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DEMOGRAPHIC TRANSITION AND UNDERDEVELOPMENT IN SUB-SAHARAN AFRICA: AN OBDURATE CONUNDRUM

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Abstract
African economic development (particularly in the Sub-Saharan region) since the turn of the twentieth century till recent times has been described by scholars as poor and unpromising. The one-time burgeoning economic prosperity of the 1950s, 60's and '70s of many African states has become moribund and in comatose, gradually nudging into a colossal growth and development crisis. One prevailing argument and explanation among demographers, sociologists, and economists for such diminutive social and economic growth in Africa is situated within the wider thesis that underscores the inability of many African states to wriggle through 'demographic transition'. With its current demographic shift, a significant number of countries in Africa is yet to grapple with and manage the intricacies associated with their ever-soaring rates of mortality, fertility and obdurate unrestrained population growth. Hence, their current underdevelopment status occasioned by lopsided demographic transition and slow economic growth rate, and which has nonetheless portrayed the region as the world poorest. Based on the foregoing, this article relying on secondary data sources traced, analysed and presented the trajectory of demographic transition of selected African states and the attendant implications of such on social and economic outcomes. By this, the paper, discusses historically the deep-seated African demographic shift, and canvasses how African states can achieve a sincere and purposeful 'demographic bonus and dividend.'

Keywords: Demographic transition, Demographic shift, Demographic dividend, Demographic bonus, Underdevelopment, Sub-Saharan African, Conundrum

Introduction

Globally, the act of studying and analysing development in its varied forms has always been an important function of economists, demographers, sociologists and some other professionals in other related fields. More often, such analyses have provided the necessary lens and insights for countries and individuals to understand and measure kinks and technicalities associated with economic growth and development of Nations. In line with this global practice, African economies like some others in the world have been regularly appraised by professionals so as to evaluate the continent's social and economic development.

However, the perception of African development by keen watchers of economies has changed considerably over the last 7-8 decades. Many African countries that were hitherto viewed as rising economies in the 50s' and 60s' due to their potentials and resources, which should not only have made them vanguard economic and social figures in the continent; but also placed them in good stead to challenge substantially the economic dominance of many developed countries, have gradually gravitated into economic and social oblivion. The one-time promising economic prospects and performances of most African states have imploded and diminished greatly, thus resulted into dereliction of economic and social growth (Grier, 1999; Englebert, 2000; Bertocchi and Canova, 2002; Lange, 2004). In the ensuing development, most African countries, particularly in the Sub-Saharan region of the continent, are completely enamoured with underdevelopment - 44% of its population currently wallop in a state of extreme and

absolute poverty. As a matter of fact, it is only Africa that is yet to attain the Millennium Development Goal (MDG) of halving poverty between the 1990 and 2015 out of all the developing regions in the world (UN, 2015).

Africa is not only known as the least developed region of the world; its Sub-Saharan part is also ranked below other regions of the world in relation to demographic transition. A cursory glance at UNDP's Human Development Report of 2006 revealed unsavoury economic and social standpoints of countries in the region. In 2004, the region with its record of United States $1946 had the least per capita income of all the developing regions of the world. During the same period, the region recorded 0.472 as against 0.599 of South Asia in terms of its development index. In terms of education and literacy level, Sub-Saharan African with its 63% literacy rate among adults still ranked behind 90% recorded by South American countries (UNNDP, 2006). In spite of its low score in development, its annual population growth has remained persistently high, the highest in the world.

In addition to the above, the comparison of life expectancy at birth of people in Sub-Saharan African with what is obtainable in other regions of the world is overwhelmingly critical and tended only to show the damning demographic situation of people living in the region. For instance, life expectancy at birth for people in south Asian (62.7 years) for the period of 2000 – 2005 remained 14 years higher than 48.8 years recorded in Sub-Saharan region of Africa (Mathers and Loncar, 2006).

Indeed, most African states in the twenty-first century suffer from lingering underdevelopment; the work of Walter Rodney titled "How Europe underdeveloped Africa" is one of the many texts that clearly attest to the fact that African underdevelopment has been chronic rather episodic. In effect, poverty as a congruent measuring rod of underdevelopment has become a recurring theme within the continent. For long, the economic development of the vast majority of countries in Africa, particularly Sub-Saharan African has been on downward spiral shortly after the period of independence from colonial rulers. Consequent upon the above, many countries in Africa have consistently experienced a dip in their Gross Domestic Products (Jeffrey, 2000; Todd, 2007). As consistently emphasised in growth literature, an unwavering rate of underdevelopment can be noted in Africa, and to some extent, persistent absolute poverty is commonplace. Michelle (2004) aptly described this unenviable and undeniably terrible economic and social state of under-development when he retorted that African has persistently produced glaring human capital of inferior stock than any other region of the world.

In spite of the fact that Africa is rich in mineral resources and has received more aid per capita far and above other developing regions of the world in the last three decades, most of the efforts directed to economic growth within the continent have resulted into development stagnates and declines (Maddison, 1995). In a stark contrast with the expectations of bookmakers who had earlier estimated that economic and social development of many African states would thrive and become extensive based on the initial growth indicators witnessed few years after their independence, is the unassailable fact that so many African countries in the twenty-first century are in total economic stagnation, and that in some the rate of growth has even waned considerably.

Based on the foregoing, several explanations and arguments have been advanced by scholars as the root causes of underdevelopment in Africa. Without mincing words, none of these explanations which foreground African stunted economic growth and underdevelopment is fortuitous; they all correspond strictly with events such as slave trade, colonialism, corruption, bad leadership, strong, economic ideology (attachment to capitalism), military conflicts, ineffectiveness of public authorities, political instability, and migration, which were and still rife in the continent. In other words, the African economic-underdevelopment causal nexus manifests in diverse contexts. Apart from the catalogue of factors highlighted above, one of the myriad prominent explanations attributed for worrisome dismal economic development of many African states is also found in demographic transition discourse (Hansen and Jonsonn, 2011; Sippel, 2011; Ingle and Suryawanshi, 2011).

In this line of argument, recent empirical studies suggest that demographic transition of many African states largely explain its current underdevelopment. These studies, therefore, focus on the link between the rates of infertility, mortality, population growth and the current economic development of

African states. The multifaceted relationships between fertility and mortality rate of Africans and the continent's economic development, on the one hand, and its attendant unchecked increasing rate of population of inhabitants of Africa, on the other hand, have been often cited by scholars as vital determinants of underdevelopment in the continent. At this point, however, deliberating on the term 'demographic transition' calls for beaming the necessary conceptual and definitional searchlight on the meaning of the term 'demographic transition' and how this has been put to use by scholars.

Reviewing Demographic Transition

Demographic transition often falls within the thesis around long-term implications of shift in fertility and mortality rates and how the accompanying changes have consequently affected human society in term of economic and social development. There exists a vast and growing body of literature on the subject matter of demographic transition. The term has been deployed as often-cited explanatory factor and mechanism of transition in fertility and mortality, with implications on how changes (rise and/or decline) in these vital demographic indicators had stimulated economic development and growth in the developed region of the world (Bongaarts &Watkins 1996, Casterline, 2003).

Available literature has shown that 'demographic transition' accentuates the decline of fertility and mortality from high to low levels within an intervening period of rapid population growth. Scholars such as Lee and Reher (2011) noted that demographic transition encapsulates the shift of fertility and mortality from high and sudden fluctuating levels to low and relatively stable ones. In the light of the aforementioned description, the term 'demographic transition' provides a vivid and detailed description of indicator of change in mortality and fertility rates, and the effects of these changes on the demographic development of any country (Notestein 1945; Davis 1945; Chesnais, 1986; Palloni and Rafalimanana, 1999).

More often, the term 'demographic transition' is demonstrated in what is known as 'demographic transition model'. This model is developed by an American demographer, Warren Thompson, who produced the first archetype of the term based on his observed changes in fertility and mortality rates of industrialised countries over the past 200 years (Lee and Reher, 2011). In line with the views of Thompson (1929), demographic transition entails logical succession of historical phases which every society must experience in a bid to attain modernity. As his work (Thompson's) and the submissions of other growth scholars like Kalemli-Ozcan (2002, 2003), Lagerlöf (2003), Weisdorf (2004), Soares (2005), Azarnert (2006), Tamura (2006), and Falcao and Soares (2007) have shown, most especially in America and Europe where such economic and social growth driven by demographic transition was first experienced; all the affected countries first experienced decline in mortality while drop in fertility occurred decades later.

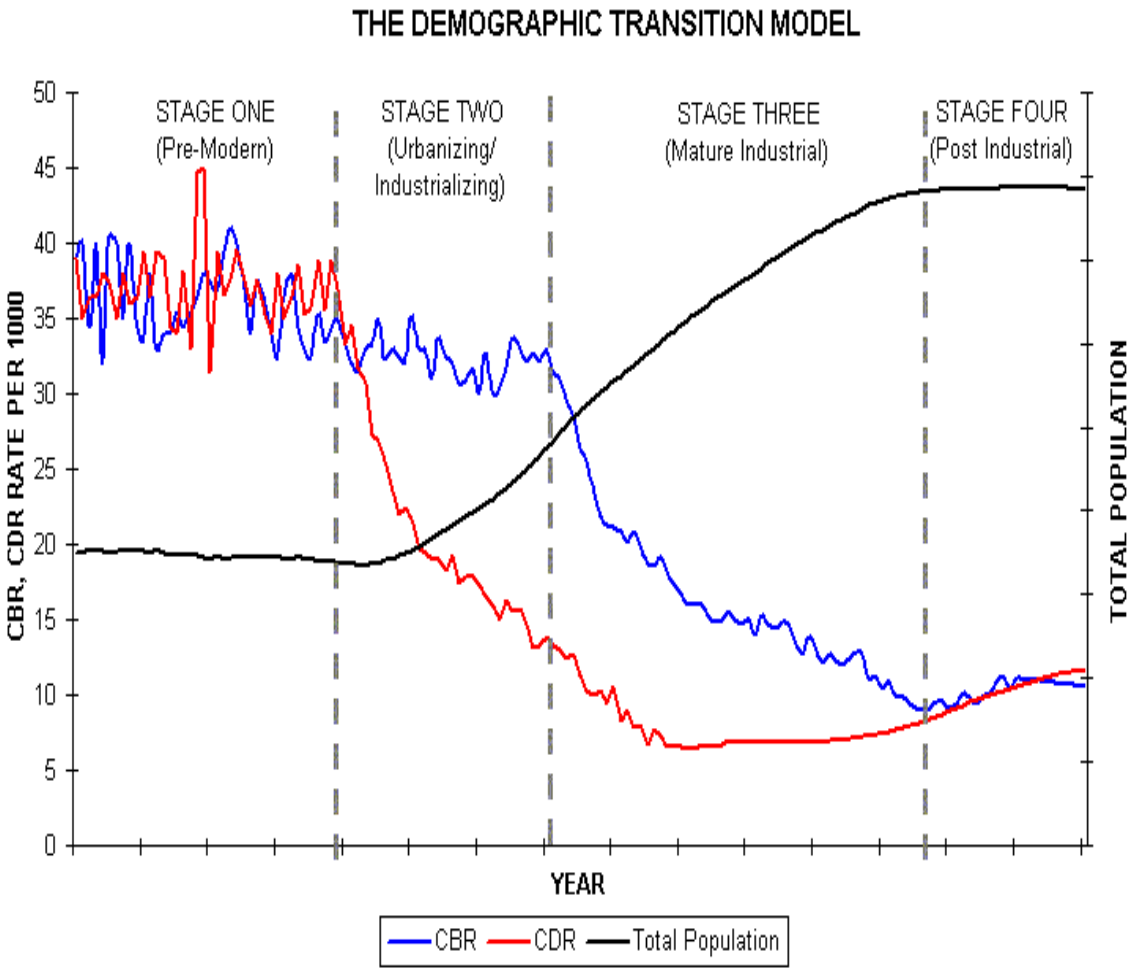
Though demographic transition model is based on economic and social growth experience and pattern in the West, nevertheless, its scope is assumed to be global. In other words, the emergence of demographic transition became noticeable first in America and Europe; nevertheless, the pattern is expected to diffuse to other parts of the globe. One other pungent fact about demographic transition is that no country in the world has completed all its processes/stages. In the light of the above, demographers are of the opinion that demographic transition is inevitable, unilineal and irreversible (Casterline, 2003). Based on the contagion and inevitability nature of demographic transition-related economic and social growth, scholars such as Landry (1909, 1934), Thompson (1929), Notestein (1945), and Davis (1945) distinguish between three to five different stages of demographic transition. These varied but related stages of demographic transition model are no doubt products of large number of scholarly and scientific works conducted to illuminate variations in birth and death rates and population growth. As a whole, the different stages of demographic transition classify populations as differentiated in line with their distinct combinations of fertility and mortality.

Warren Thompson based on the data he gathered over the period of 1908-1927 categorised all the countries in the world into three groups in relation with their population growth. The first group he denoted as **Group 'A'** comprised Northern and Western Europe and America. In his postulations, these countries from the close of nineteen century had moved from experiencing very high rates of natural increase to low (fertility and mortality). According to him, the rate was stationary at a point but decline in number later. In

his second categorisation which he denoted as **Group 'B,'** he listed countries and societies like Spain, Italy, Slavic people and central Europe as part of the group. He pointed out evidence of fertility and mortality rates decline as mark of distinction of the group. He later claimed that at this level of 'demographic transition' mortality decline more rapidly than birth rate in the affected countries and societies for many years. His third group known as **Group C** is the category in which all the rest of the countries in the world are lumped. This group consists up to 70-75 percent of the population of the world at the time. In this group, he only saw minimal sign of control over births and deaths.

Like Thompson, Landry also puts up his three different classifications but offered deeper analysis than Thompson in his efforts to explain long term effects of demographic transition on economic and social development of countries in the world. His delineation of three demographic regimes was based on the relations between production and consumers preferences. The first classification is what he termed '***primitive regime'.*** At this stage, death rates are subjected to increase or decrease in food supply. At this level, population increases when there is increase in availability of food and vice-versa. ***Intermediate demographic regime*** is his second stage and is characterised by high aspiration of people for higher economic standard of living while population growth is considered as impediment for development. At this point, population growth is largely checked. Based on his dichotomization, Landry termed his third stage as '**modern epoch'.** This era according to him is characterized by a great decline in fertility or birth rate.

Also, towing the classification pattern adopted by Thompson and Landry, Notestein categorised human population growth into three in consonance with his stages of demographic transition. The first stage is the one in which the fertility has fallen below the replacement level or something very close to this. He cited the population of entire Europe, United States of America, New Zealand and Australia as typical examples. This he referred to as population in the '**Stage of Incipient Decline'.** The second stage is the one he referred to as population in the stage of '**Transitional Growth'** - at this level society experiences high birth and death rates and rapid growth, however, the decline of birth rate is established later. Examples of countries that had witnessed this were former Soviet Union, Japan and some countries in Latin America. The third is what he described as population in the stage of '**High Growth potential'.** At this point, mortality and fertility are both high and none is showing any sign of abating soon. According to him, there is expectation of rapid growth while development in technology also ensures that mortality is in decline. This stage explains populations in the most part of Africa, Asia and Latin America (Notestein, 1945).



As a whole, the different but related stages of demographic transition as identified by theorists has been revisited and coalesced into stages by Zarnoun and Tabutin (1994) as follows:

Stage one – this is regarded as pre-transition stage; a point where birth and death rates shift slightly at levels as high as 30-40 per thousand. This stage is characterized by a slight population growth. Demographic transition theorists claimed that at this point ancient society recorded very high and fluctuating death rate. For human race to survive, the society was reproducing at highest level to offset the force of mortality caused by both human and natural disasters such as diseases, war, shortage of food, earthquake, fire, famine, abnormal rainfall, etc. At the time, natural and man-made catastrophes were the factors determining the rate of mortality. Mortality was low during the years marked by catastrophes and vice-versa.

Stage two – this typifies the beginning of steady reduction in the rates of mortality while birth rates remain high. This automatically results into high natural growth of the population. This stage typifies the point at which society began to experience improvements in working condition, transportation, income, and communication. Also, the development that occurred in the fields of medicine, medical sciences and socio-economic and political developments decelerated mortality rate. The conditions highlighted above culminated into rapid population growth.

Stage three – this explains the point at which rapid reduction in the fertility rate is experienced. At this point, the reduction in birth is less than the decline in mortality. This is the point at which the population growth begins to wane gradually.

Stage four – this is a post-transitional stage, a point where death and birth rates steadies at levels as low as 10 per thousand. At this point, birth rate remains higher than death and this consequently results into slow population growth.

In addition to the above, evidence already cited in recent literature in the area of growth study demonstrates the existence of what is now known as the second and third demographic transitions. While the transition discussed extensively in this article is known as "first demographic transition", the second demographic transition depicts a situation where there is rapid fall in the rate of fertility, until it falls below replacement level as it is common in some industrially developed countries of the world. However, the third demographic transition on its own represents increase in fertility in countries and societies regarded as lowest low fertility countries.

Demographic transition occurred first in many European countries and some parts of America (particularly non-European societies with deeply European roots) over a century ago. In spite of the fact that these regions had demographic starting point similar to that of countries in sub-Saharan African, they gradually evolved through calculated efforts towards demographic transition. This shift became noticeable during the mid-to late 18th century when mortality receded greatly and fertility declined slightly later. At a point, this demographic shift ushered in significant growth in population of people. However, in the latter part of the 19th and beginning of 20th centuries, there was a further decline in the mortality and fertility rates of many countries in Europe and America (Notestein, 1945; Davis 1945; Chesnais 1986). The decline in fertility during the transition stage and its concomitant increase on the part of the active population and decline in the inactive part of population is what is known as "demographic bonus". The term is attributed to long-term population decline occasioned by reduction in fertility and mortality rates in these regions.

As cases in Europe and America have shown, the eventual decrease in mortality and fertility rates in these regions brought in its wake a young and virile population which became the engine for the development of their national economies. Demographic transition coupled with implementation of appropriate development-oriented government policies in developed countries of the world undoubtedly ushered in social and economic development through four major pathways: increased longevity; changing age structures; increased migration - both internal and international; and increased reproductive efficiency traceable to declining fertility and childhood mortality (Lee & Reher, 2011).

Consequent upon the above, theorists have identified demographic transition as one of the vital mechanisms that provided window of opportunity for long-lasting social and economic change in Europe and America. The theorists further argued that the size and extent of the window of opportunity generated by demographic transition coupled with other factors such as: the date when aggregate number of birth will begin to decline; the point when the entire process of population aging will start to grow rapidly; and also the point during which the shrinking number of birth will result into decreasing number of population of working and reproductive ages will determine how beneficial and lasting the window occasioned by demographic transition would be (Lee and Reher, 2011). They also claim that many of the positive effects of demographic transition may disappear at the point when shrinking number of birth will eventually result into decreasing number of population of working and reproductive ages.

DEMOGRAPHIC TRANSITION-AFRICAN UNDERDEVELOPMENT NEXUS

The underlying factor of all variants of 'demographic transition theory' is the notion that the "demographic transition" is a crucial precondition for steady economic and social development of any given country. Although, factors that determine successful economic performance of any country are multi-various and wide-ranging, yet an important factor which interacts widely with host of other influencing factors is the demographic situation of such country. Theorists are of the opinion that the nature and stage of demographic transition a country experiences determine whether such country would grow socially and economically or

not. For demographic theorists, the seminal combinations of decline in mortality and fertility rates of many European and American states which inexorably cause changes in their population growth rates, size and age distribution later facilitated their economic and social development (Lee and Mason, 2010). They concluded that the demographic transition-induced changes provided the needed vehicle for a high economic and social growth recorded in the aforementioned societies (Hazan and Zoabi, 2006).

Unlike the experiences in most European and American countries, the stage of demographic transition of many African countries has been their undoing. For long, most countries in Africa are enmeshed at the initial stages of demographic transition and are yet to find a reliable and workable means of extricating themselves from a stage characterized by declining mortality and high fertility (United Nations, 2005). For instance, countries in Sub-Saharan Africa have not fared well in the provision of education for their citizens. Absence of qualitative education for all in the region has no doubt taken its toll on the citizens. Indeed, the importance of education cannot be overemphasized; it is a vital factor that assists individuals to live up to their potentials and places them on the pedestal required to obtain more favourable job opportunities. While education provides a plain level ground between men and women, it also enables and prepares people to fight against poverty (Cadwell, 2004). More importantly, education plays a significant role in lowering mortality and fertility and enhances improving health status for individuals. Another important factor responsible for lacklustre economic and social growth in Sub-Saharan African countries is the issue of infant mortality that is rife in the region. According to WHO (2005), 1 out of 6 children (17%) born in the region dies before they reach age six. The spate of infant mortality is an indicator of extent of underdevelopment and poverty rampart in the region.

For many decades now, most societies in Europe and America had maintained a balance between mortality and fertility rates. In fact, the prolonged decline in fertility experienced in these societies has ensured a long period of youthful population age structures or what is technically known as "demographic bonus" (this occurs as a result of drop in fertility rate in a country and which eventually caused an increase in active population and decrease in the inactive part). The profound increase in the number of population of working age or the 'demographic bonus' experienced in countries in America and Europe actually culminated into deep favourable economic consequences.

In stark contrast to European and American experiences, social and economic under-development associated with many countries in Africa is in part predicated upon an incongruity between the ability of many countries in Africa to generate more youthful population age structure and the ineptitude of their leaders/economy to productively employ the growing labour force. The apparent unhealthy demographic situation in many parts of Africa exacerbated by worsening cases of HIV/AIDs, resurgence of malaria, rise in mortality and reversals of waning fertility due to activities of its child-bearing generations have all placed the continent in dire social and economic situations (United Nations, 2007). The population growth rate of Sub-Saharan Africa with annual growth rate that was above 2.5% since 1960 has been the highest in the world over the last 6 decades. This development, however, has made Sub-Saharan African to have doubled its 1960 population in 20th century (United Nations, 2005). Put simply, while many American and European countries rode on the back of their relatively moderate and well managed population growth to attain social and economic development, countries in Sub-Saharan region of Africa are still neck-deep in weak economic growth due to factors such as their unbridled population growth, increased mortality rate, political instability, reappearance of malaria fever, and bad policies of governments, to mention a few (Demeny and McNicoll, 2006). In spite of vastness of its forest, mineral and human resources the region has recorded little success in harnessing its demographic growth to bolster economic growth.

Drawing upon recent experiences in demographic transition in Africa, the stages of demographic transition of countries in the continent can easily be categorized into two: those that already achieved sustained mortality and fertility declines, and others that still experience delayed demographic transition. South Africa, Botswana, Mauritius and Tunisia are prominent among the group considered to have achieved sustained mortality and fertility declines, while Nigeria, Mali, Cameroon, Egypt and Madagascar are chief among others that are still in early stages of transition (ECA, 2001). A number of factors have been highlighted as responsible for sustained fertility and mortality declines experienced in Mauritius and host of

other countries in the former group. Some of these factors are marriage postponement, provision of basic education for women, peaceful coexistence between religions and religious leaders, strong family planning initiatives strongly supported by governments at all levels; provision of social benefits in health and education to a large number of people; rigorous and aggressive investment in major physical and institutional infrastructure needed for service delivery; reduction of gender gap in accessing employment and education; sustained peaceful coexistence among people and continuity of democracy (ECA, 2001).

However, delayed in demographic transition as exemplified in countries such as Nigeria, Mali and Madagascar just to mention but a few is hinged on higher fertility rate (average of more than 5 children per woman) in the affected countries. Factors such as limited use of contraception; early marriages; high demand for children imbued by high infant mortality, polygamy, religion, and tradition, and the need to take care of food and livestock production; inadequate health facility and low level of education; and non-inclusion of population factors in development programmes have all played significant role in high fertility rates in countries with delayed demographic transition (ECA, 2001).

Critically, the unbridled population growth in Sub-Saharan Africa has been a burden and has greatly reversed the economic gains of many countries in the region due to continuous rise in their dependency rate. Countries in Sub-Saharan Africa have shown highest fertility in the world. From an average of 7 children to a woman in the 1950s, it has only slightly dropped to 5.5 children per woman between 2000 -2005. While other developing regions of the world had witnessed a fall in their dependency rate from the 1970s till the present time, countries in Sub-Saharan Africa since the 1960s have continuously recorded 0.4% fall in their annual per capita (Ndulu and O'Connell 2006). In the same vein, studies such as United Nations (1993) and Cassen (1994) have all identified how population growth in Sub-Saharan Africa has impaired economic and social growth in the region.

Aside the above, one other salient factor upon which low economic and social growth of countries in Sub-Saharan Africa is hinged is their late entry into the group of Nations that wittingly facilitated their low mortality rate. While most countries in the North-West Europe and the rest of Europe, America and Japan began witnessing meaningful downward trend in mortality since the 18th and 19th centuries respectively after overcoming food shortage and major epidemics, many countries in Africa did not experience this until the second half of the 20th century. Till date, the main indicators of Sub-Saharan African mortality remain 16% death rate, 48.8 years of life expectancy, and child mortality of 167%, levels attained in the 1900 by advanced countries of England, France and Japan (United Nations, 2007).

Conclusion

In sum, this work concludes that African economic development (particularly in the Sub-Saharan region) since the turn of the twentieth century till the recent times is poor and unpromising. It has claimed that the one-time burgeoning economic prosperity of the 1950s, 60's and '70s of many African states has become moribund and in comatose, gradually nudging into a colossal growth and development crisis. One prevailing argument and explanation among demographers, sociologists, and economists for such diminutive social and economic growth in Africa is situated within the wider thesis that underscores the inability of many African states to wriggle through 'demographic transition'. With its current demographic shift, a significant number of countries in Africa is yet to grapple with and manage the intricacies associated with their ever-soaring rates of mortality, fertility and obdurate unrestrained population growth. Hence, their current underdevelopment status occasioned by lopsided demographic transition and slow economic growth rate, and which has nonetheless portrayed the region as the world poorest.

However, guaranteeing the economic and social performance of any country depends on a web of complex factors. Of the varied factors identified in the literature responsible for economic and social performance or growth of countries in the world, none interacts with others like the demographic behaviour or transition of a given country. The long-term implications of demographic transition as witnessed in most countries in Europe and America have produced robust and deepening economic and social growth, within and between countries, on a scale not seen before over the last hundred years (Lee and Mason, 2010). In this context, demographic transition or the graphic shift in fertility and mortality from high and unstable levels

to low and moderately stable ones has become one of the most important determinants of economic and social growth of human society.

Despite the presumption of demographic transition scholarship that all countries of the world will experience and benefit from this transition, though at dissimilar rate and period, in so far they ensure the stabilization of their population and the acceleration of demographic transition; countries in Sub-Saharan Africa are still grounded in the initial phase of demographic transition, hence the problem of growth deficit confronting this region despite its abundant natural and human resources. Though many of these countries started their demographic transition journey on the right footing, yet, quite a significant number of them have witnessed trend reversals or interruption to the progress of their demographic transition. From a strictly demographic standpoint, most states in Sub-Saharan Africa are yet to fully experience the pivotal process of demographic transition due to the fact that they have made limited attempts towards the synchronization of their mortality and fertility patterns. To this end, they are not in a vantage position to experience economic and social growth propelled by demographic transition like their European and American counterparts.

Delayed demographic transition has robbed many African countries of the chance to benefit from the window of opportunity of economic and social change associated with demographic transition. Indeed, the lacklustre demographic transition exemplified in many African countries has largely facilitated a society whose present is not totally different from its past, with high number of uninformed people, low living standards, and institutions that have for long remained unstable. Most of what supposed to be potentially positive effects of demographic transition are marred by the unbridled rising rates of population (economically disadvantageous population age structure) and mortality.

In conclusion, the main thrust of this article is that demographic transition and sustainable development have synergetic relationships. More specifically, the development and growth narrative evident among social scientists also re-emphasises the inevitability of demographic transition in ensuring the economic and social growth of countries. Indeed, growth scholars explicitly call for the utilization of demographic transition as a key factor upon which long-term growth should be hinged. To counteract, however, demographic transition-related poverty and underdevelopment particularly in Africa, countries in the region have to ascertain and assess the development implications of their demographic trends which must be followed by formulation and implementation of appropriate comprehensive policies that can engender sustainable development. While policies should be designed to address factors promoting unsustainable population growth, the affected countries should also integrate the appropriate measures to offset their stunted demographic transition.

References

Azarnet, L. V. 2006, Child mortality, Fertility and Human Capital Accumulation, Journal of Population Economics 19, 285-297.

Bertocchi, Graziella, and Fabio Canova. 2002. "Did Colonization Matter for Growth? An Empirical Exploration into the Historical Causes of Africa's Underdevelopment," *European Economic Review*, 46, 1851–1871.

Bongaarts J, Watkins SC. 1996. Social Interactions and Contemporary Fertility Transitions. *Popul. Dev. Rev.* 22(4):639–82

Cassen R. 1994, *Population and Development: Old Debates, New Conclusions*, New Brunswick-New Jersey-Oxford, Transaction Publishers.

Casterline JB. 2003. Demographic transition. In *Encyclopedia of Population*, Vol. 1, ed. P Demeny, GMcNicoll, pp. 210–16. New York: Thomson & Gale

Chesnais, Jean-Claude. 1986. *La transition Démographique. Etapes, formes, implications économiques.* Institut national d'études démographiques, Cahier no 113, Paris: Presses Universitaires de France.

Davis, Kingsley 1945. "The World Demographic Transition". The Annals of the American Academy of Political and Social Sciences 237: 1-11

Davis, Kingsley. 1945. "The world demographic transition," *The Annals of the American Academy of Political and Social Science* 237(January): 1–11.
Economic Commission for Africa. 2001. The State of Demographic Transition in Africa. A Material produced by Food Security and Sustainable Development Division. ECA/FSSDD/01/10, Addis Ababa, Ethiopia. Accessed from www.uneca.org on June 6, 2018.
Englebert, Pierre, "Pre-Colonial Institutions, Post-Colonial States, and Economic Development in Tropical Africa," *Political Research Quarterly*, 53 (2000), 7–36.
Grier, Robin M. 1999, "Colonial Legacies and Economic Growth," *Public Choice*, 98, 317–335.
Hazan, M. and Zoabi, H. 2006, Does Longevity Cause Growth? A Theoretical Critique, Journal of Economic Growth 11 (4), 363-376.
Ingle, A. and Suryawanshi, P.B. 2011. India's Demographic Dividend-Issues and Challenges. *International Conference on Technology and Business Management*. March 28-30, 2011; Pp 720-727.
Jeffrey D. Sachs, 2000. "Globalization and Patterns of Economic Development," *Weltwirtschaftliches Archive* 136, no. 4: 579–600.
Kalemli-Ozcan, S. 2003, A stochastic Model of Mortality, Fertility and Human Capital Investment, Journal of Development Economics 70, 103-118.
Lagerlöf, N. P. 2003. From Malthus to modern growth: can epidemics explain the three regimes? International Economic Review 44, 755-777.
Landry, A. 1934. "La révolution démographique: études et essais sur les problèmes de population", (Paris, Librairie Sirey).
Lange, Matthew K., 2004. "British Colonial Legacies and Political Development," *World Development*, 32, 905–922.
Lee, R. and Reher, D. 2011. Demographic Transition and Its Consequences. Population and Development Review. Vol, 37. Population council New York.
Maddison, Angus. 1995. Monitoring the World Economy: 1820-1992. Paris: Organisation for Economic Co-operation and Development.
Mathers C.D. and Loncar D. 2006, "Projections of Global Mortality and Burden of Disease from 2002 to 2030", *PLoS Med*, vol. 3, no 11, p. 442.
Notestein, F. 1945. "Population the Long view", in: T. Schultz (ed.) "Food for the World", Chicago, 1945, p.36-61.
Notestein, F.W. 1945. "Population: the long view", in E. SCHULTZ (ed.) Food for the world (Chicago, III: University of Chicago Press), 36-57.
Notestein, Frank. 1945. "Population—the long view," in T. W. Schultz (ed.), *Food for the World*. Chicago: University of Chicago Press.
Palloni, A. and Rafalimanana, H. 1999. The effects of infant mortality on fertility revisited: new evidence from Latin America, Demography 36 (1), 41-58.
Peo Hansen and Stefan Jonsson, 2011. Demographic Colonialism: EU-African Migration Management and the Legacy of Eurafrica, Globalizations, (8), 3, 261-276. Globalizations is available online at informaworldTM: http://dx.doi.org/10.1080/14747731.2011.576842 Copyright: Taylor & Francis (Routledge)
Sippel, L.; Kiziak, T.; Woellert, F. & Klingholz, R. 2011. Africa's Demographic Challenges: How a Young Population can Make Development Possible. Berlin Institutfur Bevolkerung Und Entwicklung. Accessed 12th May 2018 from htt://www.berlin-institut.org/selected-studies/africas-demographic
Soares, R. R. 2005, Mortality Reductions, Educational attainment and Fertility choice, American Economic Review 95 (3), 580-601.
Tamura, R. 2006, Human capital and Economic Development. Journal of Development Economics 79, 26-72.
Thompson, W.S. 1929. "Population", American Journal of Sociology, 34(6), 959-75. [A precursor on the debate pertaining to the phases of the transition].

Todd J. Moss, 2007. *African Development: Making Sense of the Issues and Actors* (Boulder: Lynne Rienner Publishers, 87.
UN (United Nations). 2015. *The Millennium Development Goals Report 2015*. New York: United Nations.
United Nations, 2005, *World Population Prospects. The 2004 Revision*, New York, United Nations.
United Nations, 2007, *World Population Prospects. The 2006 Revision. Highlights*, New York, United Nations, Population Division.
United Nations. 1993, *Population Growth and Economic Development*, Report of the Consultative Meeting of Economists convened by the United Nations Population Fund, 28-29 September 1992, New York, UNFPA.
UNPD 2006, *Human Development Report 2006. Beyond scarcity: Power, Poverty and the Global Water Crisis*, NewYork.
Weisdorf, J. 2004, From stagnation to growth: revisiting three historical regimes, Journal of Population Economics 17, 455-472.
Wingo, Michelle L., 2004. "Social Underdevelopment In Sub-saharan Africa". *Electronic Theses and Dissertations*. 155. http://stars.library.ucf.edu/etd/155