are high. The resources ranging from farmland and forests to the oil reserves, mineral deposits and its waters have been the subject of endless research, debates, conflicts, novels and movies.

The African Charter on Human & People’s Rights notes that all peoples should freely dispose of their wealth and natural resources. Natural resources governance will explore the African-led solutions to the complex natural resources challenges. African countries will be better able to leverage their natural resources for inclusive and sustained growth. See the types of natural resources.

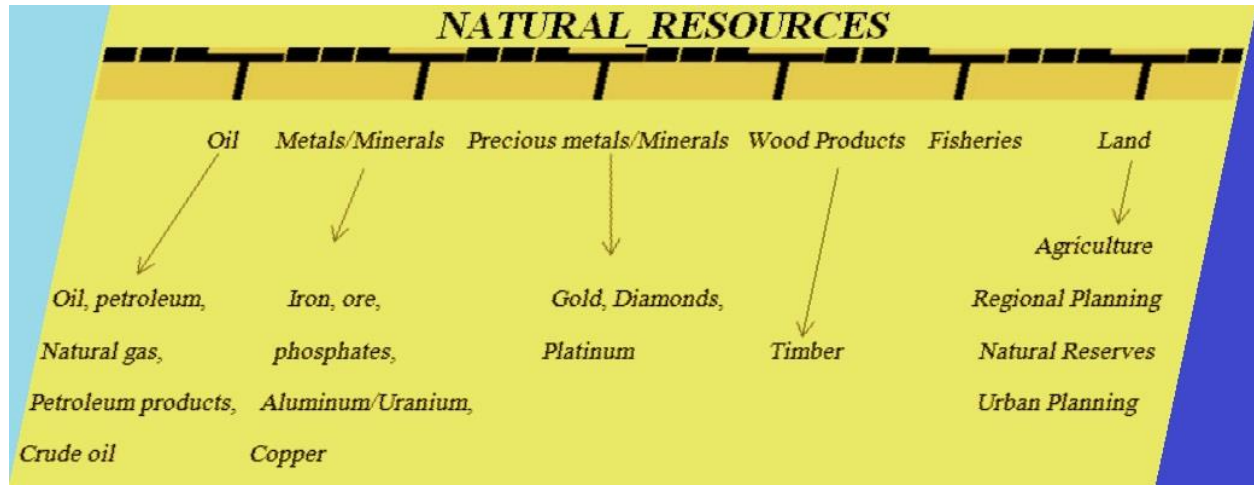


fig. Africa’s natural resources

Africa has significant natural resources wealth and in that it has challenges and opportunities also. Africa is home to the three magnanimous assets in the natural boundaries as seen below.

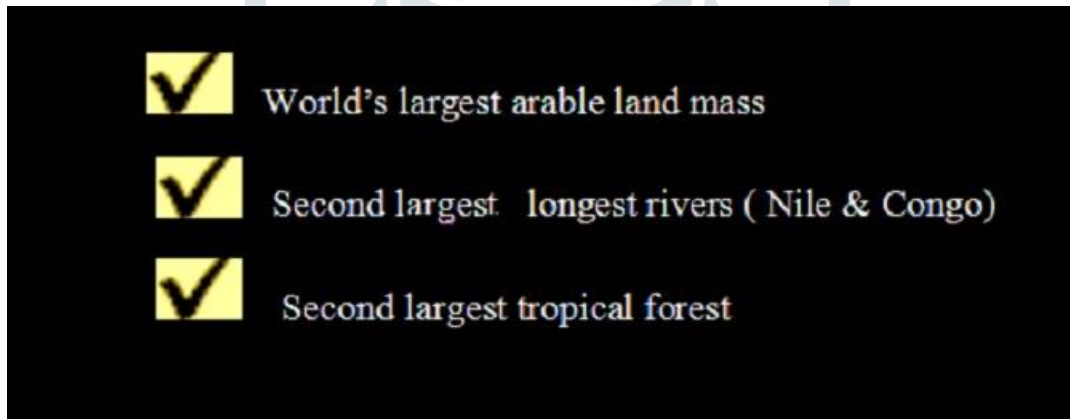


fig. Africa’s natural magnanimity

Natural resources statistics in conjunction with Africa Development Report of 2007 are indicative of the following scenario.

African mineral reserves ----- 3% of global reserves

African natural gas reserves ----- 7% of global stock

African Oil reserves ----- 8% of global stock

African mineral exports ---- 7% of total African exports & 28% of GDP of Africa

African Fisheries & Acqua culture’s total value -----US\$ 24 billion

Table of Africa Development Report -2007

AFRICA DEVELOPMENT REPORT ----2007	
Classification of African Countries	Annual GDP growth Rate (1981-2006) %
Resource Rich countries (oil & mineral exporters)	2.4
Coastal (resource rich & resource scarce) Countries	2.8
Resource scarce countries	3.8
Land locked countries (resource rich & scarce)	3.3
SANE (South Africa , Algeria, Nigeria, Egypt known as the largest economies in Africa)	3.0
Africa as a whole	3.00
Growth performance of Resource Rich countries in comparison to Resource scarce countries , is lesser.	2.4 < 3.8 by 1.4 % points

In most African countries, natural capital accounts for between 30 per cent and 50 per cent of total wealth. Over 70 per cent of people living in sub-Saharan Africa depend on forests and woodlands for their livelihoods. Land is an economic development asset as well as a socio-cultural resource. A significant share of these resources is, however, used unsustainably while others are lost through illegal activities, meaning that the stream of benefits generated from these resources is being reduced over time. For instance, Africa loses an estimated \$195 billion annually of its natural capital through illicit financial flows, illegal mining, illegal logging, and illegal trade in wildlife, unregulated fishing, environmental degradation and loss among others.

Collectively, the continent has a lot to gain in pulling together and harnessing its vast natural resources to finance the development agenda towards greater prosperity; and it must also ensure that future growth and exploitation of natural resources is results-oriented, climate resilient, and sustainable.



fig. Africa's natural green grassy soil & natural oils



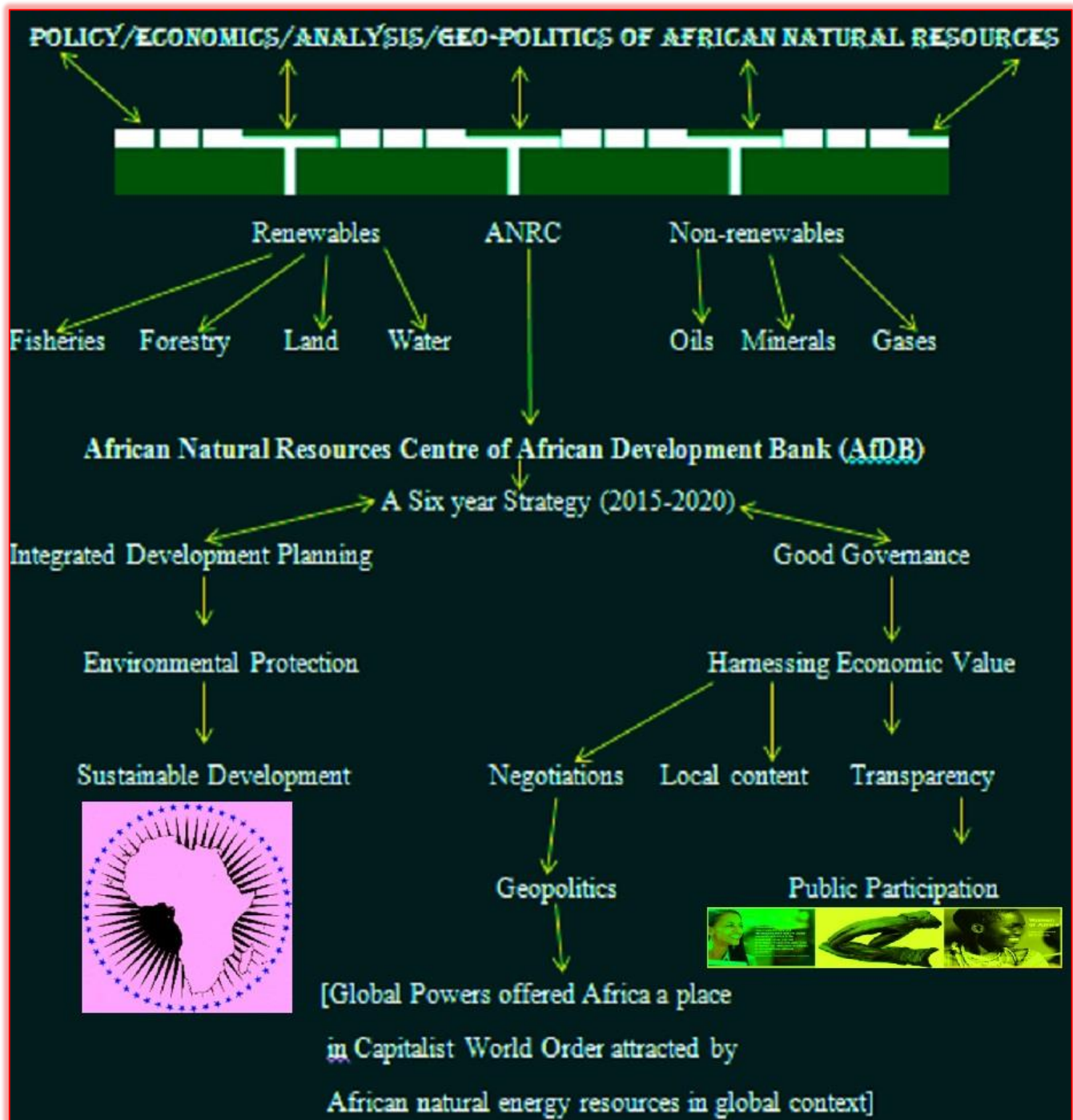


chart. African natural resources Policy & Political analysis self-explanatory



chart . strength of Africa's natural resources in global stocks

In the comprehension of paradox of the plenty, natural resource is a source of public revenue , national wealth and income and subsistence for large segments of the African population. Many African countries are in low-income trap suffering from poverty all around despite natural resources endowment abundance in Africa.

Particularly, oil resources and other point-resource-dependencies with wrong policies and programs have led to the present scenario of poverty. To reverse this poverty , the only way out is optimisation of use of natural resource booms (a rise in realized natural resources exports to GDP of at least 4% of GDP from beginning to the peak of the boom with a duration of 3-years at least) which catalyze growth with transition from cottage industries and/or factory production to labour intensive manufacturing bases and giant industries. For this purpose , implementation of growth-promotion policies and strong institutions should be put in order , let alone the policy of a few mineral-resources-exports and narural resources boom of limited dynamics. Also, resource-rich parts of Africa needs dynamic diversification. In Africa , with respect to oil, gas and mineral revenues, inflows are curse rather than blessing because of failure of natural resources wealth without expected growth which is due to the following economic factors.

- Role of the State
- Socio-cultural and political impacts
- Tensions between oil-producing and non-oil-producing regions within country
- Inflexibility in Labour , Product and Asset markets.
- Volatility of prices and asymmetry of adjustment --- public expenditure ramp up.
- Rent-seeking by elites and others without applying their energies to profit-making activities.
- So-called Dutch disease syndrome of rising real exchange rates and wages throwing out pre-existing export-import industries.

The above economic factors are also classified into exogeneous and endogeneous causes as well as a combination of both exogeneous and endogeneous nature as seen in tabulation hereunder.

Table-exo-endo causes

EXOGENEOUS CAUSES	ENDOGENEOUS CAUSES	COMBINATION OF EXO- ENDO-GENEOUS CAUSES
Structuralist Policies	Policy failure	Role of the State
Dutch Disease	Inefficient investment	Socio-cultural and political impacts
Export-based Theory	Rent-seeking	Crowding out effect and Dutch disease
		Revenue and macro-economic volatility

African Economy in the global context described as “ The Political Economy of Africa’s Natural Resources” . Over the last two decades , Africa’s political economic importance is on rise. Its energy resources have attracted global powers called boom-and-bust cycles of their interest , signalling Africa’s place in a capitalist world order with ambiguities and negative consequences historically. Exploitation of energy resources promoted in win-win terms , i.e ., beneficial to Africa and outsiders’ consumption. The global reflex is Africa’s natural place in the global order reinstates Africa in that order. A Guyanese historian , Walter Rodney claimed that foreign ownership of African natural resources is the most direct way of rich countries continuing to dominate African States without formally colonizing them. African oil takes growing importance , mainly after the 2015 oil crisis and nascent oil discoveries. Some economists have talked about the scourge of raw materials , large quantities of rare raw materials putting Africa under heavy pressures in this uncertain and complex world leading to wars and slowed down development. The African ore resources are abundant and extremely more so as other continents are beginning to face depletion of resources. However , the all-time important research questions prevail in respect of accelerating or decelerating resources endowment pressure in nature underneath the earth’s plates as read below.

- ❖ How all resource-less countries do not have resource-curse ?
- ❖ What happens when the resource-rich are not self-sufficient in non-resource-sectors ?
- ❖ Why many resource-rich nations do not bother about non-resource sector development ?
- ❖ How many times and how long the resource-curse recurs ?

9. Transformation of Production

Since the primitive times, throughout Africa, communities such as the “Pygmies”, had their economic (which means pertaining to the production) organization in the forests by exchange of goods from ‘hunting and gathering’ for the ‘agricultural produce’ of sedentary tribes.

Thomson , Wilmsen , Earle and Ericson , Ericson and Torrence claim that “ even “with hunters in a world of hunters” , exchange was part of social life “ (Thomson 1949 ,Wilmsen 1974, Earle and Ericson 1977, Ericson 1977 , Torrence 1986 cited in Jacqueline S.Solway and Richard B.Lee ,1997 , pp284) .

It has been said that “ exchange is a fundamental part of human life and appears in all cultural settings ” (Mauss 1925 , Levi Strauss 1949 , cited in Jacqueline S.Solway and Richard B.Lee ,1997 , pp284) .

Leacock and Lee reported that “ hunter-gatherer peoples have participated in exchange with farming and market societies for hundreds of years (in India, South-east Asia , and East Africa) while maintaining a foraging mode of production “ (Leacock and Lee 1982 ,cited in Jacqueline S.Solway and Richard B.Lee ,1997 , pp284) .

According to Catherine Coquery-Vidrovitch (1997, p.129), “until recently, African traditional societies have generally been studied in isolation and with emphasis on the particular “but not on the African mode of production. Further , she says that “ Economic anthropologists are only just beginning to understand the kinship structures of subsistence societies , but by concentrating on the fact of subsistence , they have underestimated the importance of the organization of production ...“.

E.E.Evans -Pritchard (1997, p.31) affirmatively concluded that “ the world ,peoples and cultures all existed together from the same remote past “ and so , it is my vision for the purpose of this investigation on the transformation of production in African Continent that transformation must have been to a non-measurable extent suffered from the influence of the remote-controller ‘past’ . I deduce then and therefore, just like human beings cannot escape the ‘past-present-future’s’ inseparable-bond-settings, the transformation of production too is a phenomenon bound by the similar settings. So, the importance of the organization, transformation, conversion and modes of production lies in the realization that the African traditional societies were, indeed the ‘beginners & starters’ (before all the other ‘arrived later’ Societies after them), of many organized ways of production with elementary methods of exchange and division of labor in such places which were usually called visiting local food markets by investing their natural traits of control, discipline and mutual trust factors in tribal life. Obviously and aptly, African Continent has been called, as per the Sciences of Social & Economic Anthropologists, the motherland of the human race.

It is asserted that the “Black Africa is the one place in the world where agriculture was least liable to produce a surplus. Agriculture and craft techniques were particularly rudimentary (no wheel nor plow: the only tool was the hoe). The necessity of improving production with the aid of new tools or large public works was never felt “(Catherine Coquery-Vidrovitch, 1997, p.136).

My investigation here is but limited in sense and content to present the transformation of production in its broadest scope of usage of Engineering and Technology appliances and implements available in the present state of global knowledge but not relates to the African mode of production as a general plan of the African Societies, in Africa. The main is that the African economy (which means pertaining to the production) has been growing by diversifying the production with the help of upgraded technologies throughout. Greater education, improved communications and the shifting of people from the slumbering traditional rural sector of the economy to the vibrant modern industrial sector of practicing technologies ensured transformation of production in Africa. A new economy-oriented consciousness underpinning progressive production-transformation with expanded facilities by agricultural programmers allowed the Continent to skip recurrence in the evolution of sentimental past for a blessed transformation of production by modernization to the pursuit of economic development transcending the African continental borders making the 21st century an African Century.

Now, the following are two case-study-exemplary mode investigations to highlight the transformation of production in Africa in the present 21st century.

Transformation of African Iron-production technologies

Iron production was a particularly important pre-colonial African technology, with iron becoming a central component of socioeconomic life in many societies across the African Continent

At some point in the first millennium (BC), evidence for iron-smelting technologies began to appear in several core regions (eastern Africa, and the northwestern Sahara). The ability to obtain iron metal from an ore through smelting-technologies spread to all corners of Africa like a revolution. Prior to the development of smelting technologies that could extract iron metal from an ore, iron was available only in isolated naturally occurring forms, predominantly nickel-rich meteoritic iron in areas of the Nile Valley and the Red Sea coast. This “iron from the sky” was highly prized, appearing in the archaeological record almost exclusively in burial contexts.¹

Iron has played a significant role in the socio-cultural, economic, and environmental spheres of many African communities, past and present, not only for utilitarian items, but also in the creation of symbolic, artistic, ornamental, decorative and ceremonial objects.

Explorations of iron production technologies are well suited to understanding the material demands and needs of past populations and past craftspeople. The archaeological remains found on iron production provided detailed information about the past production technologies.

Iron became and remained a highly valuable material in those communities that produced and used it. The malleability and strength of iron—transformed into tools, weapons, jewelry, or something else entirely—meant that the control of iron production became embedded in negotiations of power and prestige, and iron became a cornerstone of social, economic, and political life. Certainly, by the end of the first millennium AD, iron had become an everyday material across most of the continent, important not only for its physical properties and applications in agriculture and domestic life, but also for the symbolic role it played in the rituals and customs of many African societies.

In modern times, microscopy used in Africa is the primary means for iron production and iron-working technologies used in Africa.

Experimental archaeology and reconstructions of iron technologies have played a significant role in the development of iron production technologies operated in the real world.

Transformation of African Agricultural Production Technologies:--

The twenty-first century's game-changing technologies saddled in Africa currently are the dynamic force in the African agricultural production's transformatory catalysis.

Artificial intelligence and machine learning – when combined with satellite and drone imagery, the internet of things and spatial analytics – are revolutionizing how accurately farmers can treat their crops and optimize harvesting opening up the potential for much more precise crop protection and tree care. The pace of digital transformation in African agriculture enabled Africa leapfrog the rest of the world. With world-class technology platform in Africa, the potential of well-knit technology agribusiness networks across Africa has brought fame and name to the Continent that it is rising in the 21st century.

Technologies for African Agricultural Production Transformation are essentially knowledge and innovation based response to the recognized need for scaling up proven technologies across Africa. Technologies for African Agricultural Transformation (TAAT) provides the needed, proven agricultural and food processing technologies.

TAAT's approaches revitalize and transform agriculture while restoring degraded land and maintaining or strengthening the ecosystems that underpin agriculture, while modernizing and more fully commercializing agriculture. It has been estimated that overall TAAT will lead to 120 million tons of additional raw food production per year. It is a Regional Technology Delivery Infrastructure (RTDI) made up of the National Agricultural Research Systems (NARS), represented by their continental umbrella, the Forum for Agricultural Research in Africa (FARA), African Agricultural Technology Foundation (AATF) with an emphasis on agroecological zones and their priority commodities.

The principal implementation units of TAAT are Commodity Technology Delivery Compacts (CTDC), a platform of all actors in the seed, primary production, and primary processing components of agricultural commodity value chains. Clearing house is the decision making body of the RDTI when it comes to selecting which technologies to disseminate and scale up. The objective of the Clearinghouse is to decide which proven agricultural technologies proposed by each Crop/Livestock compact group can be rolled out and taken to scale.

Scientists are calling for technological transformation in how Africans undertake agricultural production to help improve food security on the continent. The scientists emphasize speedy progress in the Agric sector over the years and encourage willingness of stakeholders to embrace fresh innovations, which they say desirable change.

A high level achievement on application of science, technology and innovation in harnessing African agricultural production transformation has already taken place to so continue. The Ministry of Science, Technology and Innovation of Uganda and the African Agricultural Technology Foundation (AATF) took up the theme: "Integrating

the path in Africa's agricultural transformation", with Scientists, civil society representatives and government officials across the continent on the technologies applied to help transform agriculture on the African Continent. Africa spends more than \$35 billion importing food every year, although the continent has the capacity to produce a lot of the imported foods. This is because more than 70 percent of the workforce on the continent being engaged in agricultural production for their livelihoods. Africa believes in the adoption of technological innovations can help fix all problems giving rise to appropriate timely solutions adding that it is their responsibility to deliver Africa out of starvation, hunger and poverty by encouraging to invest in and adopt science. Advances in agricultural technologies and biosciences, in general, are immense, thanks to the convergence of crop science, biology and chemistry engineering and digital technology.

Encouraging signs of growth in Africa heralded development era of rapid transformation of production. In an effort to promote the future success of African transformation, the traditional production practices are sidelined in preference to the transformation practices in African States. Success vitally depended on agricultural development and the African public support for agricultural transformation and the recognized development challenge. Transformation also depends on industrialization strategies and Africa's winner-picking industrialization helped other aspects of transformation like home-grown and export-oriented industrialization led by private African entrepreneurs.

10. Imports & Exports

The production for Exports & Imports

Let us appreciate and understand that the Online Dictionary (1995) defines trade as the act or an instance of buying and selling goods and services either on the domestic (wholesale and retail) markets or on the international (import , export and entrepot) markets .

The Africa trade is dominated by diverse natural resources that the continent enjoys in abundance. Countries such as South Africa represent the higher side of the spectrum of production for exports and imports whereas regions such as Burundi have the least trade volumes and Africa trade represents extremes (Economy Watch Content, 2010). According to the African Development Bank's Annual Report -2014, the extractive sector accounts for over half of Africa's exports and in some African countries up to 90%.

Africa is the only African Continent that tends to be monitored and appraised for judgment as the singleton entity barring variational differences between insider-African-States' trade groupings and/or partnerships with their collective past-present-future export and import production situations . The Role of African Trade has its bonafide beneficent and certified share of global exports and imports as per the International Organization, the UNCTAD (United Nations Conference on Trade and Development) established in 1964 as permanent intergovernmental body.



fig. UNCTAD Bldgs

Africa Trade: Exports: -- Botswana and South Africa are two biggest exporting countries in Africa. South Africa is the world's biggest producer of gold as well as diamonds. The main exported commodities of African nations are Palm oil, Gold and diamonds, Oil, Cocoa, Timber and Precious metals. Oil export has been the main stay for many

economies. Nigeria is one of the world's largest oil reserves and Africa's largest oil producer. With its resources, Nigeria can produce 3.2 million barrels/day. However it only produces an average of 2.21 million barrels/day. In the last two decades, countries such as Sudan, Angola, and Equatorial Guinea have also benefited due to their oil exports.

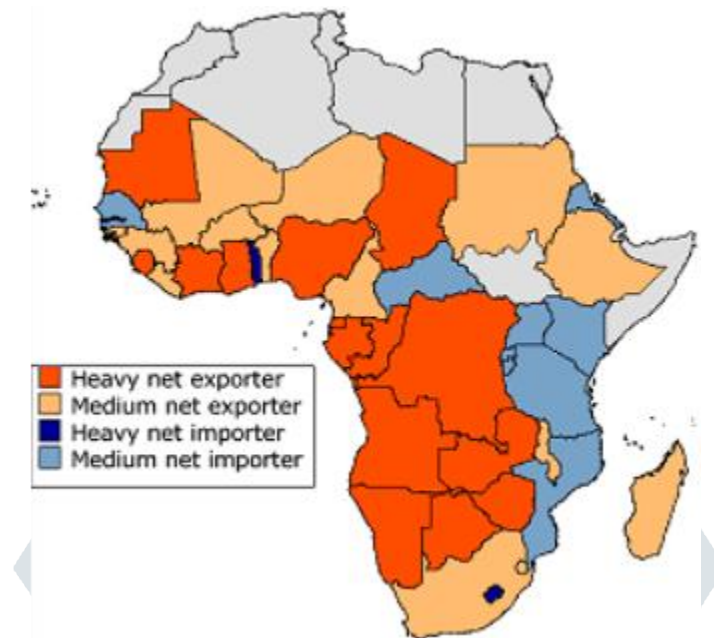


fig. Africa in area potential in exports & imports

Africa Trade: Imports: -- Africa struggles with food items and basic facilities. It is often under the grip of internal outbreaks, leaving less scope for infrastructural or administrative change over. Therefore, African imports feature medical supplies as well as food items. The main imported commodities are machinery and equipment, Chemicals, Petroleum products, scientific instruments and foodstuffs. Machinery and equipments imports have become a regular as the region is trying to uplift its productivity and make use of the vast resources. However, the imports are limited to nations that have a decent level of consumption.

Overall, Africa trade has been helped enormously by other such as Germany, Japan and China that have not only invested a lot in the emerging countries but have been regular African trade partners as well.

The Economic Community of West African States (ECOWAS), is regional group promoting economic integration among Benin, Burkina Faso, Cape Verde, Cote d' Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal and Togo . As a trading union, it is also meant to create a single, large trading bloc through economic cooperation. Integrated economic activities revolve around industry, transport, telecommunications, energy, agriculture and natural resources.(ECOWAS 2016 , Basic Information , paras 1-11)

In relation to the Sub-Saharan Africa, Rabo Research - Economic Research (2015, paras 1-2) indicates that the Sub-Saharan Africa has made good progress since its designation as the 'hopeless continent' by The Economist in May 2000 and also, the Sub-Saharan Africa is still one of the world's fastest growing economies, mainly driven by public infrastructure investments, increased agricultural production and the services sector.

11. Consumerism

The triumph of consumerism

Attachment to materialistic values or possessions is the universal definition of Consumerism.

Africa is the second to none ancient civilization from Hunter-Gatherer to Tribe to Ethnicity to Modernity, gradually evolved into making Kinships and Social Organizations with Economics as Life's Culturally Living System in the African Nations as well as the salient feature of the African Nationalism in the matters of attachment to the materialistic values or possessions fundamentally by the African people.

Africa's preoccupation with emphasis on consumerism must have been domestically localized and internalized firstly and then must have been got externalized via sea-routes and became global assuming global proportions of the World's overseas-trade off the shores of African waters and as for instance , with the African-Americans elsewhere proclaiming themselves as the African American society in the 1920s expressing a strong sense of cultural identification as Afro-Americans cultivating Afro-centrism .

Therefore, it is quintessential to learn that the ill-disputed and undeniable way of the motherland of human race, i.e., Africa's political-economic existence with attachment to materialistic values or possessions is the most perfect embodiment of the triumph of consumerism from times immemorial.

According to Karen Tranberg Hansen (2009, p.155), since the second half of the 19th century, coastal East Africa has become the regional focus for consumerism and in fact , domesticated the World!

“Domesticating the World: African Consumerism and the Genealogies of Globalization draws on Jeremy Presholdt's doctoral research into the history of consumer dynamics in societies along the East African coast. He argues that African consumer desires played an important, but not well understood, role in global integration during a period of dramatically increasing regional and transoceanic interaction. In effect, before the onset of full-blown colonialism, demands for imported goods were more often driven by local desires than by manufacturers' assumptions about consumer needs. East Africa's deep histories of global connections were shaped by complex economic reciprocities that were unsettled by colonial intervention (Jeremy Presholdt. Berkeley: University of California Press, 2008) “.

Also, the international terms of trade for commodities were often in East Africa's favor during the 19th century. The desire for particular types of printed cloth affected production of textiles both in Salem, Massachusetts and Bombay, India, where manufacturers had to cater to rapidly changing East African tastes. Several kinds of trade goods often had to be refinished or remade in Zanzibar which being the commercial center & seaport for cloves and copra , other coastal cities, inland, or on the caravan trail in order to appeal to local consumers . Goods from foreign places affected Zanzibar at a time when new cosmopolitanisms influenced people's ways of seeing and understanding their place in a rapidly changing world. By the 1860s, vessels from all over the world stopped in Zanzibar, carrying a wide variety of goods. Most of the imported goods were destined for public display rather than for utilitarian purposes.

Domesticating the World is wide-ranging and of the importance of consumption for coastal East Africa's connections with the wider world during the second half of the 19th century at a brief historical moment when local demand shaped external reactions. There is no doubt that this is the then stimulating and original form of the ancient African Globalization in trade to beginwith proving the ancient alternative genealogic era of globalization of trade , commerce and business .

Scott and Marshall (2005) argue that global culture is brought about by varieties of social and cultural developments which include the emergence of global patterns of consumption and consumerism. This implies that the trade, commerce, industry and businesses at any given time cannot be confined to pre-fixed localities or interiors or peoples of one Nation alone and always within the continents but these surely get dispersed (like seed dispersal by flying birds !) far and wide across the Globe as a matter of sharable and divergent patterns of internal and external consumption and consumerism potentials and hence , global patterns of consumption and consumerism prevail .

Even geo-politics is often dismissed as an illegitimate form of knowledge or an imperialist idea or an unscientific subject or a war-time propaganda or a psychological pressure but the triumph of African consumerism with roots in ancient African times cannot be sidelined and marginalized for the reason of non-critical and non-classical but popular cultural consumption of Film-productions , Televisions, Radios , Internet and electronic or printed Journals and Publications of modern economical and technological times have found their niche, influence and respect throughout the 21st century's independent and democratic African nations .

One can witness to his or her heart's content the existence of world satellite information system, the cultivation of cosmopolitan life-styles, the emergence of global sport, the spread of world tourism and global military systems as the triumph of consumerism in Africa in the wake of rise of Africa on the global stage triggering progressive signals for the 21st century emerging as Africa's century.

The liberated and politically broad-minded free African nations also felt that the World is shrinking into a global village with unique global equality. The technological story in terms of computers, the nuclear energy, the solar energy, the wind-mill-electricity, the dynamo-generators, talking-tablets, wireless-printers etc., as the cornerstones of information-technology and information-age have found their home all over Africa due to the abundant availability of the African materials used and African intellectual population's voluntary and participative contribution to the high levels of consumption existed leading to the consumerism's grandeur.

It is no exaggeration to say that the cyber-space driven virtual world economy of the 21st century globalized the African consumerism such that each State in Africa expanded consumer-relationships outside Africa dominating international dynamics and acquired credit to the triumph of consumerism in African yardstick of trend-setters. Many multi-national corporations are now in South Africa and new technologies with expansion of trade and transnational consumer regimes facilitated global movement of African consumer services making markets in Africa open and inclusive for outside consumers in this world of consumerism. Consumer spending across the continent amounted to \$1.4 trillion in 2015, with three countries—South Africa, Nigeria, and Egypt—contributing more than half of that total. Food and beverages still constitute the largest consumption category, accounting for as much as one-third of Africa's household spending in 2015 (and close to 40 percent of household spending in lower-income countries such as Ghana, Kenya, and Nigeria), but discretionary categories already make up a substantial share of consumption. Spending on nonfood consumer goods—including clothing, motor vehicles, and household goods—accounts for a further 15 percent of consumption. However, due in part to currency devaluations and a sharp downturn in oil-exporting economies, spending growth has slowed. Out of the 15 largest consumption markets in Africa, which constitute 90 percent of the continent's total consumption, 12 experienced a slowdown in consumption growth between 2014 and 2015—the exceptions being Ethiopia, the Democratic Republic of Congo, and Tanzania.

Consumerism African outlook to 2025

These following factors bode well for the continued growth of Africa's consumer sector.

Consumer spending in Africa is projected to reach \$2.1 trillion by 2025.¹The following strong structural fundamentals are in place to drive the consumer opportunity:

A young and growing population: -- The continent's population is projected to grow by 20 percent over the next eight years, with Africa's youth making up 40 percent of the total. By 2025, almost one-fifth of the world's people will be living in Africa. This population growth is accompanied by falling dependency ratios and an expanding workforce: the size of Africa's working-age population is expected to surpass both India's and China's by 2034.

Rapid urbanization: -- By 2025, an additional 190 million people in Africa are expected to be living in urban areas, which means that about 45 percent of the population will be urbanized by then. City dwellers are voracious consumers: per capita consumption spending in large cities in Africa is on average 79 percent higher at the city level than at the national level. Cities in Kenya and Nigeria, for instance, have per capita consumption rates that are more than double the country rates. The top three cities in Ghana and Angola will account for more than 65 percent of national consumption spending in each of these countries.

Rising incomes: -- Since 2005, increases in spending per household have been responsible for about 40 percent of consumption growth in Africa. By 2025, 65 percent of African households will be in the "discretionary spending" income bracket (earning more than \$5,000). Consequently, the profile of goods and services that Africans purchase will shift, from basic necessities toward more discretionary products.

Widespread technology adoption: -- Technology is opening many new doors for consumers. Mobile money, for instance, is growing five times faster in Africa than in any other region. By 2020, half of Africans—up from 18 percent in 2015—are expected to own a Smartphone, which they can use to buy and sell products and services, pay bills, and make remittances. A study in Kenya found that families with M-Pesa mobile money were able to withstand

financial shocks (such as illness) without reducing their consumption, because they could borrow money electronically from friends and family. The success of e-commerce company Jumia—colloquially referred to as “the African Amazon.com”—is partly due to the fact that it accepts mobile payments, allowing even Africans who don’t have bank accounts to make purchases. E-commerce and m-commerce offerings are partially leapfrogging formal retail while e-commerce could account for 10 percent of retail sales in Africa’s largest economies by 2025.

East Africa’s share of consumption is projected to rise from 12 percent in 2005 to 15 percent in 2025; Francophone Africa’s, from 9 percent to 11 percent. Meanwhile, South Africa’s share is projected to decline from 15 percent to 12 percent over the same period, and Nigeria’s, from 26 percent to 22 percent. But given that Nigeria will still account for more than a fifth of African consumption, consumer companies can’t afford to ignore that market, even amid challenges in the business environment.

Let us also have an illustrative example from the McKinsey Report (World’s most prestigious management consultancy ‘McKinsey’) on the rise of African consumer hereunder. The single-largest business opportunity in Africa will be its rising consumer market. The McKinsey Report, one of the first of its kind, offers knowledge on consumerism. Most investors and businesses know about the tremendous potential of Africa—the world’s second-fastest-growing region. But it may come as a surprise that Africa’s growth is fueled not by resources but rather by a rising consumer market.



fig. Consumerism’s triumph

The African continent’s consumer-facing industries are expected to grow by \$400 billion, representing its single-largest business opportunity, by 2020. But many companies don’t know how to translate this potential into action, because of a dearth of market research. That, however, is changing. In one of the first studies of its kind, McKinsey’s Africa consumer Insights Center surveyed 13,000 consumers in ten Africa countries, with a focus on the largest cities. Five categories of consumption were covered: apparel, financial services, groceries, the Internet, and telecommunications.

Several factors are shaping this new consuming class Africa’s population, the fastest growing and youngest in the world, is concentrated in urban areas. This new class of consumer has a smaller family, is better educated and higher earning, and is digitally savvy. Africans are exceptionally optimistic about their economic future: 84 percent say they will be better off in two years.

These new African consumers resemble their urban counterparts anywhere in the world: they are both brand and quality conscious, seek out the latest trends but watch the budget, and want a modern and attractive shopping environment.

But Africa is a complex, nuanced market of 54 countries and more consumers in the north have preferences very different from those in the sub-Saharan countries and thus, a new consuming class. Cities offer the best opportunity: urban Africa is forecast to contribute nearly 40 percent of GDP growth. High-profile megacities, such as Cairo, Johannesburg, and Lagos and there are mid-tier cities, like Abidjan and Rabat, which are more accessible and offer better profit margins. Africa remains a high-potential region for concentrated growth, markets and income segments with win-win attitude and approach to situations for consumerism and African indigenous companies and multinational corporations indulging in large-scale data-driven approach skills. Just a few years ago, consumer spending in Africa passed the \$1 trillion mark. The continent's impressive growth trajectory, in particular, the robust growth in Africa's 30 largest economies, caught the attention of consumer businesses worldwide. Indeed, the consumer-facing sector has been pivotal in Africa's growth story accounting for almost half of the continent's GDP growth between 2010 and 2014 with credit to be given to the burgeoning consumer sector.

12. Globalization

Any account of globalization touches on a number of ways to do global IPE (International Political Economy) better with globalization studies such as comprehending without apprehension, the term 'Globalization', daring to ask a question like whether Africa is globalized in international economy and if so, why and what for??

Globalization and African Sovereignty

Globalization is an objective all-embracing process. This began with the breakthrough of capitalism in some countries of Western Europe, notably England, in the early decades of the 19th century. From almost its inception, it developed along with colonialism and during the progress of the century, blossomed fully as the Imperialism. The globalization process of that period aggravated exposing the socio-economic and socio-technical inferiority of the pre-capitalized systems prevalent in the larger part of the whole world. An important part of that exploitation was the literal ruination of the productive forces of the countries who were its objects including the direct producers. It was against such globalization that the national revolutions of the colonial Africa, semi-colonial and dependent countries was directed. Even before the victory of these revolutions, the globalizers had to beat a retreat and effect compromises.

In order to end the exploitative globalization, an attempt was made from the mid-1960s by struggle for a New International Economic Order (NIEO) by some developing countries, including Africa. They also held the view that globalization in itself did not mean the end of national sovereignty, i.e., the traditional concept of the Sovereignty of the State. However, a question might arise as to the phenomenal globalization of the present days affecting or bound to affect the traditional concept of the Sovereignty of the State. The so-called cyberspace-driven virtual world economy of the 21st century impacted and influenced the African material and intellectual population with the pervasive nature of globalization for closer integration of the African economy with international economy as well as the international political themes after the end of the cold war period.

Africa & Developed World & Global Village

The contemporary world has qualitatively changed as a result of the Soviet Union's disintegration and defeat of planning by the market. The disintegration of the Soviet Union has not ended the post-Vasco da Gama epoch of History. It has not restored colonialism in Africa but it has reawakened imperial ambitions. The new levels of economic and communications' globalization in Africa have produced new pressures but these are not only on those of the Nations in Africa which have been historically the objects of exploitative globalization. The African lack of and need for the products of the scientific-technological revolution, still largely confined to the developed world makes them vulnerable. The African unity and integrity can only reach their goal by striking the balance or dynamic equilibrium between self-reliance and globalization. The assaults on national sovereignty by the globalists are, not all of whom, of course, ill-intentioned. Ecological problems, the need for interdependence and the requirement of

collectively combating terrorism and injustice, demand economic and technological globalization's integration with globalization of sovereignty of African Nations. Thus, Africa is globalized in international economy. Each State in Africa expanded its relationship inside and outside as part and parcel of globalization which concept draws the State's attention.

'Africa in the global village' was said so since the politically free and liberated African nations felt that the world has shrunk into a global village with global economic equality. The advantage accrued to Africa in the international political economy is when the world has gone through a swift process of globalization whereby States and Corporations converged in the direction of an eventual seamless world of cognate organizational patterns of best practices for converging economies. Africa has been influenced by the moving forces behind the whole technological story of globalization in terms of computers, telephones, mobiles and color televisions of wall-calendar model. These three items are the cornerstones of the information age and aptly called information technology in the globalization age.

Globalization Research & Criticism Terms

Globalization is not simply a trend or a fad but is rather an international system. It is the system that has now replaced the yesteryear cold war system.

Globalization as an open-ended process encompassed various permutations and features evolving across the world's geo-strategic, geo-political and geo-economical struggles after the close of the imperialistic phase of the world's great powers resulting in developing and under-developed Nations' seeking far more developmental assistance from developed nations. It has own rules and logic that directly or indirectly influence the politics, environment, geopolitics and economics of virtually every country in the world. The processes associated with globalization have stimulated the idea that convergence with a free hand in modeling the world's socioeconomic formations, spread and formulations. This constitutes a major shift in development perspective globally with globalization ushering in new recognition of shared responsibility for stronger institutions to regulate the global commons like biodiversity, global warming and other problems that the community of Nations must take up collectively with authoritative scientific evidence and attention of governments including their public. This apart, for all the rhetoric surrounding the globalization, its meaning remains both vague and elusive and symbolizes a host of different things to different people. In the main, however, most studies are marked by a restricted theoretical and empirical base which precludes such studies from being truly global. They are generally predicted on selected examples from the core, with an occasional nod in the direction of experiences outside the familiar. While there are sporadic references to Asia and Latin America, there is almost no mention at all of Africa, South Asia, the Pacific Region or Central Asia. That this overlooked fact impoverishes the discipline of International Political Economy (IPE) is self-obvious and self-evident. It is argued that an IPE that is comparative by nature and takes into account the most variegated nature by which globalization affects the global political economy, in particular recognizing that the developing world has been, to a large extent, left out of debate.

Facts of Africa's globalization in International Economy

The following positive impact of globalization on Africa has been studied.

- Globalization brought into focus universities and institutions of higher learning to impart knowledge, skills and attitudes in various fields to Africans.
- It made Africans believe that the world is a global village out of a wide and diverse people.
- It has opened African countries to intense external scrutiny and greater openness
- It provided information on how other countries are governed and the freedoms with rights their people enjoy.
- It offered ready-made to Africans the defined values of basic and generally accepted principles of democratic governance, transparency and accountability combined called good governance.
- It opened African people's lives to other cultures and all their creativity to the flow of ideas and value systems of ethics.
- It pressurized African leaders to adopt policies and measures that are opposed to the sentiments of people who have been isolated mentally like a frog in the well.

- It has eased international trade and commerce, facilitated foreign investment and the flow of capital while calling for greater accountability and responsiveness of leaders to their people in Africa
- Information and communication technologies have eased interaction among African countries and African peoples.

The rise of Africa on the global stage has triggered progressive signals for the well-being of Africans. The overall focus of African governments and their development friends/partners showed interest in investment and developmental cooperative policies during the wake of globalization. For example, trade liberalization, privatization and deregulation were given impetus through international agreements. This led to globalization of the economy in Africa which has commissioned the restructuring of work, work modes for flexible forms and norms of production with outsourcing philosophies of sub-contracting and temporary employment. A case in point is South Africa which after entering global economy has become important economic actor in Africa in particular as well as in the world in general. Many multi-national corporations are now in South Africa operating with mutual economic benefits. New technologies and expansion of trade regimes facilitated global movement of African goods, services, labor and markets. Markets have become open and inclusive in Africa and outside global regions for African manufactured products. All these developments in no small measure went a long way in forging links between African countries and cemented the African solidarity for economic life of the Africans.

13. The speedy technological change

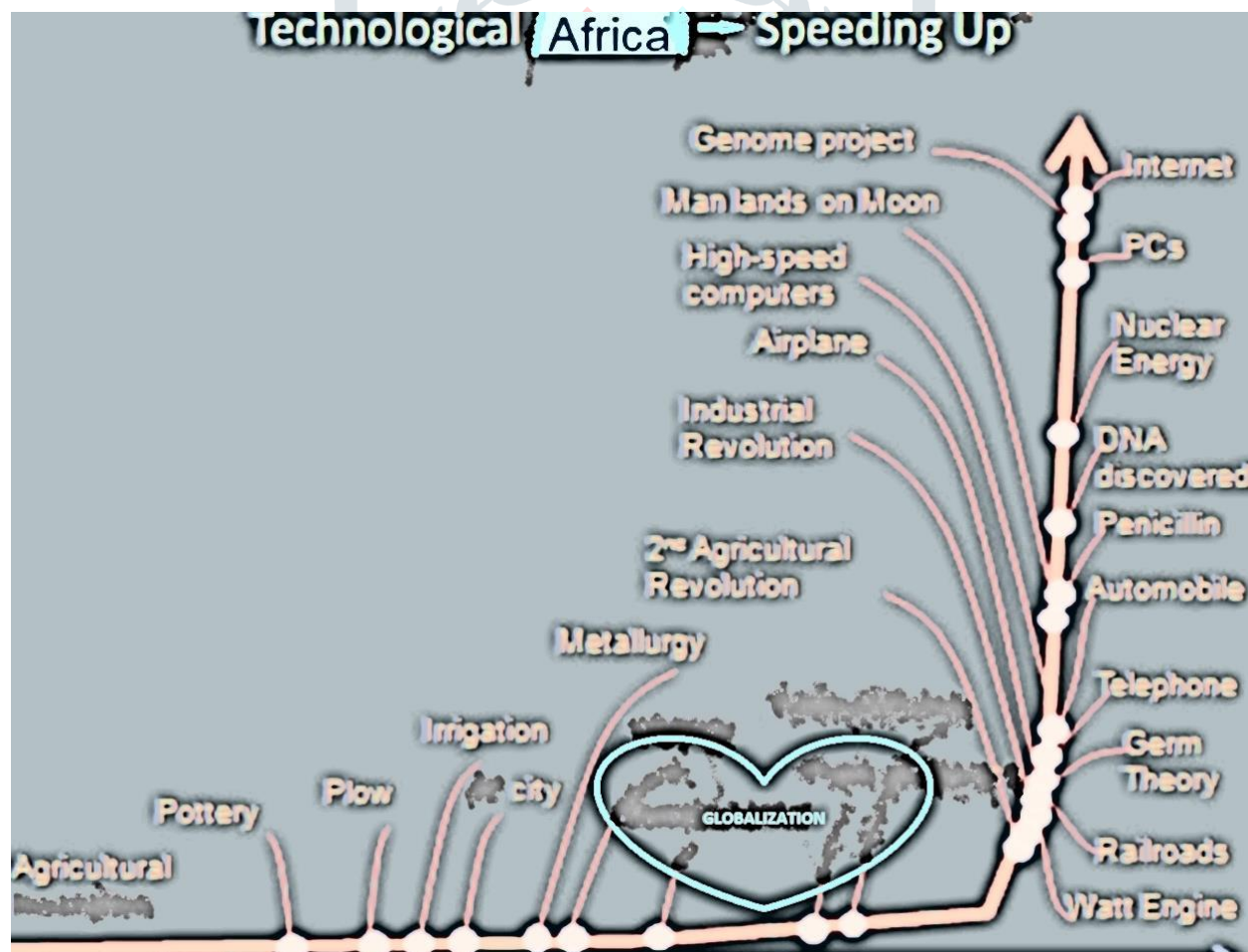


fig. Technology breakthroughs encompassing Africa's rise in 21st Century

Technology of how to create things or how to solve problems (such as to brew beer or to make an atomic bomb) is our understanding of the world and value systems. The meaning of knowledge of technology becomes reflexive in

that understanding of how to make and use tools and instruments encoded and transmissible as technological knowledge and know-how. Related to this, technology is the development of modern scientific knowledge concerning the materials embedded in the environment (these materials are also called Natural Resources discussed in my 14th item of investigation for the purpose of this Dissertation under the heading of Africa's Natural Resources ---from curse to blessing). The effects of technology influenced the early twenty-first century

Africa's rise to sustain the global challenges. On the one hand, technology and especially science-based technology, have offered better elimination of disease and material improvements to standards of living while on the other hand, engineering-based electronic technologies facilitated natural resource extraction and supply of non-saline waters for agriculture and soil health which have created conditions for unprecedented technological dependence and innovations resulting in irreversible practices and procedures .

Credit goes to the Africans for ushering in the Early Old Stone Age of nature-carved-stones as implements. Aptly described , those were the times of stone-technologies used for food-gathering and storing inputs by the then evolving human ancestors .Therefore, technology encompasses the aspect such as the useful tools/instruments to enhance human ability to shape nature and solve problems (such as a hammer and nail). Historically, the emergence of human civilization has been closely connected to the development of tools for hunting, fire, agriculture, irrigation, water and navigation-- given Africa the motherland of human race ab initio and Africans reckoned as our ancestors turned modern humans dictated by the primitive-time's natural coastal floods and movements of accidental and seasonal migrations which weather-temperatures even affected the skin-colorations.

Globalization and technology-transfer determined evolution in the manufacturing sector in Africa. Africa has been influenced by the moving forces behind the whole technological story of globalization in terms of computers, the telephone /mobile phones and the television . These three items are the cornerstones of the information age and aptly called information technology in the globalization age . The so-called cyber-space driven virtual world economy of the 21st century impacted African material and intellectual population with the pervasive nature of globalization for closer integration of the African economy with international economy as well as international political themes .Thus , Africa has made good of the open-ended process across the geo-technological features and various permutations and combinations of development-technologies seeking far more developmental growth and performance technologically creating an Africa-rising transition on the global stage .

In the recent modern times, for large populations in Africa, the benefits of technology like photovoltaic cells, cellular phones, and the Internet helped them leap-frog in twenty-first century. Evidence of technological change is all around present-day Africans —smartphones, self-driving cars, amazing drug discoveries, and even drone warfare. With all of this, African technological change is speeding up. Audio cassettes and CDs, the BASIC programming language, computer mice, and the first integrated circuit computer that were so exciting that they even helped launch a stock market “tronics” boom and bust in electronics in Africa.

Ecommerce,healthtech, agriculture, renewable, biometrics and of course mobiles, wearable and implants have emerged as key areas of growth, to the point that some have overtaken developments in countries which are thought to be more economically and technologically advanced. African countries have technological advancements and demonstrated highly sophisticated initiatives. Rwanda, for example, rolled out a national fiber optic system in 2011 which has yet to be replicated in countries that are supposedly more developed. Drones are already being used to transport vital medical supplies, and Somaliland is currently using iris recognition in presidential elections, giving the state the most advanced voting register in the world.

Africa is keeping pace with major technological advancement and mapped its way out of the extractive sector. Given the fluid nature of technology, the good news is that there is realization of the vital role of technology speeding up the global domination and development through Africa that is fundamentally changing the way we live, work and relate to one another and no wonder , mobile-based techniques of the supercomputing, intelligent robots, self-driving cars, neuro-technological brain enhancements and genetic editing, are all evidence of dramatic change liberating the African mankind of the human race from animal power, made mass production possible and brought digital capabilities to billions of people , given Africa is the motherland of the homo sapiens. That using of the modern technology is not time consuming , safe, cheap, renders work process easy, not energy sapping , easy to operate by women and ensures large production capacity in minimum duration , re-designing and re-modification feasible ,

spare parts provisions , repairing and servicing facilities and last but not least important that modern technology is in line with humanity of the social, cultural and religious ethics are best projected by the current generations of Africans to the rest of the Global users within and external to Africa .

Let's read altruistic African tech-stories below which are not exaggerations to justify the cause and purpose of my study.



fig : African Motorist Family

The pride of Africans belongs to a wave of digital entrepreneurs who aim to transform sub-Saharan Africa. Their emergence coincides with the ubiquity of mobile phones throughout the continent called mobile revolution leading to more mobile money accounts in sub-Saharan Africa than there are bank accounts encouraging the domination of FinTech services as well as the arrival of high-speed Internet—which, as recently as a decade ago, was rare in most of Africa. During the past few years, tens of millions of dollars in venture capital has flowed from the West into such countries as Kenya, Rwanda, Nigeria, and South Africa. The result is a generation of innovators whose homegrown ideas could, in the manner of SafeMotos, improve the lives of their fellow Africans. Knowing how to use their data has been the least of Peter Kariuki and Barrett Nash's liabilities. Every week the SafeMotos founders email a newsletter to their investors with updated statistics that range from the percentage increase in the number of repeat customers to the safety scores of their drivers.



fig. safe-motos transforming transportation in Africa

On this planet only one continent is growing faster than all the others in population, and it's likely to keep growing even faster," says Steve Mutabazi, a chief strategist with the Rwanda Development Board who said "When you have a developing region with enough members developing an ecosystem, it generates incredible momentum for investment in that region." Africa, Mutabazi adds, "is at that point now."

Africa's digital economy comes with certain competitive advantages. It benefits from advances and mistakes already made by Silicon Valley. Its population is younger than that of any other continent. Its marketplace amounts to a new frontier, says Bitange Ndemo, Kenya's former permanent secretary at the Ministry of Information and Communications and a professor of entrepreneurship at the University of Nairobi's School of Business. The best of Kenya's digital scene motivated by a desire to better their communities by even touring the world for business summits and market opportunities in a broad sense from a heightened innovative streak, as Ndemo points out that since independence Kenya has been a free market economy. It happens that Ndemo was one of the first Kenyans to promote his country's tech potential with the nickname Silicon Savannah.

Thanks to the mobile money-transferring innovation launched in 2007 by Kenya's M-Pesa, Africans with a cell phone can deposit and withdraw cash at many shops without having to visit a bank or ATM. Mobile money transfers also are being used to pay for power from solar panels that off-grid-energy companies install on homes lacking electricity.

Uber is a fact of life in urban East Africa, as are homegrown car-sharing competitors. New technology spreading throughout the region allows residents to buy groceries, clothing, and other goods online. An app called iCow helps

herders manage their cattle populations. Another, named Kytabu, makes it possible for students and teachers in underprivileged schools to lease textbooks on mobile devices.

Rwanda is rapidly becoming an education success story. When Paul Kagame became president in 2000, he proclaimed that his country would have a knowledge-based economy in two decades. As recently as 2008 no place outside Kigali had fiber-optic cables. By 2010 the entire country was covered by a network of fiber optics. Twenty years ago the country's entire higher educated population was 4,000. Now it's 86,000."

Investing in the future, Rwanda has pledged to educate students about the digital world, connect its citizens to the internet and build a knowledge-based economy by the year 2020 . Rwanda partnered with Zipline , a Californian Company to deliver blood and plasma inside drones, creating technical jobs for people like flight operators . See the picture below. By utilising mobile and drone technology, health organizations provide aid to patients in remote and underserved areas. This explains Africa has overtaken other parts of the world in terms of tech growth.



fig : African-Drones for emergency blood-supplies

Kenyan entrepreneurial experience—the Farm Drive, launched in May 2015 has succeeded. The digital recordkeeping platform serves as a basis for bankers to establish credit ratings and determine which farmers are best suited for small loans. Farm Drive's pilot program consisted of 50 farmers. Today hundreds of thousands are in Farm Drive's database; about 830 have received financing. In turn the banks pay Farm Drive for essentially functioning as their credit bureau for Kenya's vast farming community. There are more than five million small farmers in Kenya and throughout Africa it's about 50 million. But, the Farm Drive had global ambition of building solutions for farmers in Asia too. Thus, Africa is The World's Next Rising Tech Centre. A decade ago, it wouldn't have been unfair to call Africa a little behind in tech. But 10 years later, there are reported 300 tech hubs in 93 African cities, with particularly notable growth happening in Nigeria and Kenya. In 2000, only 10 per cent of Kenya's population had access to the internet. Today, this has risen to almost 80 per cent. Rapid population growth, mass urbanization and increased internet usage have transformed Africa into a focus point for investment and development by the community of world nations.



Conclusion

As I said in the Title, “Ethnics to Economic Ethics”, it makes a revelatory reading experience on the Strengths and Opportunities of Africa.

The villainous pair of Weaknesses and Threats---appropriate to or characteristic of a villainous plot to kidnap the Africa’s claim to the 21st century , is dramatically abandoned by me in this Paper as a student-researcher thinking in an optimistic fashion that a research into the themes of villainous pair should be the job of a pessimistic historian’s hard research-mission to project African Continental Status, Solidarity and Organization of African Unity in dim light of opposition to the 21st Century claim of the heroic Africans and African leaders. So, much less has been revealed on the Weaknesses and Threats so far for my defending Africa’s popular and 21st century-image is concerned.

However, a swipe at the SWOT tabulation below once more is an indelible deal of research ferretted out by me respecting the other’s researched-output-value of the weaknesses and threats to present as my concluding shot.

SWOT AT A GLANCE			
	Weaknesses		Threats
	<i>Communal differences /domestic terrorists</i>		<i>Colonial genetic camouflage</i>
	<i>God’s languages /linguistic partialities</i>		<i>Technological</i>
	<i>Genocide Theories /domestic violence</i>		<i>International Relations /Terrorism</i>

fig. Africa with weaknesses & threats

According to Adam Jones (2006, p.394), the United Nations (UN), has an abysmal record in confronting and forestalling genocide. Leo Kuper (1985 c/o Adam Jones , 2006, pp 394-404) confirmed this by saying that the UN’s Record reflected the Organization’s foundation on Westphalia Norms of state sovereignty and the desire of most member States to avoid a shining spotlight on their own atrocities , past or present .

The Research work of Barbara Harff (c/o Adam Jones , 2006 , pp 309-22) describes that



fig. Photos of Researchers on Genocides/politicides/democides

“Empirically , all but one of the 37 genocides and politicides that began between 1955 and 1998 occurred during or immediately after political upheavals ; 24 coincided with ethnic wars and 14 followed the occurrence of adverse regime changes”. Harff’s research also turned up a surprise that the ethnic and religious cleavages, in and of themselves, were strongly relevant only when combined with an ethnic minority’s capture of the state apparatus while genocides occur with alarming frequency during or shortly after the revolutionary takeovers. Especially dangerous are situations in which long-standing ethnic rivalries erupt and radicalized groups armed with a revolutionary ideology gain the upper hand.

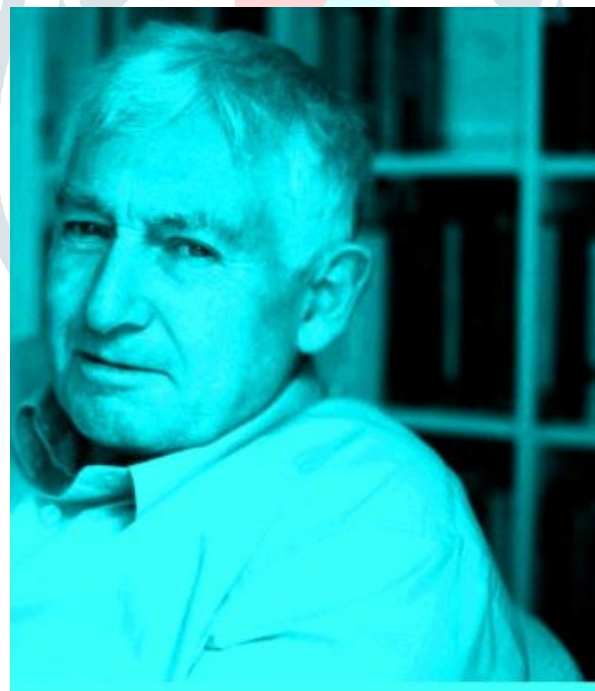


fig. Prof. Jonathan Glover, University of London in Ethics

In the words of Jonathan Glover, “It is too late to stop the technology. It is to the psychology that we should now turn” (Jonathan Glover , Humanity, 2001, p 144 c/o Adam Jones , 2006 , pp 261-86).

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Singleton Research Value Papers: Four Published

1. Transformation of Production: Africa Redefinitive
2. Woman-laborer Reforms in African Societies
3. Global Consumerism—Award goes to Africa –History’s First Globalization
4. A Nelson Mandela Genetic Research: An Aristotelian Approach

Multiplex Research Value Papers: Four Published

5. 21st Century: Africa’s Century –An Advanced Research Saga & A Deemed Thesis
6. Africa & The Dark Side of the Moon in the 21st Century --- An Advanced Research Saga & A Deemed Thesis
7. Sons & Daughters of African Soil --- Democracy + Development = Africanism –Advanced Research Saga & Deemed Thesis
8. Current Paper :

A SWOT’S ANALYSIS OF AFRICA’S SWOT ANALYSIS --- ETHNICS TO ECONOMIC ETHICS--- ADVANCED RESEARCH SAGA & DEEMED THESIS

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