# **Review Article**

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# High fertility level in Sub-Saharan Africa: implication for reaping and optimizing demographic dividend

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#### **ABSTRACT**

Africa region remains the continent with the highest total fertility rate among other major regions of the world such as Europe, North America, Asia and Latin America and Oceania. This paper examines the determinants of high fertility in sub-Saharan Africa; it also determines the policy implication for reaping and optimizing demographic dividend. Secondary data sources were employed in achieving the set objectives. This paper submitted that determinants such as age at first marriage; high child mortality; low female education; gender preference; and limited birth spacing were the determinants of high fertility in Africa. For Africa to harness the demographic dividend, certain policy implications such as investment in child survival and health programmes; investment in quantity and quality of education; multi-sectoral approaches and meeting infrastructural development; enhance job market and enact and enforce laws to prevent early marriage among other policy programmes must be embraced. The paper concludes that there is high fertility in sub-Saharan Africa because of the in-built population momentum of the populace. Also, fertility must be reduced significantly if sub-Saharan Africa must reap and optimize the promising dividend. This paper, therefore, recommends that all government in Africa continent should come up with and implement effective population policy that will help to reduce high fertility level.

**Keywords:** Fertility, Demographic dividend, Policy implications

#### **INTRODUCTION**

Owusu et al estimated that the global total fertility rate was 2.5 per woman. Though there were variations in total fertility rate across the major continent of the world. Of the major continents of the world, Africa occupied the leading continent with highest fertility (4.7) per woman while European reported lowest (1.6) per woman. The next to European countries was North America with (1.9) per woman. It is worthy of note that Asia and Latin America and Caribbean constituted fertility level (2.2) and lastly Oceania (2.4). It noted that forty-six per cent (46%) of the world's population lived in countries with a low level of fertility where on average women have fewer than 2.1 children. Low-fertility countries include all of

Europe and Northern America, as well as many countries in Asia and Latin America and the Caribbean.<sup>1</sup>

Similar to this, forty-six per cent (46%) of the world's population lived in "intermediate fertility" that is, countries that have already experienced substantial fertility declines, where women have on average between 2.1 and 5 children while the remaining 8 per cent (8%) of the world's population lived in high fertility countries that have experienced only limited fertility decline till present. In these countries, the average woman has five or more children over her lifetime. Most of these countries are traceable to sub-Saharan Africa, Nigeria inclusive. The current high fertility experienced in Africa had been linked to several determinants which include but are not

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limited to early age at first marital union; high child mortality; low female education; gender preference; and limited birth spacing.<sup>2</sup>

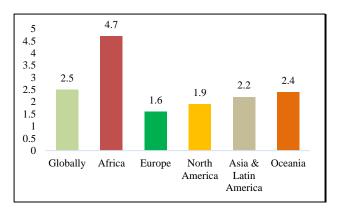


Figure 1: Total fertility rates by major regions. Source: World Fertility Pattern, 2015.

The demographic dividend (DD) is described as the accelerated economic growth that is caused by a decline in a country's mortality and fertility and the subsequent change in the age structure of the population.<sup>3</sup> This simply translates to mean that when there is low birth each year, the number of a country's young dependent population grows smaller to the working-age population. By extension, when there were fewer people to support, a country has a window of opportunity for rapid economic growth if the right social and economic policies were developed and investments made. The level to which Africa will be able to benefit from its youth and reap the rewards of the demographic dividend depends heavily on favourable policies and actions.3 The required policies and actions needed include those that expand youth opportunities, give them the skills to participate fully in the economy and public life, and promote healthy behaviours. To this end, this paper examined (i) determinants of fertility and (ii) the policy implications for reaping the promising demographic dividend in sub-Saharan Africa.

# **METHODOLOGY**

The researcher used a secondary data source by an engaging desk review of existing literature from researchers as well as the 2013 Nigeria Demographic and Health Survey (2013) was also used for the review to achieve the paper objectives.

#### **RESULTS**

# Determinants of fertility in Africa

Several authors have examined the factors influencing fertility rate in Africa. Some of the determinants include but are not limited to the value placed on children especially in Central and West Africa; age at first marital union; mortality change; education and income level, birth spacing and gender preference.

Demand for children: economic and social determinants

Children in most of the societies with high fertility are seen to be assets to the family. In most cases, it is believed that the more the number of live birth, the more the wealth of the parents. This is because these children would help them cultivate their large farmland and also support them in domestic work which in-turn leading to high productivity. This argument is equally sustained with the theory posited by Caldwell.<sup>4</sup> Caldwell posited two net wealth transfers. These are 'positive and negative' net wealth transfer. It is said to be positive when the return from children to parents outweighs the investment incurred by parents in the course of training their children. In this situation, parents would prefer to have more children, as this will, in turn, translate to more wealth in the future. On the contrary, it becomes negative when the investments parents incurred on children exceeded the return from children. When this happens, fewer children would be desired.

#### Age at first marriage

There is a negative relationship between age at first marriage and reproductive performance all things being equal. The earlier women of reproductive ages get into the marital union, the more likely to have more number of children and vice versa. Most societies with high fertility entered into marriage below 20 years on average. This is not too far from the case of Nigeria especially the Northerners. This accounted for one of the reasons why the total fertility in this region is on the increase when compared with other geo-political regions in Nigeria. 6

Ushie examined age into marriage to be another great determinant in Africa.<sup>7</sup> Unlike communities, especially in highly developed countries, couples in their late 30s and 40s still attempt first pregnancy due to high level of delay in starting a family. However, in most African countries, Nigeria inclusive, women as young as 14 years especially in Northern Nigeria, have either given birth or are in marriage unions and at the risk of pregnancy and childbirth. Several socioeconomic variables such as educational demands, career, law, suitable suitors, and economic backgrounds are some of the factors responsible for early age into marriage.<sup>8,9</sup> In Nigeria for instance, the law states that a girl must at least complete her basic education and must be at least 18 years before entering into a marriage union. However, enforcing such a law in Nigeria has been an uphill task given the heterogeneous nature of the country.10

Motivation: infant and child mortality change

During the pre-transition regime, there was a high level of infant and child mortality due to some reasons such as poor hygiene, lack of medical assistance, war, famine and epidemics among other underlying factors. In other to offset the dead children, there was a need to increase the

number of live birth. In a nutshell, high mortality rate resulted in demand for more children. Fertility decline occurs once-rising levels of urbanization and education, changes in the economy and declining mortality lead parents to desire a smaller number of births. 11-14 In contrast, Cleland et al opined that mortality decline is the necessary and sufficient condition for fertility decline. 15

#### Education

Some scholars supported that there existed a negative relationship between education, age pattern among others and fertility behaviour in sub-Saharan Africa. In a study conducted by Pearce in Peru, it was revealed that women who spent a long time to acquire education are likely to have fewer numbers of children than those who spent lesser time. Similar to the above study, Leon and McCrary et al, reported that education raises a woman's income through earning, thereby given her optimal fertility choices towards fewer offsprings. Moreover, education improves an individual's knowledge and ability to process information regarding fertility options and healthy pregnancy behaviour. 19,20

The effect of education on fertility revealed that women with no formal education women who live in societies where a large proportion are literate may have a fertility rate compared to that of uneducated woman elsewhere. If the aggregate educational distribution has, on the whole, a substantial depressing effect, fertility will likely decline more sharply in response to an increase in women's education. In effect, the higher the proportion of better-educated women in a community, the lower the fertility rate in that community.<sup>21</sup>

A better-educated woman notwithstanding her residence may experience different fertility to an uneducated woman. In a study by Pearce, in Peru, it was found that women who spent a long time acquiring education were more likely to have fewer numbers of children than those who spent less or no time at all. <sup>16</sup> Of course, this is because the woman has spent a long period of childbearing years in school, consequently shortening the years of risk of pregnancies. <sup>17,18</sup>

# Income level

Income level is another important determinant expected to influence fertility performance. There is a tendency to have a large family size if the disposable income earned by the couple is sufficient enough to cater for the household. On the contrary, the couple seems to have a decline in fertility if the means of subsistence is so infinitesimal. In most settings, the accessibility and quality of family planning services vary by community wealth.<sup>22</sup>

This explains the reason why households with financial constraints may be less successful in implementing their fertility aspirations.<sup>23</sup> Child rearing becomes more costly

to the extent that parents have relatively high expectations for child quality, especially the cost invested in schooling. Mainstream microeconomic theory suggests that increases in income are ordinarily, but not necessarily associated with an increase in per-child investment (money and time) by parents.<sup>24</sup> In contrast, if the increase in per-child investment exceeds the increase in household income, then higher income will translate to reduced demand for children.

Cost of fertility regulation: obstacle to contraception/family planning service uptake

Family planning is a key component for achieving fertility declines and reductions in maternal mortality, and it has the additional benefit of reducing the number of unintended pregnancies and therefore maternal mortality and morbidity due to unsafe abortion.<sup>25,26</sup>

The findings of Lesthaeghe, reported slow progress on the uptake of contraception in the majority of sub-Saharan Africa countries compared with other developing countries.27 The current uptake of modern methods of contraception is still very low among women 15-49 who were in a sexual union. In the period 1998-2005, 12 out of 23 countries recorded less than 10 per cent of current users of modern methods. Only 9 countries had more than 20 per cent, Namibia (43), Zimbabwe (50) and South Africa (60). In the period 2006 to 2011, the tail with less than 10 per cent comprised 5 countries among 23 countries sampled (Niger, Benin, Sierra Leone, Guinea, D.R. Congo), and 11 made it above the 20 per cent threshold, with maxima above 40 per cent in Malawi (42), Rwanda (45), Lesotho (46), Swaziland (48), Namibia (53) and Zimbabwe (57).

# Birth spacing/interval

Child spacing practices is an important feature of fertility dynamics in many traditional Sub-Saharan African societies. Several populations' studies have shown that short birth intervals are undesirable, as it is believed that pregnancy and breastfeeding are arduous to women's health. Traditionally, birth spacing was controlled by two mechanisms namely prolonged breastfeeding and postpartum abstinence. Despite increasing urbanization, cultural change and the use of contraception having loosened these traditional controls on birth spacing in many parts of Sub-Saharan Africa, birth intervals have been lengthening. Traditionally intervals were around thirty months (levels observed in natural fertility populations). However, in South Africa, these have increased to more than six years and in Ghana, Namibia, Lesotho and Zimbabwe they have increased to almost five years.<sup>28</sup>

It is now thought that long birth intervals may be a unique feature of the fertility transition in Sub-Saharan Africa.<sup>28</sup> Understanding the pace of change of birth rates in both urban and rural areas is imperative if researchers and

policymakers are to facilitate an accelerated decline in birth rates in the population.

### Gender preference and fertility intention

In sub-Saharan Africa, considerable levels of gender preference in favour of a male child had been reported in previous studies. The reason for this is that parents expect that male children add to family affluence, continue the family lineage, perform important religious roles and defend or exercise the family's power, while daughters benefit from the family resources which are believed to be shared among their husband family.<sup>29,30</sup>

# Policy implications: reaping and optimizing Africa's promising dividend

The level to which Africa will be able to benefit from its youth and reap the rewards of the demographic dividend depends heavily on favourable policies and actions. The required policies and actions needed include those that expand youth opportunities, give them the skills to participate fully in the economy and public life, and promote healthy behaviours.

In a study by Lesthaeghe, Ashraf et al, and Mason et al it was observed that full demographic dividend in Africa will only be made possible if a substantial increase in human capital investments (health, education, reproductive health and infrastructural) development among others could be given high priority. <sup>27,31,32</sup>

# Investment in child survival and health programs

UNICEF submitted that sub-Saharan Africa fertility rate remains high because of the relatively high death rate and population momentum.33 Sub-Saharan Africa has the highest risk of death in the first month of life and is among the regions showing the least progress. The highest rates of child mortality are still in sub-Saharan Africa where 1 in 9 children die before age five, more than 16 times the average for developed regions (1 in 152). Sub-Saharan Africa, which accounts for 38 per cent of global neonatal deaths, has the highest newborn death rate (34 deaths per 1,000 live births in 2011). Neonatal deaths accounted for about a third of under-five deaths globally (1.1 million newborns die in the first month of life). However, sub-Saharan Africa has observed a faster decline in its under-five mortality rate, with the annual rate of reduction doubling between 1990-2000 and 2000-2011. Sub-Saharan Africa has reduced under-five mortality by 39% between 1990 and 2011. Statistics showed that if current trends persist, 1 in 3 children in the world will be born in sub-Saharan Africa, and its underfive population will grow rapidly<sup>33</sup>

Hence, in other to further reduce high infant and child mortality sub-Saharan Africa, it is expected to focus more on simple child survival interventions (such as immunizations, prevention and treatment of infectious diseases, nutrition and education). This will ensure that children do not die before their fifth birthday and that they grow into healthier more productive adults. Consequently, reducing child deaths and also stimulates a desire for smaller, healthier families that will set the stage for economic growth.<sup>34</sup>

## Investment in quantity and quality of education

Study shows that primary education helps youths to be able to read and write, but secondary school helps delay marriage and pregnancy and gives young people the skills and confidence needed to be effective in the labour force participation. Education promotes lower fertility and is a fundamental investment for a stronger economy. Education programs need to prepare students for the 21st century labour force. And greater participation in the labour force will allow countries to reap the economic rewards of the demographic dividend.<sup>3</sup>

The enrolment of boys and girls in secondary schools in sub-Saharan Africa is low with boys and girls constituting 42% and 34% respectively. Though, Southern Africa has an appreciable and secondary school enrolment with girls and boys having 92% and 88% apiece. Expansion of school enrolments, especially for girls, and ensure minimum standards of quality, a gateway for improved quality of life and for lowering fertility. Ensure that secondary school and university education are relevant for the skills needed in the workforce, and provide equal educational and job training opportunities for girls and boys.<sup>35</sup>

Gender discrimination in schooling and employment opportunities hurts economic growth. Concern has been raised that countries which ignore the female half of their population will not realize their demographic dividends.<sup>36</sup> Other scholars, such as Dollar et al concluded that one per cent increase in the per cent of females with secondary schooling can increase per capita income growth by 0.3 percentage points.<sup>37</sup> Educated mothers not only raise more highly educated children but also contribute to the labour supply and household income by participating in the labour force.<sup>38</sup> In other to bring about a decline in fertility, more investment in quantity and quality education is needful. Encouraging gender parity will have a positive effect on reducing fertility which will also increase female's labour force participation.

Pursue multi-sectoral approaches and meeting infrastructural development

Establish coordination mechanisms to combine the efforts of various government departments across ministries to enhance youth skills and opportunities. It is particularly important to link health and education programs and capitalize on potential synergies. Diversification of the economy into labour-intensive activities outside agriculture will equally help a great deal. Raising agricultural productivity by embracing land policies that

improve land titles and increase productivity. Agricultural productivity can be improved by increasing access to irrigation, increasing use of high yield varieties, and improving market access. Also, economic diversification would require reducing administrative burdens, simplifying regulations, promoting competition, and investing in human and physical capital.<sup>39</sup> This can be achieved if credits are made available for investment in new farming techniques. By so doing, this will further increase the opportunity for employment to the growing youthful population.<sup>34</sup>

Trade policies that both create markets for domestically produced materials and reduce barriers that limit foreign materials from entering the country are one of the keys to fostering economic growth.<sup>3</sup> Promoting private sector development is another channel to encouraging multisectoral approaches. This encourages the private sector to engage in new areas of economic activity. Private sector development could be facilitated by reforms that support a more business-friendly environment.

Meeting infrastructural needs such as transport, telecommunications and energy have been identified as creating a fertile ground for expanding manufacturing and services, as well as reducing the business running cost. Similarly, improving intra-regional infrastructure also could better connect sub-Saharan African markets, making it possible to exploit economies of scale and boost industrialization.<sup>39</sup>

Investment in the reproductive health needs of both married and unmarried youth

Sub-Saharan Africa is especially deficient in areas of reproductive health crucial for meeting MDGs for child and maternal health. Family planning has steadily decreased as an international priority in recent years, despite its documented impact on both maternal and child health and overall development.<sup>40</sup> In addition to reducing births per woman, family planning use has a direct, positive impact on reducing maternal deaths and preventing mother-to-child transmission of HIV. Family planning use and fertility declines in West and Central Africa are lagging. A study showed that less than 10 per cent of married women in these regions use modern contraceptives, and use has increased only slightly over the last two decades.<sup>41</sup> However, to achieve these health benefits, women and couples must have access to a wide range of contraceptive methods at all stages of their reproductive lives to allow them to have the number of children they want when they want them.42

In sub-Saharan Africa, 24 per cent of married women are using family planning 16 per cent with a modern method and 5 per cent with a traditional method. Within sub-Saharan Africa, use of family planning and unmet need vary greatly. In Southern Africa, where the contraceptive use rate is 58 per cent, almost exclusively of modern methods, unmet need for family planning is a relatively

low 16 per cent. In Western Africa, in contrast, only 8 per cent of women use modern family planning, 5 per cent use traditional methods, and the unmet need is 23 per cent. Of course, these averages mask the variation within geographic areas: In Western Africa, for example, more than 14 per cent of women in Ghana use a modern method, compared with less than 5 per cent of women in Sierra Leone. In Eastern Africa, unmet need is high in Uganda, at 41 per cent, and in Madagascar, it is 23 per cent.<sup>42</sup>

Enact and enforce laws to prevent early marriage (before age 18)

There is an indirect relationship between age at marriage and fertility performance. Girls, who marry young, naturally have children early and are likely to have more children than their peers who stay in school longer and marry later. They are also less able to contribute to the productive sectors of the economy and reach their full potential. In sub-Saharan Africa, 29 of 51 countries or areas had adolescent birth rates of 100 or higher in 2005-2010, and these are more predominant in Middle Africa and Western Africa (144 and 124 births per 1,000 women aged 15 to 19, respectively). Niger had the highest adolescent birth rate of all countries with 210 births per 1,000 women aged 15 to 19 in 2005-2010.<sup>42</sup>

The region as a whole has an adolescent birth rate of 117 births per 1,000 women aged 15 to 19 (2005-2010). Adolescent births, however, account for a higher proportion of all births in Latin America and the Caribbean (15.9 per cent of all births) than in sub-Saharan Africa (10.9 per cent of all births). There is an increasing rate of risky sexual behavior among adolescents in Africa and Nigeria in particular.43 High levels of adolescent fertility are closely connected with the widespread prevalence of 'child marriage' (i.e. marriage before the age of 18). Rates of child marriage are high in much of sub-Saharan Africa. In western Africa, almost 1 in 5 girls are married by the age of 15, a slightly lower proportion than in south-central Asia. 42 This suggests that if laws could be put in place to prevent early age at marriage, the high birth rate would be curtailed and consequently reducing high dependency load of young population experiences particularly in sub-Saharan Africa.<sup>47</sup>

# Enhance the job market

In other to achieve a demographic dividend, the government is expected to implement economic policies that create an enabling environment for jobs expansion and economic growth. According to Anyanwu et al, gender equality in employment is currently one of the greatest development challenges facing countries globally, Africa inclusive. <sup>44</sup> A study showed that in 2011, male employment to population ratio, globally, was estimated at 72.7% compared to the female employment-to-population ratio was estimated at 69.2%

compared with the female employment-to-population ratio at 39.2%. In some countries in sub-Saharan Africa, time-related underemployment for women is as high as 40 or 50 per cent of total employment while women continue working fewer hours in paid employment and still perform the vast majority of unpaid household and care work. In sub-Saharan Africa, many working women still remain self-employed and a high proportion works as contributing family workers (34.9%).

Formal employment in sub-Saharan Africa is a greater source of non-agricultural employment for women than for men but the gender gap in informal employment still exists and reaches up to 13 percentage points. Moreover, the report also provides new evidence on the nexus wage, employment and social protection. Globally, 40% of women in wage employment do not contribute to social protection but 63.2% of women in wage employment in sub-Saharan Africa do not contribute to social protection.<sup>44</sup>

Policies at making the African labour market more inclusive and consequently enhancing women's employment for the purpose of greater economic empowerment, household welfare and poverty reduction should be encouraged.<sup>45</sup> This will in-turn ease barriers to starting work, encourage flexibility in job mobility and ensuring equal access to employment for young men and women. Providing incentives to businesses for job creation and encouraging private-sector firms to invest in training can equally accelerate job expansion.<sup>34</sup>

#### **CONCLUSION**

For sub-Saharan Africa to enjoy the reaping and optimizing the promising demographic dividend, fertility must decline substantially. The reduction in procreation could be achieved through certain actions and policy implications such as investment in human capital including health, quantity and quality education, infant and child's survival, infrastructural development and reproductive health of the married and unmarried populace.

#### Recommendations

It is recommended that government in collaboration with relevant law enforcement agencies in the regions with high fertility rates, Nigeria inclusive should come up with and effectively implement policies that would control mismanagement of funds and corruption and consequently ensuring accountability for the above-stated policy implications such as investment in quality education, infant and child's survival and infrastructural development among others, so as to enjoy the promising demographic dividend.

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