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Modernization and Development in Africa's Nascent States

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ABSTRACT:

Development as we know it is a process of growth, progress through a sequence of stages and of directed/ purposeful change towards a particular height. It means making a better life for everyone. In the present context of a highly uneven world, a better life for most people means, essentially, meeting basic needs: sufficient food to maintain good health; a safe, healthy place in which to live; affordable services available to everyone; and being treated with dignity and respect. This paper aimed at finding the relationship between modernization and Africa's nascent states' development. The hypothesis stated is that, modernization though it is a product of colonialism it has a positive impact or contribution to Africa's development. The qualitative research design is used and the documentary analysis is the research method used in to develop this paper. The development theories served of great significance in the understanding of this research such modernization, dependency, Economic growth and import Substitution industrialization theories.

The findings show that, there are two causes of Africa's underdevelopment namely colonialism as external factor and internal factors such as poor governance, corruption, lack of political will, lack of participation of grassroots in formulating, planning, implementing, monitoring and evaluation of developmental policies in Africa.

Furthermore, modernization plays a great role to African nascent states' development. The sectors like Agriculture, Transportation, Information and Communication Technology (ICT) among others should be modernized for the socio-economic purposes of the continent.

To this end, the African leaders should maximize the benefits or advantages of modernization to develop the continent and stop complaining the West everyday life.

Keywords: Modernization and Development

BACKGROUND OF THE STUDY

Africa as a continent full of natural resources, is still known as an undeveloped world. Surprisingly, to a wealthy continent to be the most poorest in the World whereby the majority of its population lives under 1\$ of the United States though the objectives of the MDGs¹ and SDGs² focusing at respectively to reduce poverty of the people living under 1\$ and 1.25\$ which encountered a failure and may not still succeed.

This could be explained by many factors as it is developed in this paper but modernization and dependency theories of development could help us understand better and develop well this paper in relation to underdevelopment of the nascent African States.

¹ In September 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at United Nations Headquarters in New York to adopt the [United Nations Millennium Declaration](#), committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have become known as the Millennium Development Goals. .Eradicating extreme poverty continues to be one of the main challenges of our time, and is a major concern of the international community. Ending this scourge will require the combined efforts of all, governments, civil society organizations and the private sector, in the context of a stronger and more effective global partnership for development. The Millennium Development Goals set time bound targets, by which progress in reducing income poverty, hunger, disease, lack of adequate shelter and exclusion — while promoting gender equality, health, education and environmental sustainability — can be measured. They also embody basic human rights — the rights of each person on the planet to health, education, shelter and security. The Goals are ambitious but feasible and, together with the comprehensive United Nations development agenda, set the course for the world's efforts to alleviate extreme poverty by 2015.

² On 25-27 September 2015, the Heads of State and Government and High Representatives, meeting at the United Nations Headquarters in New York as the Organization celebrates its seventieth anniversary, have decided today on new global Sustainable Development Goals. In replacement of the Millennium Development Goals (MDGs), the [Sustainable Development Goals \(SDGs\)](#) serve as a global plan action of the United Nations. This Agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. We recognise that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development. All countries and all stakeholders, acting in collaborative partnership, will implement this plan. We are resolved to free the human race from the tyranny of poverty and want and to heal and secure our planet. We are determined to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind. The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what these did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

Modernization theory is a theory used to explain the process of modernization that a nation goes through as it transitions from a traditional society to a modern one. The theory has not been attributed to any one person; instead, its development has been linked to American social scientists in the 1950s.³

The modernization movement of the 1950s and 1960s is an economic theory that is rooted in capitalism. The concept of modernization incorporates the full spectrum of the transition and drastic transformation that a traditional society has to undergo in order to become modern as argued by Hussain et al, and Lenin⁴. Modernisation is about Africa following the developmental footsteps of Europe (largely the former colonizer of Africa).

Modernization is associated with development aid from the developed countries. The idea was borrowed from the Marshall Plan of the post-World War II. Apparently aid can be negotiated either bilaterally or multilaterally. Whatever type of arrangement, aid (except humanitarian) has strings attached to them. These strings have tended to benefit the metropolitan states more than the recipient countries (Africa). Today China is one of Africa's biggest trade partners because it has arranged aid at conditions that are more favourable to Africa than those of the West. But the story still remains the same that China is interested in exploiting Africa's resources ahead of Europe and America. A balance sheet of trade between China and Africa will reveal that the former economy has more to gain by exporting its agriculture ideas, manpower and technology to Africa. The surplus economic value that is extracted by Chinese capital may be externalized in the form of profit remittances back home and some of it could be spent on conspicuous consumption. No wonder why Andre Gunder Frank⁵ thought that the only way to manage the exploitative relationship was through a political revolution.

Modernity correctly notes that technology is one of the major avenues through which monopoly capital penetrates and integrates the economies of Africa into the Chinese capitalist system. According to Samir et al⁶, classical economists such as Smith, Marx and Marshall gave

³ <http://study.com/academy/lesson/modernization-theory-definition-development-claims.html> (retrieved on 27/6/2017 at 3:14pm)

⁴ Hussain A, Tribe K (1981). *Marxism and the Agrarian Question: German Social Democracy and the Peasantry 1890-1907*. Hong Kong: MacMillan Press Ltd. And, Lenin VI (1964). *The Development of Capitalism in Russia*. Moscow: Progress Publishers.

⁵ Frank AG (1967). *Crisis in the Third World*. New York. Holmes and Meier.

⁶ Samir A, Chitala D, Mandaza I (1987). *SADCC Prospectus for Disengagement and Development in Southern Africa: Studies in African Political Economy*-United Nations University, London: ZED Books Ltd.

technological innovations pride in their analysis of economic progress in Africa. Marxists have argued that the difference between the modern world and Africa is purely technological and determined by the international division of labour. In other words, the West produce manufactured goods for itself and Africa while the later produce raw material for the West and for its large subsistence sector.

Modernization impoverished Africa through colonialism and imperialism by the West and this trend is with us today as the East takes its turn to deplete the continent's resources such as oil and minerals. Africa needs to outgrow poverty and underdevelopment but this may not be possible as long as we still believe in the power and strength of modernity at the expense of promoting new theories for Africa's development. Fighting Africa's poverty involves much more than a simple displacement of the traditional society by the modern society.

Ideas of modernization impoverished Africa. The theory failed to recognise the creativity and initiative of the Africans. Instead, it places value on externally sourced aid without attending to the inhibiting conditionalities attached to such aid. The failure of the theory to attend to such conditionalities may demonstrate the hidden hand behind the metropolitan states' application of the theory to Africa.

The theory's emphasis on the supremacy of the metropolis in the development of Africa is a cause of concern in contemporary discourse on Africa's development. It is this supremacy of the metropolis that altered Africa's superstructure of beliefs and value system.

According to Rodney⁷, the colonial conquest that followed the 1884 to 1885's Berlin Conference (partition of Africa) established a comprehensive economic and political domination of Africa by the West. Africa's endogenous development path was discarded in favour of an 'external driven development path' which was and is still manipulated by the metropolis. There has to be a paradigm shift if Africa is to reclaim its right to chart a new way to development.

⁷ Rodney W (1972). *How Europe Underdeveloped Africa*. Dar es Salaam: Tanzanian Publishing House.

PROBLEM STATEMENT

It is well known that Africa is falling behind the rest of the world in terms of economic well-being. Sub-Saharan African countries have not fulfilled their potential since independence. While other developing countries and regions have grown over the past 50 years, much of Africa has stagnated.

The history of Colonialism in Africa is easy link to Frank's dependency theory from the late 1960s. After the Second World War, the majority of African nations declared independence and ruling elites were confronted with the dual challenge of promoting both nation-state building and economic development.

In the mid1970s, most African countries went bankrupt due to external crises which led to aid response from the World Bank and International Monetary Fund (IMF) with requirements of liberation: **Open Market Economy**.

The historical colonial relationship between Africa's nations and western powers created the failing of institutional foundation, that together with the post-colonial cold war era eventually lead to economic crises. The following consequence of forced pragmatic neo-liberal market economy has further hindered Africa from developing.

High external dependency and institutional weaknesses that are root of Africa's economies slow growth.⁸

African theories of underdevelopment are inextricably linked to with the concepts of imperialism and colonialism. Consequently, a clarification of these terms would be in order. African nationalists use these terms loosely and frequently interchangeably. In most cases, however, it is the modern colonialism of the European powers to which they refer. Imperialism ordinarily applies to any attempt by a state or group of states to exercise control over another people or territory. In other words, imperialism is simply expansion into additional territory and domination of subject peoples for the advantage of alien rulers. As a general phenomenon, imperialism is as old as recorded history and is not associated with any particular ideology, belief, or economic system.

In Lenin's modern context, colonialism is the establishment and maintenance by the one nation-state of political domination over a geographically separate territory, and the subsequent social, cultural, and economic subordination of its indigenous population.

⁸ Eyo D, Sandbrook R., (2003): Neo-liberalism and Just Development in Africa, the United Nations University Press, Tokyo In: States, Markets and Just Growth.

What distinguishes modern colonialism from other kinds of imperialism is that the former is marked by significant racial, cultural, and/ or religious differences implying a superior – inferior relationship between rulers and ruled, all of which is reinforced by a political and legal system designed to maintain, if not perpetuate, this definite supremacy and subordination.⁹

The open market and unfavorable global trade rules have led to exploitation of Africa and increased the underdevelopment of the continent. This has little hope for improvements in Africa's export position, which is crucial in its potential, export oriented growth. In regards to that, liberalization through modernization jacket has increased income inequality between the World's developed countries and the developing ones (African countries).

As long as there exist an ignorance for the side effects of the neo-liberal economies in Africa using its strategies such as modernization and foreign aid, development and just is seen as relatively far fetched, even in the long run. External factors will remain the foundation for the underdevelopment of Africa and are still hindering development by allowing more developed countries to exploit the continent.

Research Question

This paper aims at finding out what is the relationship between Modernization as a colonial strategy and Africa's development. Further, it seeks at making an appraisal of the both positive and negative sides of modernization on the Africa's development.

Research hypothesis

To above research question could be answered by the following pre-anticipated answer that though modernization contributes to development of the Africa.

Research objectives

The following objectives are pursued in this paper:

- To establish the relationship between modernization and African nascent states' development;
- To find out both positive and negative sides of modernization on the African nascent states' development;
- To understand modernization and dependency theories on the African nascent states' development.

⁹ Kenneth W. Grundy (1996): African Explanation of Underdevelopment: The Theoretical Basis for Political Action; *The review of politics*, Vol. 28, No. 1. (Jan, 1996), pp.62 - 64

Definition of key concepts

Modernization: Modernization as a theory emerged in the early 1960s as the demises of European colonialism produced a host of newly independent countries in Africa and Asia.

Hence, modernization could be seen as a period of transition during which a society sheds its “traditional” characteristics and becomes dominated by “modern” types of institutions and action.¹⁰ Modernization theorists often see traditions as an obstacle to economic growth.¹¹ Although modernization might bring about racial change for traditional societies, it was thought worth the price. Functionalist theory of social change is the theoretical foundation of the modernization perspectives.¹²

Development: In general terms, “development” means an “event constituting a new stage in a changing situation”¹³ or the process of change *per se*. If not qualified, “development” is implicitly intended as something positive or desirable. When referring to a society or to a socio-economic system, “development” usually means improvement, either in the general situation of the system, or in some of its constituent elements. Development may occur due to some deliberate action carried out by single agents or by some authority pre-ordered to achieve improvement, to favorable circumstances in both. Development policies and private investment, in all their forms, are examples of such actions.

Given this broad definition, “development” is a multi-dimensional concept in its nature, because any improvement of complex systems, as indeed actual socio-economic systems are, can occur in different parts or ways, at different speeds and driven by different forces. Additionally, the development of one part of the system may be detrimental to the development of other parts, giving rise to conflicting objectives (trade-offs) and conflicts. Consequently, measuring development, i.e. determining whether and to what extent a system is developing, is an intrinsically multidimensional exercise.

Therefore, **Development as Modernization-** emphasizes the process of social change which is required to produce economic advancement; examines changes in social, psychological and

¹⁰ Athanasius Fonteh AMUNGWA (2013): *Rural Sociology: An African Perspective*, Cameroon, p.249.

¹¹ Loc. Cit.

¹² Loc. Cit.

¹³ Oxford English Dictionary. <http://oxforddictionaries.com>

political processes. How to develop wealth oriented behavior and values in individuals; profit seeking rather than subsistence and self-sufficiency.

If one asks what should be developed? From this question, the answers can be developed through the various Dimensions of development.

Even if the development of a socio-economic system can be viewed as a holistic exercise, i.e. as an all-encompassing endeavour; for practical purposes, in particular for policy making and development management, the focus of the agents aiming at development is almost always on selected parts of the system or on specific features. To this end, “development” is qualified and specified in different ways. A summary (non-exhaustive) list of possible qualifications comprises:

- **Economic development:** i.e., improvement of the way endowments and goods and services are used within (or by) the system to generate new goods and services in order to provide additional consumption and/or investment possibilities to the members of the system.
- **Human development:** people-centred development, where the focus is put on the improvement of the various dimensions affecting the well-being of individuals and their relationships with the society (health, education, entitlements, capabilities, empowerment etc.)
- **Sustainable development:** development which considers the long term perspectives of the socio-economic system, to ensure that improvements occurring in the short term will not be detrimental to the future status or development potential of the system, i.e. development will be “sustainable” on environmental, social, financial and other grounds.
- **Territorial development:** development of a specific region (space) achievable by exploiting the specific socio-economic, environmental and institutional potential of the area, and its relationships with external subjects.

Economic development has traditionally been seen as the first form of development. It has often been strictly associated with the concept of economic growth, in turn defined as an increase in the *per capita* income of the economic system. Indeed, growth defined in this way can be seen more as the result of an economic development process, i.e. the transformation of the structure of an economic system, rather than as a development process *per se*. Countless economists provided insights and proposed models to explain how economic systems develop (or should develop) to generate growth. Just to mention some milestones, it is worth mentioning the contributions of Shumpeter (1911)¹⁴, who suggested that economic systems evolve through

¹⁴ Shumpeter J., 1911. *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle* (original title in German) 1911.

subsequent disequilibria due to agents which introduce innovations, more than “developing” according to a pre-determined path. Ramsey (1928)¹⁵ set a model to maximise the consumption of future generations with endogenous savings, disutility of work and individuals with an infinite time horizon. Allais (1947)¹⁶ (and, later, P. Samuelson) set the first “*overlapping generations model*”, where individuals have a finite time horizon but overlap with other individuals living longer. Solow (1956)¹⁷ with his “*Long Run Growth Model*” highlights that, increasing the capital per unit of labour (a shift in the capital/labour ratio) increases labour productivity and generates growth. But factors exhibit diminishing marginal productivity. The diminishing marginal productivity should push the economy at a point where additional capital per worker would have no impact on production. The output would increase only if labour also increases. In this situation, there would be no interest in investing more because this would bring no returns. Therefore output, capital and labour would all increase at the same rate (steady state).¹⁸

Less-industrialised countries, which enjoy a lower capital/labour ratio, should benefit more from capital increases (investment) than industrialised ones, where the capital/labour ratio is higher. The larger returns on investment in less industrialised countries, (assuming constant returns to scale), should generate convergence between less-industrialised and industrialised countries. However, exogenous technology improvements shift the output, pushing forward the steady state. Romer (1986)¹⁹ with his “*endogenous growth model*”, questioned the idea of technology shifts as exogenous to the economic system, highlighting how investment and human activities in general have positive “spillover” effects on knowledge.

He implies that technology, which is an application of knowledge to production processes, is endogenous, i.e. generated within the economic system. Similarly, impacts of investment in research (innovation) and in human capital on technological changes and growth, have been

¹⁵ Ramsey F, P. 1928. A Mathematical Theory of Saving. *Economic Journal*, vol. 38, no. 152, December 1928, pages 543–559.

¹⁶ Allais M. 1947. *Économie et Intérêt. Présentation nouvelle des problèmes fondamentaux relatifs au rôle économique du taux d'intérêt et de leurs solutions*. Paris, Imprimerie nationale. Vol 2(1947),

¹⁷ Solow R.M. 1956. A Contribution to the Theory of Economic Growth. *The quarterly Journal of Economics* Vol 70, No. 1 (Feb.1956). 65-94

¹⁸ Solow accepts almost all the assumptions of the Harrod-Domar model, except the fixed proportions between capital and labour. See: Harrod R. F., 1939. An Essay in Dynamic Theory. *The Economic Journal*, Vol. 49, No. 193. (Mar., 1939)

¹⁹ Romer P., M., 1986. Increasing Returns and Long-Run Growth. *The Journal of Political Economy*, Vol. 94, No. 5 (Oct., 1986), pp. 1002-1037.

considered. For instance, Aghion and Howitt (1990)²⁰ address the issue of research and obsolescence and highlight that the expectations of an accelerated pace of research in the future can depress current research. There is a fear of rapid obsolescence of possible innovations (a too fast process of Schumpeterian creative destruction). Galor and Zeira (1993)²¹ highlight how strong income inequalities may prevent investment in human capital leading to lower per capita output. Galor and Moav (2004)²² identify the replacement of physical capital accumulation with human capital accumulation, stimulated by a more equitable income distribution, as an advanced stage along the development process, which sustains the so called “modern growth”, as opposed to the “industrial revolution” growth.

Human development. The above-mentioned emphasis on the links between human capital and growth constituted a step towards a multi-dimensional concept of development, where knowledge is not only fundamental to economic growth but an end *per se*, as it generates empowerment, self-reliance and a general improvement in community and social relationships. Nowadays the concept of development encompasses a set of elements comprised in more than one of the above-mentioned qualifications, UNDP (2010)²³

Solow accepts almost all the assumptions of the Harrod-Domar model, except the fixed proportions between capital and labour. See: Harrod R. F., 1939. An Essay in Dynamic Theory. *The Economic Journal*, Vol. 49, No. 193. (Mar., 1939), pp. 14-33. and: Domar, E., 1946, Capital Expansion, Rate of Growth and Employment, *Econometrica*. for instance, provides an aggregate concept of human development on the basis of three criteria: (i) “Long and healthy life”, (ii) “knowledge” and (iii) “A decent standard of living”, respectively measured by life expectancy at birth, mean years and expected years of schooling and gross national income per

²⁰ Aghion, P. Howitt, P., 1990. A Model of Growth Through Creative Destruction. *Working Paper No. 3223 January 1990 NBER*

²¹ Galor, O. and Zeira. 1993. Income Distribution and Macroeconomics. *Review of Economic Studies* (1993) 60 (1): 35-52

²² Galor, O., Moav O., 2004. From Physical to Human Capital Accumulation: Inequality and the Process of Development. *Review of Economic Studies*, Vol.71, 4, pp 1001-1026, Dec 2004.

²³ UNDP, 2010. Human Development Report 2010. The Real Wealth of Nations: Pathways to Human Development. http://hdr.undp.org/en/media/HDR_2010_EN_Complete_reprint.pdf (accessed on 20 june 2017 at 2:55am)

The HDI is calculated as the geometric mean of three indexes for the three components. Each index ranges between 0 and 1 because the minimum level of the selected measure observed between 1990 and 2010 in any country is set to 0, the maximum level observed is set to 1 and all the other observations are normalised within these bounds. Inequality adjustments are made by means of the Atkinson index of each measure (Atkinson, A. 1970. On the Measurement of Inequality. *Journal of Economic Theory* 2(3): 244–63).

capita at purchasing parity. The associated Human Development Index (HDI) is then adjusted on the basis of (iv) the inequality in the distribution of the specific features within countries, assuming that the unequal distribution of wealth is an undesirable feature of the development processes.

Sustainable development. The concept of “sustainable development” was first introduced by Brundtland (1987)²⁴, who defines development as “sustainable” if it “*meets the needs of the present without compromising the ability of future generations to meet their own needs*”. Sustainable development implies minimizing the use of exhaustible resources, or at least, ensuring that revenues obtained from them are used to create a constant flow of income across generations, and making an appropriate use of renewable resources. This applies to energy (oil and oil products in particular) but also to fish stock, wildlife, forests, water, land and air. Land degradation, due to soil erosion and salinization, persistent water and air pollution, depletion of fish stock and deforestation are all examples of consequences of non-sustainable activities. Soil conservation practices; Good Agricultural Practices (GAP) based on reduced use of energy, pesticides and chemicals; waste management and recycling, waste water treatment, use of renewable energy sources such as biomasses and solar panels, are frequently cited as techniques for sustainable development. The concept of sustainability has also been extended beyond environmental concerns, to include social sustainability, i.e. long term acceptance and ownership of development changes by the citizens, their organizations and associations (civil society), and financial and economic sustainability.

Territorial development. This dimension of development refers to a territorial system, intended as a set of interrelationships between rural and urban areas, in a space characterized by the existence of poles of attraction for human activities (production and consumption of goods and services, but also culture and social life), and connected by information systems and transport infrastructures. When referring to production activities, poles of attraction can be characterized as “Clusters” where, for various reasons, homogeneous or closely interlinked activities are implemented. Territorial systems are open to influences from the national and supra-national contexts and from the interrelationships between territories. Territorial development implies focusing on the assets of the territory, its potential and constraints (FAO,

²⁴ Brundtland, 1987. *Our Common Future*, World Commission on Environment and Development (WCED) Oxford: Oxford University Press.

2005)²⁵. Policies to exploit and enhance this potential play an important role in the development process.

LITERATURE REVIEW

The review of literature in this paper, focusing on the analysis of multifaceted literature basing on two strands of thoughts stand out. The first one would be on the colonial view in which different authors analyze the negative effects of colonialism of colonialism in African nascent states' development – this refers to external factors of Africa's underdevelopment and the second and the last is the view of the authors on the positive impact of modernization theory to African nascent states' development but hindered by internal factors – this refers to internal factors for African nascent states' underdevelopment. Underdevelopment is usually characterized by: low per capita incomes, low literacy and educational attainment, lack of basic services- water and power and so on.

The first view is the colonialism. This should be understood as the external factors that caused Africa's underdevelopment before the new policy of modernization. Why do we consider this factor as important to this paper? It is because, modernization should have existed without colonialism. To this end, it is important to us to consider colonialism as a point of depart. According to this view, the persistent effect of colonial institutions can explain the huge differences in income across all ex-colonies including Africa as argued by Acemoglu et al. 2001, Rodrik et al. 2004 and Bhattacharyya 2004.²⁶

Europeans resorted to different style of colonization depending on the feasibility of settlement where they created the institutions.

These colonies erected institutions characterized by strong protection of private property and efficient enforcement of contracts. These institutions created by the colonizers have persisted

²⁵ FAO, 2005. *An Approach to Rural Development: Participatory and Negotiated Territorial Development (PNTD)*. Rural Development Division Food and Agriculture Organization of the United Nations (FAO) April 2005. http://www.fao.org/sd/dim_pe2/docs/pe2_050402d1_en.pdf (accessed on 15 june 2017 at 4:23pm)

²⁶ Earlier work by Easterly and Levine (1997) and Sachs and Warner (1997) also reports strong link between quality of state institutions and post-war growth (or the lack of it) in Africa. Easterly and Levine (1997) show that ethnic diversity in Africa has led to social polarization and the formation of several rival interest groups which increase the likelihood of selecting socially sub-optimal policies when an ethnic representative in the government fail to internalise the entire social cost of their rent seeking policies. Sachs and Warner (1997), on the other hand, stress on Africa's lack of openness to international markets and unfavourable geography as other contributors to poor growth in addition to poor quality institutions.

over time and they continue to influence the economic performance of the colonies even long after independence. The settlement colonies with better institutions continue to perform well in the economic arena, whereas the non-settlement colonies with poor institutions continue to struggle.

In addition to that, there might also be an explanation related to the economic impact of Africa's engagement in slave trade that been caused by the external World. According to this view, Africa's engagement in the slave trade caused massive depopulation of the continent over two centuries. Many things remain uncertain about the slave trade and its consequences for Africa, but the general picture of destructiveness is clear, and that destructiveness can be shown to be the logical consequence of the manner of recruitment of captives in Africa as argued by Walter Rodney (1973)²⁷ in his book entitled "How Europe Underdeveloped Africa."

This resulted into an implosion of the continent's production possibility frontier and an unambiguous reduction in welfare. The secular decline in welfare continued over more than two centuries plunging the continent into economic backwardness as said by Gemery and Hogendorn 1979; Inikori 1992; and Manning 1981.²⁸

Another theory within this group is proposed by Nunn (2004)²⁹. He argues that Africa's engagement in slave trade had a detrimental impact on the development of domestic institutions. The frequent slave raids and the culture of violence attached with it severely damaged the security of private property and weakened the judicial system creating a persistent state of lawlessness in the society. These weak institutions persisted over time and are continuing to affect contemporary development. Nunn (2004) assumes that the slaves exported from a particular port in Africa are coming from the country where the port is plus from the close neighbouring countries inland. This method always leaves a possibility of under-representation of slaves from inland.

²⁷ Walter Rodney (1973): *How Europe underdeveloped Africa?* Bogle-L'Ouverture Publications, London and Tanzanian Publishing House, Dar-Es-Salaam, Transcript from 6th reprint, 1983

²⁸ - Gemery, H. and J. Hogendorn. (1979). "The Economic Costs of West African Participation in the Atlantic Slave Trade: A Preliminary Sampling for the Eighteenth Century," In Gemery, H. and J. Hogendorn (eds.), *The Uncommon Market: Essays in the Economic History of the Atlantic Slave Trade*, Academic Press: New York.

- Inikori, J. (1992). "The Chaining of a Continent: Export Demand for Captives and the History of Africa South of the Sahara, 1450-1870," Institute of Social and Economic Research, University of the West Indies, Mona, Jamaica.

- Manning, P. (1981). "The Enslavement of Africans: A Demographic Model," *Canadian Journal of African Studies*, 15(3), 499-526.

²⁹ Nunn, N. (2004). "Slavery, Institutional Development, and Long-Run Growth in Africa, 1400-2000," Mimeo, Department of Economics and Institute for Policy Analysis, University of Toronto, Canada.

It can also be the case that a country chooses slave trade and demonstrates extreme reliance on warfare and violence because of some unobserved characteristics inherent in its culture. If these characteristics are still persisting, then it is impossible to identify econometrically the partial effects of slave trade on its current level of development. The size of the estimates will be biased away from zero as the coefficient will account for the unobserved country effect plus the true effect of slave trade.

The African Leaders of Ghana, Guinea, and Mali openly state that their backwardness is a direct product of European colonialist exploitation. In their view, colonial rule has prevented the socioeconomic development of Africa in the interests of the indigenous masses. They regarded the African economy as an appendage of the metropolitan economy, to be exploited for enhancing the national power, profit, and prestige.

They took slaves, profits, and raw materials out of the continent, the argument continues, and left virtually nothing in return. The resulting conclusion is that in order to foster development in their own interests, Africans must terminate colonial political control.

Traditional institutions were either destroyed or retained on the basis of their utility to the colonial regime. According to Séko Touré, this was the real nature of European colonialism.

So, after they had destroyed the indigenous African economy, the imperialists replaced it with capitalism – not competitive capitalism as a rule but monopoly capitalism in its most odious form. The commercial system which evolved, the *economie de traite*, sought to exploit in a systematic way Africa's resources and raw materials at the expense of the native population. In Touré's words: "The colonial system took our goods at a very paltry price and sold them at a very high price. The profits ... did not go to the producers who were the real creators, the true owners of the products; they went through many middlemen ... into the cash boxes of the colonialists"³⁰

Generally, colonialism's effects on Africa's development was done in the way that could be summarized as follows: Indigenous population exploited, traditional way of life and self-sufficient mode of production have been destroyed, forced to pay taxes and conscripted labor practices, social differentiation increased- disintegrating force, fatal effects on secondary (manufacturing) and tertiary (service) sectors- import of cheap goods forced indigenous artisans out of work, discouraged modern industrialization, thus what occurred in these situations was dependent not autonomous development, colonial powers extracted wealth for home country-

³⁰ Grundy W. Kenneth (1996): African Explanations of Underdevelopment: The Theoretical Basis for Political Action, *The Review of Politics*, Vol. 28, No. 1. Pp. 64-65

Netherlands, France, Great Britain, international division of labor (IDL) and western dominated trading structure was created to take advantage of colonial authority, IDL=allocation of tasks among laborers such that each one engages in tasks that he performs most efficiently and this promotes worker specialization and productivity.

The second view refers to internal factors. Scholars of internal hindering factors to Africa's development, claim that poor policy making, corruption, political instability or other domestic failures are the main factors³¹. For corruption today, foreign businesses arrive in Africa and with the help of corrupt local government officials, will extract the precious resources. For example, in 2004 China owned 40% of Sudan's oil resources³² (1). Child labor, as well as cheap labor, is used by these companies. For example, Hershey (the chocolate company) was under fire for using child labor to obtain their cocoa (2). Because foreign businesses are arriving in Africa and taking the resources, **none** of that money is going back into the African economy (aside from the pathetic wages that are being paid to labor, if at all).

Furthermore, the fact that African leaders were permitted to get away with ruinous, self-interested decisions must be attributed, in large part, to a relative lack of democracy (or to single-party dominance) in Africa. There has been little bottom-up pressure on leadership to make better choices, although there has been encouraging growth of civil society in parts of the continent over the last decade. This apparent passivity of the populace in the face of bad leadership must, at least in part, be attributed to a neo-patrimonial culture. In that culture, the "big man" rules and dispenses favors. He uses all manner of tools to bolster his rule— from traditional governance structures and kinship ties to witchcraft and the church. The system that many African leaders have preferred thrives on corruption and nepotism.

Corruption is not particular to Africa, of course. But leaders from other societies where corruption is also a problem - Asia in particular have displayed a commitment to popular welfare that is lacking in African leadership.

African societies, in contrast, have overwhelmingly been run along the lines of the "politics of the belly" a primordial lust for wealth and power along crude racial, tribal, party, and familial lines. In this system, government officials and politically connected business elite use their positions and influence to enrich themselves and their families or kinsmen. Personal wealth,

³¹ See supra, Eyo D, Sandrook R., (2003), p. 7.

³² www.quora.com/Why-is-africa-so-underdeveloped-inspite-of-rich-natural-resources (retrieved on Sunday 02/7/2017 at 8:15pm)

Jean-François Bayart of the Centre for International Studies and Research in Paris writes, “Is one of the chief political virtues rather than being an object of disapproval.”³³

Similarly, Patrick Chabal of King’s College London and Jean-Pascal Daloz of the University of Oslo argue that “in most African countries, the state is no more than a decor, a pseudo-Western facade masking the realities of deeply personalized political relations [where] legitimacy is firmly embedded in the patrimonial practices of patrons and their networks.”³⁴

There has been little interest among the leadership of many African countries to reform the system. At the same time, a disastrous “reform” took place in Zimbabwe, where land was seized and redistributed on the basis of political allegiances.

The top-down imposition of states and borders on Africa’s rich ethnic and sectarian tapestry by colonial powers has institutionalized weak governance structures. African states were both formed and maintained not by raising taxes and ensuring public goods, as was the case in Europe, but by colonial fiat. Over the past 50 years, however, the Organization of African Unity/the African Union has been adamantly opposed to changing Africa’s colonial boundaries.

Therefore, from the two above views, one could say that the development of Africa has been hindered by both external factors – effects of colonialism on Africa (which includes modernization in the context of this paper) and the internal factors too which generate from the African governments themselves. Nevertheless, despite the fact that modernization presents some effects on the development of African nascent states, but it has also positively contributed to their development.

VII. RESEARCH DESIGN AND METHODOLOGY

This paper uses a qualitative research design and the documentary analysis research method. This method aims at analyzing various documents specifically on the Africa’s development and colonialism in Africa. The data contained herein, is from a secondary source.

Development theories are used to help us understand and develop this work. Development theories seek to explain development processes and development inequalities based on

³³ Jean-François Bayart, *The State in Africa: The Politics of the Belly* (London: Longman, 1993), p. 238.

³⁴ Patrick Chabal and Jean-Pascal Daloz, *Africa Works: Disorder as a Political Instrument* (London: James Currey, 1999), p. 16.

particular definitions of development. Policy formulation coming out of these theories. While development theories usually have a spatial element, in that they consider how and why levels of “development” vary between locations, geographers have often been at the margins of theory formulation. As said earlier in the introduction, there are various Development Theories, coined by scholars in time past, but for the purpose of this paper, merits and demerits of only a few will be examined.

Modernization Theory of Development

According to the Merriam-Webster Dictionary, "Modernization is the process of advancement from an old and antiquated state to a current or most recent period of existence, that comprising of the newest information methods or technology".³⁵

Modernization theory posited that poor countries are undeveloped or underdeveloped because of their archaic traditional social, political and economic structures. In order to develop, these countries have to industrialize, and so must also urbanize. Before they can industrialize, though, they must overcome their traditional structures by shifting from traditional values to ones more congenial to industrialization. Secondly, the western advanced industrial countries (AICs) serve as the essential models of development. The notion of a dual society is one of the most powerful concepts. It suggests that there are two sectors within any society, a modernizing industrial sector orienting itself to western values and a backward traditional agricultural sector that takes time to catch up. Like other theories in the developmental tradition, theories of modernization have been criticized for viewing the transformation of societies as largely the result of immanent processes of change.

Advantages of Modernization Theory of Development

- New technology has revolutionized the speed and accuracy of production. Furthermore, increased global trade allows businesses to sell their products anywhere.
- Natural resources such as wood, water and oil are often processed in modernized society, and skyscrapers and factories begin to transform the landscape. In many

³⁵ Merriam - Webster Dictionary. (2014). *Modernization*. Retrieved June 15th, 2017, from <http://www.merriamwebster.com/: http://www.merriamwebster.com/dictionary/modernization>

poorer countries, the discovery of oil and the adoption of new technologies is welcomed for the financial opportunities it presents.

Disadvantages of the Modernization theory of Development

- Increased global production may hurt domestic business when international companies can offer products at cheaper prices. The production of goods in foreign countries, where labour laws are more relaxed, amounts to exploitation in some people's view.
- Most of all, due to the implications of Modernization theory of development (coping western modernization), it lead to dependence of highly indebted poor countries and underdeveloped countries on the western and more developed countries.

Economic Growth Theory of Development

Economic development theories seek to explain and predict how economies develop (or not) over time, also barriers to growth can be identified and overcome and how government can induce (start), sustain and accelerate growth with appropriate development policies.

Economic growth is measured by varying economic indicators (BOP, GDP, GNP etc.) These economic indicators have a huge impact on an economies market. The Economic growth theory of development argues that development of an individual, a community, a country or an economy solely depends on the improvement of the countries/individuals economic indicators.

Advantages of Economic Growth Theory of Development

- The Economic growth theory allows for a countries improvement on her comparative advantage – concentration of a country on manufacturing a product at a relatively lower cost than another country or economy.
- This theory also allows for improvement in an economies Balance of Trade, Balance of Payment, Gross Domestic Product, Gross National Product, etc.

Disadvantages of the Economic Growth Theory of Development

- Laying so much emphasis on just the economic growth of an economy obviously would imply grievous effects on global warming due to the close correlation of economic growth with carbon dioxide emissions, as a result of intense industrialization and manufacturing.

- This theory overlooks other variables of development in a country besides the economy, e.g. religion, culture, which are of equal or even more importance than just a single variable.

Dependency Theory of Development

From Economics Online, “Dependency theory advocated an inward looking approach to development and an increased role for the state in terms of imposing barriers to trade, making inward investment difficult and promoting nationalisation of key industries”.

Dependency theory³⁶: introduced by Raul Prebisch in the late 1950s, is an economic concept that identifies a financial dependence between the rich and the poor nations. More specifically, this theory holds that the richer nations increase in wealth at the **expense** of the poorer nations due to a relationship that exists between economic and other factors. Initially, Prebisch, as Director of the United Nations Economic Commission for Latin America, was concerned about the fact that industrialized countries were achieving economic growth, yet without contributing to growth to poor countries.

Instead, according to Prebisch’s studies, the economic activity in the industrialized countries caused a range of economic problems in the poorer nations. Prebisch attributed the situation to the fact that the poorer nations are primarily exporters of commodities and importers of the finished goods that the industrialized nations produce with these commodities. Therefore, it is impossible to achieve equal growth.³⁷

Advantages of Dependency Theory of Development

- The theory analyses the inequality existing between the poor and the rich countries, moreover the theory breaks some political bonds and explains reasons why the wealthy nations are taking advantage of the poor countries.
- Also, dependency theory dismisses the neoclassical theory's claim that the existing global inequality is caused by the poor countries' laziness.

³⁶ www.myaccountingcourse.com/accounting-dictionary/dependency-theory (retrieved on 15 June 2017 at 9:49 pm)

³⁷ Ibid.

Disadvantages of Dependency Theory of Development

- Dependency theory does not explain other factors that lead to underdevelopment other than the role played by the wealthy nations.
- The poor nations provide natural resources, cheap labour destination for obsolete technology and markets to the wealthy nations without which the later would not have the standard of living and this would further lead to exploitation of raw materials exported to the developed countries hence leading to underdevelopment of developing economies.
- These theories lead to interference of the dependent economies by dominant economies. Any attempt by the dependent economies or countries to resist the influences of dependency will result into economic sanctions and or military invasion and control.

Import Substitution Industrialization Theory (ISI)

According to Investopedia “ISI is an economic theory employed by developing or emerging market nations that wish to increase their self-sufficiency and decrease their dependency on developed countries. Implementation of the theory focuses on protection and incubation of domestic infant industries so they may emerge to compete with imported goods and make the local economy more self-sufficient.

Advantages of the ISI Theory

- Infant industries where protected through bans on competitive imported goods and concessions on sales tax and customs duties on inputs.
- Import substitution policies might create jobs in the short run, as domestic producers replace foreign producers.

Disadvantages of Import Substitution Industrialization

- Economics theory shows that in the long run output and growth will be lower than it would otherwise have been, because import substitution denies the country the benefits to be gained from specialisation and foreign imports.
- Import substitution industries create inefficient and obsolete products as they are not exposed to international competition.
- ISI lead chronic problems with the balance of trade and payments.

Growth Pole Theory of Development

The central idea of the growth poles theory is that economic development, or growth, is not uniform over an entire region, but instead takes place around a specific pole (or cluster). This pole is often characterized by core (key) industries around which linked industries develop, mainly through direct and indirect effects.

Advantages of Growth Pole Theory

Growth pole helps in natural progression in the urbanization process, where relative growth in a countries urban population is accompanied by an even faster increase in the economic, political, and cultural importance of cities.

- Growth pole gave rise to dialectical relationship between the concepts of growth and development.

Disadvantages of Growth Pole Theory

- It leads to urban poverty and income inequalities.
- It leads to economic cost which includes high unemployment, particularly among recent graduates from schools and colleges, low productivity per capita due to poor health of the labour force.

RESEARCH FINDINGS

The modernization the movement of the 1950s and 1960s is an economic theory that is rooted in capitalism. The concept of modernization incorporates the full spectrum of the transition and drastic transformation that a traditional society has to undergo in order to become modern (Hussain et al., 1981; Lenin, 1964). Modernisation is about Africa following the developmental footsteps of Europe (largely the former colonizer of Africa). According to modernity, policies intended to raise the standard of living of the poor often consist of disseminating knowledge and information about more efficient techniques of production.

Thus, modernization is a term used to describe the transformation of a society from traditional, rural, agrarian society to a secular, urban and industrialized society. This is what our societies are going through. With all kinds of development in medical, technological arena, slowly our societies are transforming very fast. Earlier there were less number of urban areas or small town areas in Africa. Most of the places were pristine landscapes with natural surroundings, amidst

nature's beauty. Human beings also thrived in such places. They didn't even know if they could have a telephone to connect with someone they cared. All these never existed once upon a time. Children never imagined beyond their clay models or simple plastic dolls or their own kitchen set made of trash items. Now things are not like that: Modernization is now playing its role.

The role of Modernization for the development of African nascent States' development

Modernization has positively and to some extent contributed to the development of African nascent States. This could be well understood through the study of some few sectors as mentioned below namely agriculture, information and Communication Technology (ICT) and infrastructure (transport). In each other, we provide the role played by modernization but we present the criticism.

1. Agriculture

In the traditional systems, perhaps the most important difference between the categories is the way farmers see themselves and their roles. Traditional farmers, for example, often say that they seek to work effectively with resources at hand. That is, they use the land, rainfall, seeds, tillage methods and power sources they have to produce what nature offers. Conventional processes are used to till the land, select and plant seeds, protect plants from competing plants and animals and gather the harvest. Surpluses are marketed through nearby outlets. Such producers frequently report only limited capacity to change these processes - and some seek to avoid change.³⁸

The productivity of such systems depends primarily on the natural fertility of the soils - enhanced by skillful care and on the climate. The technology and management systems involved are often characterized by lack of access to, or reluctance to use new information about production and/or management, or public or commercial assistance. Their productivity tends to grow slowly, often in response to outside developments that reduce producer isolation, increase access to markets or support investment in water and land.

³⁸ William C. Motes: Modern Agriculture and Its Benefits – Trends, Implications and Outlook, Global Harvesting Initiative, p.12.

However, in modern agricultural systems farmers believe they have much more central roles and are eager to apply technology and information to control most components of the system, a very different view from that of traditional farmers. In contrast to the isolation inherent in traditional arrangements, modern agriculture tends to see its success as dependent on linkages—access to resources, technology, management, investment, markets and supportive government policies.³⁹ In Africa, country like South Africa where modern agriculture is practiced, the result is significant. If African nascent states could adopt a priority policy of modern agriculture, the agricultural yields would be sufficient for both food and cash crops so to reach some level of development.

As a result, much of the success of modern systems depends on the development and maintenance of soil fertility through the specific provision of nutrients when they are depleted; of machine power and technology to create soil conditions necessary to promote plant growth with minimal disturbance and minimal soil loss; of the use of improved genetics for crops and livestock to enhance yields, quality and reliability; and on modern genetic and other techniques to protect plants and livestock from losses to competing plants, diseases, drought insects and other threats.

This success also depends on access to efficient, effective irrigation to supplement rainfall in many climates; on advanced harvesting, handling and storage equipment and techniques to prevent losses and to market commodities efficiently. It depends, in turn, on both public and private investment to provide access to technology, equipment, information and physical facilities throughout the production-marketing system. And, it depends on well supported commercial and financial systems and broad public policies that support effective commercial markets at all levels that generate economic returns throughout the system.⁴⁰

To this end, one could ask why is the modern agriculture important? The following explanation would serve as the answer to this question.

There is really little mystery about why agriculture is important - it is the physical foundation of human energy, health, and physical well-being - all key components of every important human activity. To the degree these components are missing, the human existence is defined primarily by the effort necessary to provide them. Making them more widely available at lower costs increases the capacity of any population to invest in more productive work, education, economic development and cultural activities.

So, the basic facts with the modern agriculture are clear that show its importance:

³⁹ Ibid, p.13

⁴⁰ Ibid, p.13

- More people the world over eat more and better because of modern agriculture.

Increased production continues to enable steadily improving diets, reflecting increased availability of all foods, dietary diversity and access to high-protein food products.

- The additional food modern systems provide has enabled hundreds of millions of people to realize more of their potential and better lives—thus enhancing the achievements of all, from students to retirees. It increases workforce productivity and generally supports human development and growth.

- The current hunger and malnutrition that extends to some one billion people reflects poor policies, low productivity and low incomes. Failure to continue to apply new technologies to advance productivity on the farm and across the food system simply worsens every aspect of these problems, especially those forced on individuals and families who live in poverty. To a very large extent, current food insecurity problems reflect bad policies, poor infrastructure and low economic productivity in the nations where these conditions occur, rather than a physical lack of food or food production capacity.

- The significant hunger and malnutrition that persist in many parts of the world would have been far worse had agricultural systems not grown and developed as they did.

The physical pressures on the environment that have become increasingly prominent public concerns have been greatly ameliorated by modern agriculture, which has reduced:

- The need to expand land area, and thereby reduced pressure to cultivate fragile lands and forested areas. Modern agriculture includes successful new technologies, including biotechnology to enable both higher yields and reduced environmental impacts. These reduce the land, fertilizer and pesticide use per unit of output.
- Pressure on grassland, forestland and cropland thus increasing wildlife habitat as a result.

While the unintended negative environmental consequences of modern agriculture are frequently noted, little mention is ever made of the negative environmental impacts that frequently arise from smallholder farming, especially from —slash and burn primitive systems in wide use in developing countries where vertical rows are often planted up steep hillsides, resulting in some of the world's heaviest soil erosion, badly polluted watercourses and many other problems of both efficiency and sustainability. The lack of sustainability of these practices can be seen in the fact that they typically lead to abandonment of successive plots year after year.

- Processing technology and handling advancements contribute enormously to improved food safety through pathogen reductions and large reductions in post-harvest losses that further increase food supplies. Pasteurization of milk, canning, freezing, and other processing technologies significantly reduce health risks associated with food. Threats from bacteria and other contaminants are still important, but the risks of illness and death are far less than in the past, a fact that is widely underappreciated.

- Modern agriculture brings enormous economic and social benefits to consumers including:

- Improved quality of life and living standards as food costs decline. This effectively raises consumer incomes since it leaves greater purchasing power for other consumer goods, for education, health care, leisure, etc., a trend that has been a major driver of economic growth in developed countries, and in some developing countries, as well. Today, consumers in the United States spend less than 10% of their disposable income for food while many in the developing world spend from half or more of their income on food, a huge drag on quality of life. It is now widely recognized that the development of modern food system has been a major factor in improving the standard of living enjoyed in much of the world today.⁴¹

When consumers spend the major share of their income and virtually all of their daily efforts simply to find food, little money or time is left for human investments. This survival treadmill characterizes the lives of most smallholder farmers, especially in developing countries.

- Modern agriculture increases global political stability by making more food available, improving its quality and making it accessible to more people. Without the advances that characterize modern agriculture, the world arguably would be a much more dangerous and volatile place because more people would be food insecure—as the food price spikes of mid-2008 clearly illustrated. Development of a robust, rules-based trading system has been extremely important in improving food distribution and increasing accessibility in food-deficit areas.

The major threat to modern agricultural development comes not from lack of interest and willingness to invest by farmers, but from increasingly vocal opposition from a constellation of activists who have succeeded in shifting agricultural policies in several areas.

In conclusion, modern Agriculture's crucial role is vital.

The vital importance of food to physical, economic and cultural development, together with the importance of efficient, sustainable production makes modern techniques crucial in fact, there

⁴¹ Ibid, p.16

is strong evidence that only such approaches have any significant chance of meeting the world's basic food needs in the next few decades. In addition, they offer by far the world's best perhaps only prospect of dealing with growing future challenges to protect the environment and to deal with global climate change.

Traditional agricultural yields are low and stagnant compare to introduction of better machines, synthetic fertilizers, improved plant and animal breeding, pesticides and, most recently, biotechnology and the huge changes these new techniques brought.

For example, in the Democratic Republic of Congo where the land is so fertile but not cultivated and for the small cultivated portion is for food crop using the traditional agricultural system. The DRC's agricultural potential is comprised of 80 million hectares of farm-land, of which five million hectares can be irrigated. According to estimates, currently only about 10 percent of available agricultural land is being farmed.⁴² If only, agriculture can be modernized in Africa, as a backbone of the Africa's state economy, it will contribute much to national Gross Domestic Product (GDP). To back this statement with concrete evidence, we could use the case of DRC whereby though agriculture is not yet so modernized, but in 2005, the sector made up the largest contribution 42% of the GDP.⁴³

The following could be considered as the disadvantages of modern agriculture:

Disadvantages of modern agriculture⁴⁴:

- Removal of buffers to make large fields for maximum efficiency leading to lower food costs and greater food availability to the poor. But it also limits the natural habitat of some wild creatures and can lead to soil erosion.
- Use of fertilizers can alter the biology of rivers and lakes.[8] Some environmentalists attribute the hypoxic zone in the Gulf of Mexico as being encouraged by nitrogen fertilization of the algae bloom.
- Pesticides can kill useful insects as well as those that destroy crops. Generally not sustainable.
- Often results in an inferior product.
- Use of chemicals on fields creates run-off, excess runs off into rivers and lakes causing pollution.

⁴² Tanguy Smoes: Agricultural development in the Democratic Republic of the Congo (DRC), global growing casebook, p. 68

⁴³ Ibid, p.69

⁴⁴ answers.yahoo.com/question/index?qid=20080518011635AAQySZg (retrieved on June 20, 2017 at 07:12am)

- Animal Welfare is significantly decreased compared to organic, animals are kept in tight living conditions, over-fed and only have a small life span before being slaughtered
- Per John Jeavons of growbionintensive.org, it kills or malnourishes the fungi and bacteria that hold the soil together, resulting in loss of topsoil, so the increase in yield is only temporary, and, like a heroin addiction, demands ever-greater inputs to sustain output, and eventually destroys the productive capacity of the land.

Criticism

Though modern agriculture presents a set of advantages which are beneficial for Africa's nascent state development yet there are some lackings at the African government level that raise up the criticism. The criticism could be that, the African policy makers set the ineffective agricultural policies, there is not political will in implementing them, insufficient fund, poor governance, insufficient monitoring (follow up) and evaluation, lack of grassroots participation in planning, implementation and monitoring or evaluation of the activities or policy. Also, there are not many skilled labours to use the modern agricultural equipments but this one could be resolved through trainings. The most important criticism from our point of view is that, those oil and gas rich African countries have overlooked at agriculture and prioritize oil or gas and minerals since they are world widely marketable and forget that agriculture is the back bone of their economies.

2. Information and Communication Technology (ICT)

Using technology in communication has become a necessity, it's now part of our lives. People communicate through emails, faxes, Mobile phones, texting services, video conferences, video chat rooms and social media channels. As time goes on, more emerging technologies will change the way we communicate and it will be up to us to embrace them or not.

According to Anyakoha (1991)⁴⁵, information technology is "the use of man-made tools for the collection, generation, communication, recording, re-management and exploitation of information. It includes those applications and commodities, by which information is transferred, recorded, edited, stored, manipulated or disseminated". Hawkrigde (1983)⁴⁶ describes information technology as a revolution which has penetrated almost all fields of

⁴⁵ Anyakoha, M.W. (1991). Basic librarianship: Modern technologies in information work. Owerri: Totan publisher, p. 106

⁴⁶ Hawkrigde, D. (1983). New information technologies in education. London: Broom Relm, P. 161.

human activity, thus transforming economic and social life. UNDP (2001)⁴⁷ asserts that even if sustainable economic growth facilitates the creation and diffusion of useful innovations, technology is not only the result of growth but can be used to support growth and development. ICTs are credited with the ability to transform, and deep and significant changes are expected from their widespread use in Africa. From this stand point Africans can take maximum advantage of the new technologies to develop the continent even if major challenges remain. These challenges include adapting ICTs to local conditions and uses in developing countries, and allowing each country understand those innovations and adjust them to their own development needs.

ICTs have been the basis for human existence from time immemorial and this has driven man to continuously seek ways to improve the processing of information and communicating such information to one another irrespective of distance and on a real-time basis (Ndukwe, 2002)⁴⁸. Surviving in the information age depends on access to national and global information networks. ICTs are the bedrock for the survival and development of any nation in a rapidly changing global environment, and it challenges us to devise initiatives to address a host of issues such as reliable infrastructure, skilled human resources, open government, and other essential issues of capacity building (Federal Republic of Nigeria, 2001)⁴⁹.

At the heart of technology lie two main or branches of technology: computing and telecommunication. The technologies covered are the computer system, Internet/electronic mail (e-mail), mobile phone, and fax machine.

Computers

Computers were originally used by scientists for calculating numbers, and have gradually become useful in offices and industries. In recent times, simplified models that can be used by almost everybody have become common in schools and homes for accomplishing many varied tasks and applications (Madu 2000) Fapohunda (1999)⁵⁰ lists the uses that computers are now commonly put to: writing letters, and reports, printing books, newspapers, and magazines, drawing pictures and diagrams, doing statistics, mathematics and handling financial records,

⁴⁷ UNDP (2001). World report on human development 2001. United Nations Development Programme. De Boeck University for UNDP, Brussels, Belgium.

⁴⁸ Ndukwe, E. (2002). Application of information technology. *The Pointer*, 28 October, P.16.

⁴⁹ Federal republic of Nigeria (2001). Nigeria national policy for information technology (IT). Available: www.nitda.gov.ng/nigeriapolicy.pdf. Madu2000 and Fapothunda1999

⁵⁰ Ibid.

controlling traffic lights, flying aeroplanes, making and playing music and video, sending messages anywhere in the world.

Internet

The Internet is a global collection of many types of computers and computer networks that are linked together. It is increasingly becoming the solution to many information, problems, information exchange, and marketing (Adesanya, 2002)⁵¹. Eseyin (1997)⁵² describes the Internet as a mixture of many services with the two most commonly used being electronic mail (e-mail for short) and the World Wide Web (www). It plays a significant role in education, health, political processes, agriculture, economy, businesses and newsgroups. Woherem (2000)⁵³ states that with Internet connectivity, one can do business all over the world without physical contact with the buyer or the need for a business intermediary.

E-mail

Electronic mail (e-mail) is the exchange of text messages and computer files transmitted via communications networks such as the Internet (Nwosu, 2004)⁵⁴. Fapohunda sees the e mail system as the equivalent of postal mailing services, with the biggest difference being the time and cost involved. And not only written data, but all sorts of information in the form of video, audio, or photographs, can be sent via e-mail. Oketunji (2000)⁵⁵ describes e-mail as an increasing popular method of communication, especially in the workplace.

Mobile Phones

Bittner (1989)⁵⁶ defines mobile phones as a telephone system that can move or be moved easily and quickly from place to place. Mobile phones were once the tool of rich and busy executives who could afford both the luxury. Mobile phones are now the ICT that is reshaping and revolutionizing the communications globally. Its impact on the economic activities of nations,

⁵¹ Adesanya, O. (2002). The impact of information technology on information dissemination. In Madu, E.C. and Dirisu, M.B. (Eds.). *Information science and technology for library schools in Africa*, Ibadan : Evi-Coleman. p.10

⁵² Eseyin, E. (1997). African Internet status. Available: www.3.5n.apcorg/atstat.htm

⁵³ Woherem, E.R. (2000). *Information technology in the Nigerian banking industry*. Ibadan: Spectrum Books, pp.1-2.

⁵⁴ Nwosu, I. (2004). Digital public relations: Concept and practice, In Nwokocha, J. (Ed.). *Digital public relations: New techniques in reputation management*. Lagos: Zoom Lens Publishers. p. 33.

⁵⁵ Oketunji, I. (2000). Computer applications in libraries. A compendium of papers presented at the 39th National Annual Conference of the Nigerian Library Association. Owerri. pp.2-4.

⁵⁶

businesses, and small entrepreneurs is phenomenal. According to Marcelle (2000)⁵⁷, the availability of this new technology has been reshaping the material basis of the society as well as bringing about a profound restructuring of economic, political, and cultural relations among states. Nigeria is not an exception.

According to Tiemo (2006)⁵⁸ the importance of information cannot be overemphasized. People need information to plan and carry out their decisions. More than 90 percent of Africa's population could greatly benefit from information on better choice of food, safe water and basic nutrition, child care, family planning, immunization, prevention and control of endemic diseases. The combination of modern communication devices could play significant roles in the collection and dissemination of global information. Oji-Okoro (2006)⁵⁹ supported this view by stating that mobile telephony usage by individuals enables them to communicate with loved ones, clients and business associates. For large businesses, it is a means of providing a service that leads to an increase in profits. For governments, revenues are gained through taxes and duties. As a tool for sustainable livelihoods, mobile telephones provide employment for many who could have been idle.

Fax machine

Telefacsimile systems permit the transaction of images (photos, printed images, maps, drawings) and their reproduction on paper at a remote receiver. Facsimile (fax) is not a new service; however, advances in digital imaging technology and microelectronics have caused a sharp drop in prices with a significant increase in capacities (O'Brien, 1996)⁶⁰. "Long distance copying" might be an appropriate nickname for this telecommunication process. Any document, whether it is handwritten, contains pictures, diagrams, graphs, charts or typed text can be transmitted at a great speed for relatively low cost. The fax system is widely available; most organizations have at least one fax machine.

⁵⁷ Marcelle, G.M. (1999). Getting gender into African ICT policy: A strategic view" In Rathgeber and Ofwona (Eds.) *Gender and the information revolution in Africa*. IDRC.

⁵⁸ Tiemo, P.A. (2006). Impact of global system of mobile (GSM) communication services on rural communities in Delta State. In Iyoha, C. C. (Ed.). *Mobile telephony: Leveraging strengths and opportunities for socio-economic transformation in Nigeria*. Lagos: Ezcell Communications Ltd. pp.90.

⁵⁹ Oji-Okoro, M. (2006). Mobile telephony and sustainable livelihoods in Nigeri : Case studies from south east Nigeria, In Iyoha, C. C. (Ed.). *Mobile telephony: Leveraging strengths and opportunities for socioeconomic transformation in Nigeria*. Lagos: Ezcell Communications Ltd. pp.53.

⁶⁰ O'Brien, J.A. (1996). *Management information systems: Managing information technology in the networked enterprise*. Boston: McGraw Hill, p.282

Mass media

Televisions, radios are so powerful in disseminating an information, culture and value. African nascent states can maximize these tools to disseminate their own culture, values and African model of worshipping God and transmit them to the next generations. This contribute to development because people without culture is a dead ones.

The following could however, be considered as the benefit of ICT⁶¹:

- **Easy Access to information:** It has become very easy to get access to relevant information at any time anywhere. This has been possible because of modern technologies like broadband internet. Lots of data is being published and indexed online, sites like Wikipedia and Youtube have great original content which can be used in research or entertainment. [Information](#) is power and those who find information and use it well always succeed. With smart gadgets like the iPad, iPhone, galaxy tablet, users can easily have access to information through these smart gadgets because they use the internet. These smart gadgets make it easy to access the internet and this simplifies the way we get information. So, through ICT, African governments can adopt for e-governance and e-public service such as visa etc so fasten the access to information to all citizens and avoid the long queue at the administrative offices. Today, in many African countries such as Cameroon, just a simple information such as, how to get the resident permits for foreigners, a person must go to migration office. This avoid this, e-governance should be applied through the advancement of ICT so that the citizens and other people in need of, should have easy access to information needed.
- **Encourages innovation and creativity** – Since technology is challenging, it sparks the brain to work to its full potential. In the past, it used to be very difficult to start a business, one had to have lots of capital and they even had limited access to business information. Today, it is very easy to start a business while at home. On this platform, creative developers post projects seeking funding from the community, this helps them generate lots of cash for their good ideas which latter leads to the creation of new Jobs. In Africa today, youths are trying their best to be creative and innovative through internet platforms but these efforts are not so much supported by the African governments.
- **Improved communication:** Communication is like water to life. We can not develop without communication. Modern technology has blessed us with advanced communication technology tools. These can include e-fax machines, electronic mail, mobile phones, video conferencing, instant text messaging applications, social networking applications. All these modern

⁶¹ www.useoftechnology.com/modern-technology-advantages-disadvantages (retrieved on Junz 14, 2017 at 5:52pm)

communication technology tools have simplified the way humans and businesses communicate. I can easily talk to my relative overseas using a mobile phone or video chatting services like Skype.

- **The convenience of Traveling:** Modern transportation technology makes it very easy to travel long distances. Transport is a very important both in our lives and in the business world. Transportation technology has evolved with years. In the past, it used to be slow and expensive to move long distances. Nowadays, one can cover a 10 miles distance within a few minutes or hours using electric trains or airplanes.
- **Improved housing and lifestyle:** This is another great way how modern technology has simplified our lives. If you compare the type of housing we used to have in 1900 and the architecture of houses today, the difference is very big. New architectural technology has improved the types of houses we build nowadays. People with money can afford town floating houses and glass homes. Most of the items in our house are now automated, for example, doors use fingerprints which guarantee security. Remote webcams which you can use to monitor what goes on at your home.
- **Improved Entertainment:** Modern technology has played a big role in changing the entertainment industry. Home entertainment has improved with the invention of video games and advanced music and visual systems like smart televisions which can connect live to the internet so that a user can share what they're watching with friends. Easy access and storage of music, services like iTunes allow users to purchase and download music on their iPods at a small cost, this is a win – win situation for both musicians and the users. Because musicians can easily sell their music via iTunes and the user can also have a wide selection of which music to buy without having troubles of going to a physical music store.
- **Efficiency and Productivity:** Modern technology has helped businesses increase production. Humans are slow and sometimes they fail to deliver on time. So many businesses have integrated modern technology in their production line, most of the hard work has become so simple and the results are better than those of humans. Let's look at a farmer who uses modern technology right from the day of preparing the farmland to the day of harvesting. They save a lot of time and money during this process.
- **Convenience in Education:** Learning is a process and it is part of our daily lives. Modern technology has made it simple for students to learn from anywhere through online education and mobile education, access and download documents from online, the use of projector in schools and so on. Students now use modern technology in classrooms to learn better. For

example, students use iPads to share visual lessons and examples with peers in the classroom. This has made learning more convenient and fun. Also new modern educational technologies support individual learning which gives a chance to students to learn on their own with no need of tutors.

- **Social Networking:** Modern technology has made it simple to discover our old friends and also discover new people to network with. This is a benefit to both individuals and businesses. Many businesses have embraced the social networking technology to interact with their customers. Users of social networks can share information with friends, live chat with them and interact in all sorts of ways.
- **Changed the health industry:** Nowadays most hospitals have implemented modern technology in surgical rooms, this has reduced on mistakes made by doctors. Humans can easily make mistakes because of work overload and stress factors. Also, the business community has developed health applications which can enable us to monitor our health and weight. These applications can be used on mobile phones, so users can have them at any time of the day.

A part form the advantages of ICT⁶², it also presents some disadvantages such as:

- **Increased loneliness and loss of the art of conversation** – Social Isolation is on the increase, people are spending more time playing video games, learning how to use new modern technologies, using social networks and they neglect their real life. Technology has replaced our old way of interacting. If a user can easily interact with 100 friends online, they will feel no need to going out to make real friends which at a later stage leads to loneliness.

Furthermore, Technology such as text messages and email allows us to communicate in short, carefully-edited sentences that lack immediacy and completely remove the contextual information provided by tone of voice and body language. As a result, people who connect with others primarily through technology might find it difficult to engage in normal conversation, since they may have issues understanding non-verbal cues due to lack of practice with face-to-face interaction that can't be paused, edited or filtered.

- **Job Loss:** Modern technology has replaced many humans; robots are doing the jobs which used to be done by humans. Many packing firms have employed robots on production lines to increase production and efficiency, this is good news for businesses because it helps them make

⁶² Ibid.

more money and serve customers in time, but it is bad news to employees because they get replaced by a robot.

- **Deteriorating Language:** Books, dictionaries and treatises have been written on the vocabulary and peculiarities of online and text messaging slang. This slang can prove extremely confusing for people who are not native English speakers, making it harder to discern the meaning of a sentence; people who regularly text or chat online may end up using it, out of sheer habit, even in situations where it is inappropriate or out of place, such as in business messages or school essays.
- **Competency** – Increased dependency on modern tools like calculators has reduced on our creativity. You can find a student when they can solve a very simple mathematical equation without using a calculator. This affects the way this student uses their brains and reduces the level of creativity.
- **Enabling Rudeness⁶³:** Because communicating through technology creates a barrier between people that isn't there when speaking face to face, some may find it easier to be rude and aggressive. Insulting or threatening messages from anonymous commenters are par for the course for anybody who regularly publishes online content, and even lack of anonymity doesn't alleviate the issue -- Facebook arguments and the like are also relatively common. Sherry Turkle, professor of the social studies of science and technology at MIT, suggests that this happens because technology keeps us from having to see the reaction of the person on the receiving end of the message, making it harder to empathize with him.
- **Constant Disruption:** Technology allows us to always be reachable if we want to be, no matter where we are or what we're doing. Although this can be beneficial, it may also lead to a vicious cycle of stress and anxiety in which people feel pressured to immediately check and answer any incoming messages, emails or phone calls regardless of whether it is appropriate, for fear of being seen as inadequate or inattentive. In turn, this can potentially cause the breakdown of the very same relationships the person is trying to maintain.
- **World destruction weapons:** Modern technology has been the main aid in the increasing and endless wars. It aids the manufacturing of modern war weapons which will require testing. So when these weapons get into the hands of criminals, they will use them for their selfish reasons.

⁶³itstillworks.com/disadvantages-technology-communication-1821.html (retrieved on June 17, 2017 at 7:08am)

Criticism

New ICTs can offer real opportunities to improve the quality of community life. It is also important to deepen our level of reflection on community dynamics and on the constraints encountered when introducing and using ICTs for development.

ICT has been used by the westerners to transmit their culture to Africa. The TV and radios that broadcast the information quickly disseminate the information that touches Africa and put it in the way that Africans would see themselves as nothing and as people who need to copy and paste what is done in Europe and America as good examples. African children through different movies of homosexuality, in 20 years to come, they would see homosexual marriages as a common and normal value which has to be embraced.

While the Europeans and Americans are using ICT to impose their culture to Africans under the jackpot of modernization, African leaders however, should use their media and ICT in general in disseminating their own values and for any other benefit for the continent.

3. Infrastructure (transport)

Transportation plays a major role in the economy. It increases the production efficiency and it links to the logistics system. Transportation is generally of two types. They are public transport and transport for non-generic-use. Public transport is nothing but which is used for meeting the needs of all sectors of the people for transportation of goods and services. Transport non-generic will be for the plant operations here the transportation means may be by the non-transport enterprises. As earlier said, Modern transportation technology makes it very easy to travel long distances. Transport is a very important both in our lives and in the business world. Transportation technology has evolved with years. In the past, it used to be slow and expensive to move long distances. Nowadays, one can cover a 10 miles distance within a few minutes or hours using electric trains or airplanes.

These are some means of transportation presented with their advantages and disadvantages. Modern railways, road, aircrafts, ships could easily drive the African nascent states to development if only good policies have been formulated, implemented, monitored and evaluated.

Rail: It is so useful and present the following advantages: Ability of loading and unloading goods and services is more; frequency of delivering the goods over long distances is more; and; climatic conditions have no effect; no traffic or congestion easy movement of the vehicle.

Disadvantages: Capital and initial investments are more; high material usage for the construction and even the fuel consumption; the above are some of the advantages and disadvantages of using the rail.

2. Road: Advantages: High flexibility and ability to move the vehicles fastly; uses different routes to reach the destination quickly; does door to door service; high safety for the cargo; and; chance to select the carrier which is suitable for carrying the goods.

Disadvantages: It mostly depends on climatic conditions; high cost for long distances; productivity is low; and; some of the advantages and disadvantages are discussed above.

3. Air: Advantages: Highest speed; even delivers goods to remote places; and; high reliability.

Disadvantages: Highest cost of transportation; even adverse weather conditions effect the transportation; and; material and fuel consumption is costly.

4. Water: Advantages: It is economical mode for transporting heavy loads and even cargo; it is the safest mode which provides convenience to the people without accidents; cost of construction and maintenance is very low; and; it even provides international transport

Disadvantages: It is highly affected by the weather conditions; it requires large initial investment; and; it is a slow process.

Criticism

During colonial era, the colonizers built roads, railways and ships if possible. This was not for prestige or fashion. It was for their economic purposes so to ease the transportation of their goods from one place to another and export them to their respective home countries.

Today, It is like that African nascent are sleeping to embrace this purpose for the development of their countries. Roads, rails, aircraft and ships should be modernize for the economic purpose. Transportation intra and inter African state is still big challenge. For example, in the Democratic Republic of Congo no roads that connect one region (province) to another. The only way to move is by air. The country has only one railway that connect the province of Tanganyika to Lubumbashi (Katanga). The rest of the country is suffering from internal transportation. In this case, modern transportation is needed for the socio-economic purposes.

RECOMMENDATIONS AND CONCLUSION

Some of the greatest recommendations made herein go to African leaders to modernize the sectors for developing their own countries such as ICT, agriculture, transport, health, housing etc.

In conclusion, we could say that, modernization as a hybrid of colonialism and neo-liberal market economy has been on one hand the root cause of African states' underdevelopment. And, on the other hand, the internal factors such as corruption, poor governance, lack of political will, lack of participation of grassroots in the formulation, planning, implementation, monitoring and evaluation of policies among others.

The African leaders should modernize the agricultural sector as a backbone of the African economy. Agricultural innovation is very important for African nascent nations by considering the indigenous. It is very important to mention that, despite the criticism of modernization theory, it still presents some advantages which could be maximized by the African leaders to develop their own countries.

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