

Ending Africa's Dependency on Developed Countries: the Intellectual Capital-Knowledge Economy Option

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Abstract

This paper examined and analyzed, in the context of intellectual capital-knowledge economy option, the challenge (or problem) of ending Africa's dependence on developed countries. Though not an empirical paper, its primary purpose was to share opinions on why and how Africa should end its dependence on developed countries. It posed some questions to provide a sharp focus for opinions contained. There was a review of literature on the contexts of those opinion questions to articulate the nature, process, consequences and dependency exit strategies for Africa. Specifically, emphasis was conceptual and theoretical frameworks, strategies used by developed to maintain the status quo with African countries, the role Africans have played in the continent's continued dependency status and what should be done for it to exit from the vicious cycle of dependency. Cultivation of intellectual capital as an economic factor, modernization of African economies to knowledge-based was the underpinning options. It was the concluding opinions of the researchers that Africa can only extricate itself from dependency if it cultivates and amasses intellectual capital as well as modernize its economy to knowledge based.

Keywords:

Africa dependency,
Developed
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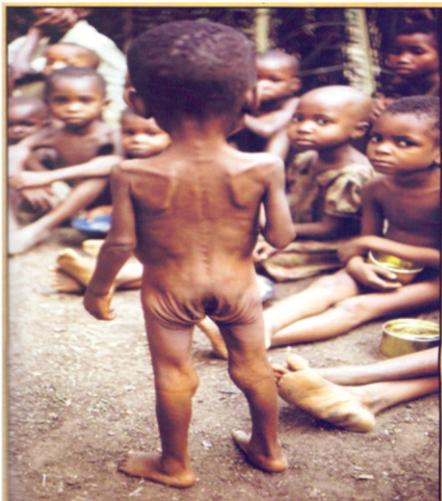
Background to the Study

The harmful effects of dependency (economic imperialism) on all aspects of human existence make Africa's desire and efforts to end its dependence on developed countries a welcome development. However, there is need to ascertain the nature and degree of Africa's dependency syndrome. This means, too, that there is need to understand the meaning of "dependency" in order to take a right perspective in this debate. Consequently, McClean and McMillan (2003) define dependency as "the external mechanism of control exerted by the center (or metropolis) upon the periphery (of satellite) ... in a state of underdevelopment for purposes of super exploitation". This definition raises the following opinion questions:

1. Is Africa ever likely to develop as long as it continues to depend on developed countries?
2. Does Africa possess the potentials to end its dependence on developed countries?
3. How should Africa end its dependence on developed countries?
4. How is a knowledge economy a veritable option for ending Africa's dependence on developed countries?

There is need to answer these questions because some Western media, World Bank Human Development and Poverty Indices and donor agencies' are awash with publications that describe Africans as a collection of tadpole black people with pallid faces, wilting waists hanging on crumpled buttocks with sagged jaws; all barely clothed. The children, with bloated stomachs and bald heads, are indicative of poverty, malnutrition and lack of resources for care (Guest, 2004). Plate 1 aptly portrays the direct consequences of dependency.

Plate 1: Evidence of Dependency



Conceptual Framework

The conceptual framework of this paper hinges on the facts that as long as Africa continues to depend on the developed countries, the continent can never develop. Rodney, 2005; Garba, 1987 and dos Santos (1993) give detailed accounts of the structure of

dependency and how developed countries studiously ensure they maintain an ever widening gap between them and underdeveloped countries. Dos Santos (1993) particularly has identified: (1) aids (2) capital in the form of machinery and equipment as well as financial capital and (3) Ashimolowo (2007) the use of corporate organizations such as UNCTAD, World Bank, IMF and WTO to fix unfavorable prices between manufactured goods and primary commodities from underdeveloped countries. Heads or tails, underdeveloped countries pay higher for manufactured goods and interest or royalties on capital goods.

Theoretical Framework

The theoretical framework of this paper is based on the facts that if Africa can cultivate and amass intellectual capital and modernize its economy to knowledge-based, the continent can develop and catch up with other regions of the world. Africa can only come out of the vicious cycle of dependency if the continent cultivates and amasses intellectual capital and modernizes its economy to knowledge-based in accordance with prevailing global trends across Europe, the United States of America, Asia and Latin America that modernized their economies to knowledge-based (Bergsten and Norland, 1993). In these countries, there is a clear shift from regarding economic factors in their traditional characteristics to knowledge-based skills. This paradigm shift is responsible for restructuring their economies to knowledge-based skills.

Is Africa ever likely to develop as long as it continues to depend on developed Countries?

The first strategy developed countries used was to break up Africa among themselves as possessions and today stereotype Africans and make them accept dependency as their identity. (Baran, 2012) explains that stereotype simply means applying a standard image or concept to members of certain groups, usually based on limited information (and facts sic). Giddens, (2009) defines stereotype as “the illegitimate generalization about people based simply on their membership of a certain social club. (Hilgard, 1962) defines stereotype as “a biased generalization, usually about a social or national group, according to which individuals are falsely assigned traits they do not possess”. Stereotyping, psychological projections and dependency are strategies which developed countries use to make Africans believe in and accept an inferior status though there is no biological basis for it. Stereotyping is graphically illustrated in Diagram 1.

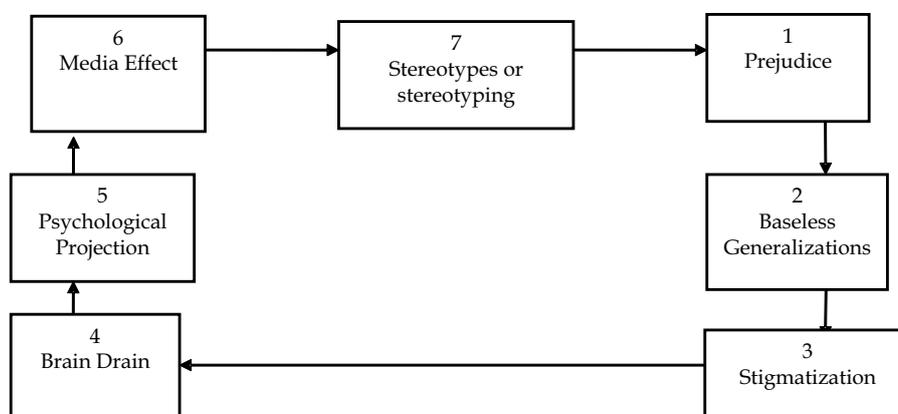
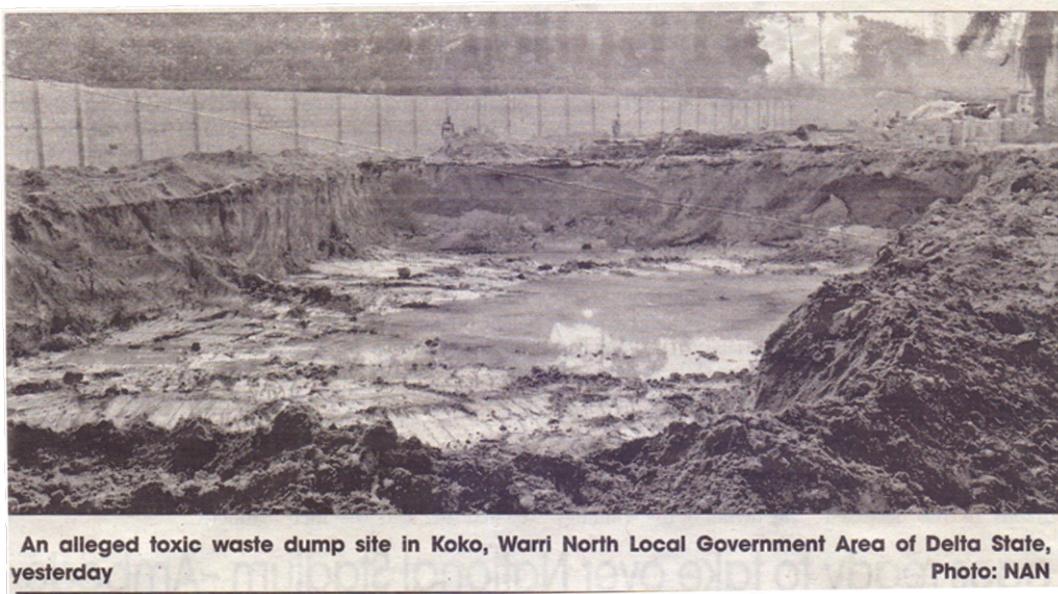


Diagram 1 Stereotype Vicious Cycle

Another dimension is the exploitation of crises situations between African countries; sometimes supporting rebel groups especially in mineral rich zones (Guest, 2004 and Meredith, 2011). In fact, Clarke (2008) wonders if Africa may not be colonized again because of developed countries' scramble for its hydrocarbons! No wonder they make Africa a refuse heap for dumping their outdated development policies, machinery, industrial (toxic) wastes and continue to bandy around ineffective economic proposals that sustain dependency (Plate 2).

Plate 2: Toxic Waste Dump (courtesy Daily Sun March 2nd 2017)



Africans' Role in the Continent's Dependency Status

A comprehensive account of how Africans underdeveloped Africa is in Igwe (2010). However, other activities of Africans in this regard include: corruption and connivance to perpetuate fraudulent acts against their countries (Ashimolowo, 2007) as well as importation of toxic wastes, poor planning, lack of trust in each other, uncooperative attitudes, and sheer hostility towards each other (Meredith, 2011 and Garba, 1987)).

Intellectual Capital: Potential to end Africa's Dependence on Developed Countries

Africa possesses the intellectual potentials to break the dependency syndrome (Forsyth, 1977). The breathtaking feats of Nigerians; no, Africans, during the Nigeria-Biafra war, are eloquent testimonies and the basis of arguments in this paper that Africans and the Blackman in general, are not intellectually inferior to other races. Within thirty (30) months of the war, Nigerians (who were in Biafra) were able to manufacture their own rifles of varying degrees of sophistication, rockets, Ogbunigwe (monster bombs) popularly known as Ojukwu Bucket, armoured cars (the Red Devil: (Plates 3), Biafran Tank (Plate 4) and fighter aircraft (the Minicons) fitted with two Beetle car engines; (Plate 5); shocker battery (sea mine), extracted and refined petrol, salt, produced sulphur and built most sophisticated bunker in the world (the famous Ojukwu Bunker)!

Plate 3: Armoured Personnel Carrier Fabricated by PRODA and Awka Blacksmiths

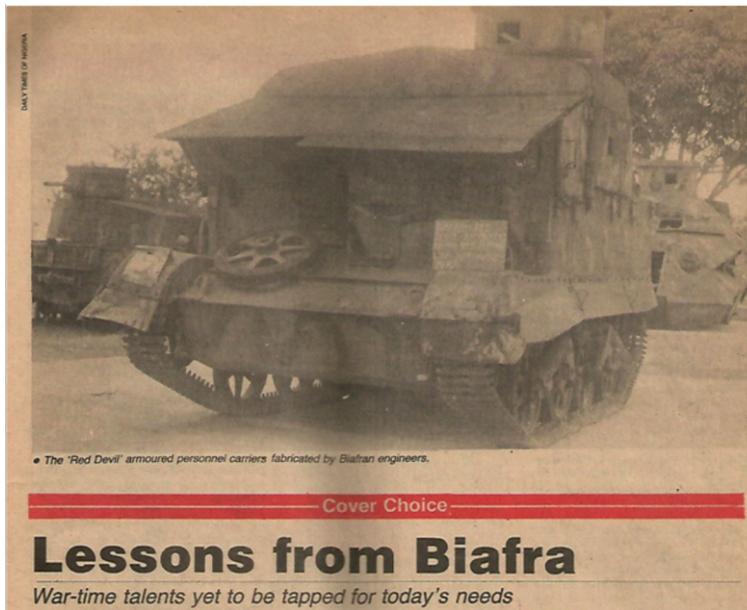
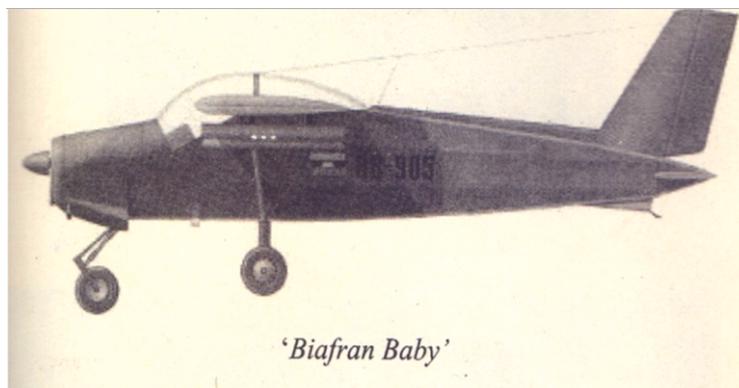


Plate 4: Biafran Tank Fabricated by PRODA and Awka Blacksmiths



Plate 5 Biafran Fighter/Bomber Fabricated by PRODA



In his first *Post-Biafra War Speech* in February, 1994 at the *Lagos Law School*, Ojukwu (1994) enthused: "... Biafrans were outgunned, blockaded and starved, yet they achieved within a short period, in war time, what Nigeria, even in time of peace, could not achieve for decades". He went on:

These were the three years when we had the opportunity to demonstrate what Nigeria would (could) have been even before 1970. In the three years of war, necessity gave birth to invention. ..We built bombs ... rockets... designed and built our own delivery systems.... guided our rockets, far, and... accurately...maintained engines, machines, and technical equipment...extracted and refined petrol in their back gardens ...built and maintained airports...under heavy bombardment. We spoke to the world through a telecommunication system engineered by local ingenuity...we built armoured cars and tanks...modified aircraft from trainer to fighters...passenger to bombers. In three years of freedom, we had broken the technological barrier....we became the most civilized; the most technologically advanced black people on earth (Ezeani, 2013).

Could these feats be achieved by intellectually inferior, lazy and unimaginative people? In fact, these scientific and technological achievements prompted an anonymous Soviet Union Government Official to remark that "...a country that is not yet two months old that can manufacture Ogbunigwe (monster bombs) and rockets must be feared..."; Back page of Ezeani, (2013). Certainly, this was a huge flash of African inventive ingenuity reminiscent of Ashimolowo (2007) exposition on Volney (1787), Rawlinson (1885), Reclus (1893), *The History of National*, Vol. 18 (1906), Jastrow (1914), *Encyclopedia Britannica*, Vol. A (1959), Weatherwax (1962), Custance (1975), Gurowski (2005) and Sowell (1994) as clear indications that there exists a robust but latent intellectual capital in the continent. This was why Forsyth (1977) against the jeers and sneers of his kith and kin, detractors, foes and entreaties of friends, shouted his voice hoarse on the making of an African legend which the world has ignored. Moreover, it boggles the minds of right thinking people why, unlike the Americans and British who scrambled for German and Japanese scientists, engineers and technologists after World War II (Peacock, 1987), the Nigerian government did not absorb and integrate their brothers who made these scientific and technological achievements in Biafra and use their intellectual capital to establish an industrial base for

the country. It is a surprise that 47 years after these technological feats and 30 years after Ghahia and Ubani (1987)'s "Lessons from Biafra: War-Time Talents yet to be tapped for Today's Needs"; successive Nigerian governments have kept mute over the ex-Biafran scientists, engineers and technologists and allowed them melt into the faceless sea of humanity and, consequently, a loss of Africa's intellectual capital but continue to embrace and romance with developed countries' junk development programmes and policies. Imagine what Nigeria could have been today if there was enough political will to absorb and integrate the ex-Biafran scientists, engineers and technologists into the services of the Defence Industries Corporation (DIC), Kaduna! This is also why this paper argues that a fitting title for Ezeani's (2013) book should have been: *In Biafra, Africa Came Alive*. There is consolation that the accounts of Forsyth (1977) make Africans hold their heads high and not to bury them in shame, dejection and frustration because *In Biafra, Africa Came Alive!* This is where IIPRDS, an organization determined to cultivate and amass intellectual capital for the continent, has a challenge: to dust up, sharpen and articulate the ex-Biafran and other Africans' scientific and technological achievements as well as transform them into industrial products for the marketplace. This position agrees with Abdulrahman (2008) who argues that Africa should pursue development which emphasizes "objectives towards people-centered development ... this notion of development involves investing in human capabilities". What is more: Africa is the richest continent in the world with intellectually creative people. What is required is to cultivate and amass the needed creative skills and intellectual capital that find expression in a knowledge economy.

Intellectual Capital as Basis for Ending Africa's Dependence on Developed Countries

The acquisition of knowledge-based skills (intellectual capital), the foundation of a knowledge economy, is gathering momentum globally because a knowledge economy can only be powered successfully by these because it is the key component of a knowledge economy. Moreover, a knowledge economy relies on intellectual capabilities than on physical inputs or natural resources. This is because part of human knowledge and operational systems has been transformed to machines. Moreover, labour is now treated as intellectual capital. This means while labour is contracting in its economic scope, capital is expanding. The emphasis here is that it takes a lot of time and resources to invest in people to acquire knowledge-based skills that cannot be easily replaced and whose expert or professional skills are critical to the success, multi-dimensional impact on modern economies, and the socio-political and sustainable development of any country.

Faststartincome (Retrieved: 22/2/17) argues that there are three categories of skill sets: knowledge-based, transferable, and personal traits that people need to possess in order to cope with STEM job clusters and knowledge economy. These are explained as follows: (1) *Knowledge-based skills* are those amassed from experiences. These may include academic attainment, additional training, seminars attended, previous employment and other practices that have learned to enhance expertise in a given field. Knowledge-based skills include computer and communication skills, marketing or managerial knowledge, product development, and many more. These skills vary depending on the field of industry or each job. (2) *Transferable or portable skills* are those one brings to a specific job. This is the reason interviewers ask, "What could you offer the company?" Transferable skills

are important because companies strive to look for quality employees that would improve the development of the workforce. Portable skills include problem-solving, team leader potential, organized, writing and communication skills; customer service oriented, time and project management, and good working abilities with numbers and the budget. This kind of skills varies depending on the experience and versatility of each job candidate and (3) *Personal traits* determine who one is. In a job interview, one of the most common things an employer says is “*Tell me something about you.*” Your response is vital because it would set the tone for the rest of the interview. Personal traits include one possessing good judgment, being well organized, having analytical skills, goal oriented, being flexible and creative. Try to sell yourself as modest as you possibly can within a limited time.

Knowledge Economy: An Option for ending Africa's Dependence on Developed Countries

A knowledge economy is the latest stage of development in global economic restructuring. Thus far, the developed world has transitioned from an agricultural economy (pre-Industrial Age, largely the agrarian sector) to industrial economy (with the Industrial Age, largely the manufacturing sector) to post-industrial/mass production economy (mid-1900s, largely the service sector) to knowledge economy (late 1900s–2000s, largely the technology/human capital sector). This latest stage is marked by technological innovations and the global competitive need for innovation with new products and processes that are churned out from the research community (i.e., Research and Development efforts, universities, laboratories, educational institutes and so on).

Evolution

In a knowledge economy, the specialized labour force is characterized as computer literate and well-trained in handling data, developing algorithms and simulated models, and innovating on processes and systems. Porter (1998) asserts that today's economy is far more dynamic and that comparative advantage is less relevant than competitive advantage which rests on “making more productive use of inputs which requires continual innovation”. Consequently, the term “STEM careers” includes computer scientists, engineers, chemists, biologists, mathematicians, and scientific inventors will be in continuous demand in years to come. Additionally, well-situated STEM job clusters, which Porter (1998) argues is vital in global economies, is locally linked with industries, manufacturers, and other entities that are related by skills, technologies, and other inputs; hence, knowledge-based skills are the catalyst and connective tissue in modern economies.

Driving Forces

Researchers, (Smith, 2002; Blomström, Kokko and Sjöholm, (2002); Dutta, (2012); Flew, (2008); Djeflat, (2009) and UNCSTD (1997) argue that there are various interlocking driving forces which are changing the rules of business and national competitiveness. The identified driving forces include: (a) Globalization – opening up of markets and products on a global scale as in e-commerce. (b) Information technology, which is related to the next three factors: (i) Information/Knowledge Intensity – efficient production relies on information and know-how; many factory workers use their heads more than their hands.

(ii) New Media – New media techniques that enhance the production and distribution of knowledge which in turn, results in collective intelligence. Existing knowledge becomes much easier to access as a result of networked data-bases that promote online interaction between users and producers and (iii) Computer networking and Connectivity – developments such as the Internet bring the "global village" ever nearer. As a result, goods and services can be developed, bought, sold, and in many cases even delivered over electronic networks (e-commerce). As regards the applications of new technologies, this depends on how a particular technology meets a specific economic demand. It can remain dormant or make a commercial breakthrough (e.g. e-banking or cashless economy).

Characteristics

The United Nations Commission on Science and Technology for Development Report (UNCSTD, 1997) concluded in its study that for developing countries to successfully integrate ICTs and sustainable development in order to participate in the knowledge economy “they need to intervene collectively and strategically”. Africa should embrace knowledge economy because it differs from the traditional economy in several key respects:

1. The economics of a knowledge economy are not of scarcity, but of abundance. Unlike most resources that are depleted when used, information and knowledge, when shared, actually grow through application.
2. The effect of location is not diminished but widened and enhanced by using appropriate technology and methods, marketplaces and organizations that offer benefits of speed, agility, round the clock operation and global reach can be created. (b) On the contrary, knowledge economy is reinforced by the creation of business clusters around centers of knowledge such as universities and research centers or business or industrial clusters, e.g. the Silicon Valley in the United States of America.
3. Laws, political barriers, taxes and ways to measure knowledge economy are difficult to apply solely on a national basis. Knowledge and information "leak" to where demand is highest and the barriers are lowest.
4. Knowledge enhanced products or services command price premiums over comparable products with low embedded knowledge or knowledge intensity.
5. Pricing and value depends heavily on context. Thus the same information or knowledge can have vastly different values to different people or even to the same person at different times.
6. Knowledge, when locked into systems or processes, does not have a higher inherent value than when it "walks out of the door" in people's heads.
7. Intellectual capital (competencies) is a key component of value in a knowledge company, yet few companies report competency levels in annual reports. In contrast, downsizing is often seen as a positive "cost cuts" measure.
8. Communication is increasingly being seen as fundamental to knowledge flows. Social structures, cultural contexts and other factors influencing social relations are of fundamental importance to knowledge economies *Wikipedia, the Free Encyclopedia* (Retrieved: 14/2/17).

It is, thus, incumbent on any country or continent to embrace modernizing its economy. Moreover, with inflation and unemployment at double digits across many countries in Africa since 2015, some critical scholars have been telling a bewildered continent that up to 60% of the graduates are “barely literate” (Braide, 2002) and “parading worthless degrees” (Akinyanju, 2003a). That up to 60% of these supposed graduates is actually “unemployable”; many requiring “re-training” (Akinyanju, 2003a). The big question is: where do we go from here? Continue in our dependency or take conscious radical and sustainable steps to end it? This is the crux of this paper: that Africa should cultivate and amass intellectual capital as well as adopt knowledge economies. So, what is involved in a knowledge economy?

Conclusion and Recommendation

This opinion paper concludes that Africa should cultivate and amass intellectual capital and modernize its economy to knowledge economy based on a tripod of (1) major markets (national and global) (2) open economy with selective protection of domestic markets and (3) working with major technological partners in locally fabricating technical equipment for industrialization because the continent will never develop as long as it depends on developed countries. This is illustrated in Diagram 2:

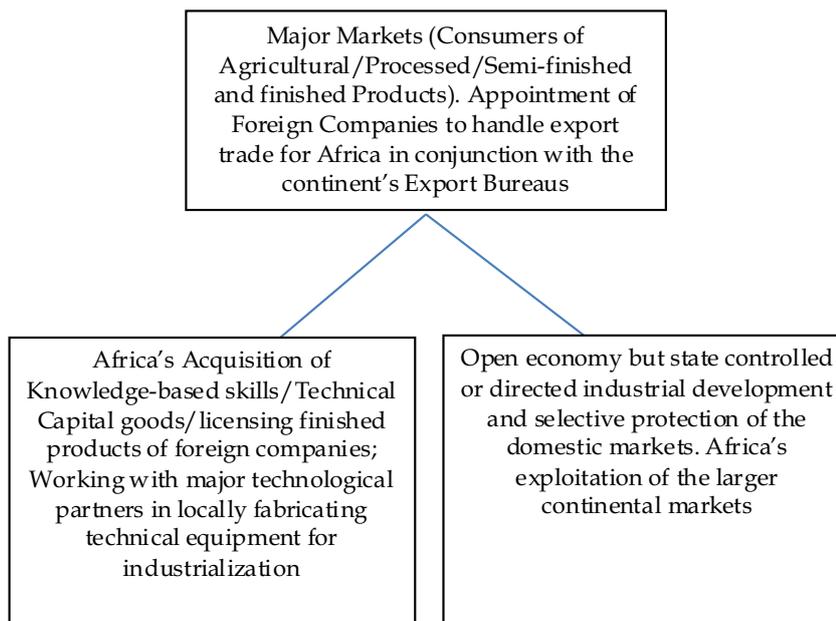


Diagram 2: Tripod Concept for Knowledge Economy

If this concept is adopted, Africa should avoid the present economic pitfalls of Asian and Latin American countries. It is the candid opinions of the researchers that Africa should take the following actions to end its dependency on developed countries:

1. African educational systems should be reformed to prepare products to meet present and future demands for knowledge-based skills.
2. Cooperation with major technological partners in locally fabricating technical equipment for industrialization.

3. Identification of major markets for consumption of finished/processed agricultural goods.
4. Appointment of foreign companies to handle Africa's export trade in conjunction with local Export Bureaus.
5. State controlled or directed industrial development
6. Protection of domestic market.
7. Establishment of an African Research Center and funded continentally where African scientists, engineers and technologists (at home and in the diaspora) conduct joint researches rather than scramble to carry out sponsored research programmes for developed countries' research foundations.
8. Firm agreements on co-patent ownership and payment of royalties to African researchers. This is because some researches are too costly for individual African countries to sponsor and when their researchers carry them out, the results are owned and used by the sponsoring foundations. This situation illustrates an African adage: "Monkey de work, Baboon de chop".
9. Establishment of an African Field Test Center where past and present research results and technological innovations are tested for practical application to the solution of industrial development, health and economic problems.
10. Establishment of a legal framework for patenting African research results and technological innovations.
11. Establishment of a mutually beneficial research cooperation framework with scientists, engineers and technologists from other parts of the world.
12. An IIPRDS-organized National Conference on tapping the ex-Biafran and other Nigerians' technological achievements for today's industrial and economic development as a sure end to the country's and Africa's dependence on developed countries. At this stage, Africa should be cooperating with other continents in science, technology, medicine rather than look up to them for survival.
13. There should be a census of African scientists, engineers and technologists worldwide to identify those that can serve as mentors to groom the younger generation to handle today's problems and the challenges of tomorrow.
14. Establish a continental competition and reward system where Africans can showcase their scientific research results, technological innovations and creative works.
15. Encourage industrialists to develop, modernize and standardize prototypes and models into industrial goods for the final consumer.

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