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THE DEMOGRAPHIC DIVIDEND IN SUB-SAHARAN AFRICA: TWO ISSUES THAT NEED MORE ATTENTION

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Abstract: In mid-2016, the population of Sub-Saharan Africa (SSA) was almost 1 billion people. By 2050, the population of the region will probably reach 2.1 billion people [Population Reference Bureau (2016)]. In 2100, SSA's population could be almost 4 billion people [United Nations (2015)]. This rapid demographic increase would translate into a possible quadrupling of the current SSA population by the end of the century (unless fertility would decline sharply in the near future). Nonetheless, the region has embarked on its demographic transition, i.e., the shift from high to low crude birth rates and crude death rates, albeit this process has occurred in SSA at a slower pace than in the rest of the developing world. In particular, the decline of fertility has been slower in SSA than in the other regions of the world. The rapid population growth and the occurrence of a demographic transition in the region have generated discussions on the prospects for SSA to open a demographic window of opportunity and capture a first demographic dividend. However, two crucial dimensions, which have so far been rather neglected, need more attention. First, one will need to define with more accuracy the sub-populations of the working-age adults and their young and older dependents, therefore refining the calculation of the dependency ratio. In particular, one will need to assess the population of the young dependents as well as the population of adults who are actually working. Second, it will be also necessary to examine the conditions required to trigger a faster and significant fertility decline in the region. This is most important because the relationship between the active adults and their dependents is predicated by the fertility decline, which will bring the changes to the age structure.

Keywords: Sub-Saharan Africa, demography, mortality, fertility, demographic transition, demographic dividend, demographic dependency ratio, economic dependency ratio, population policies

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1. INTRODUCTION

Sub-Saharan Africa (SSA) is a vast and very diverse region and its 48 sovereign countries have all experienced different demographic trajectories, which are linked to a variety of historical, cultural, social, and religious heritages and dimensions. However, it is possible to find several common causes explaining the unprecedented population growth that the region will continue to experience during this century [Guengant and May (2013)].

First, mortality levels (especially infant and child mortality levels) have decreased dramatically in SSA. This has occurred despite the emergence of major epidemics, such as HIV/AIDS and, more recently, Ebola. Large immunization campaigns, supply of nutritional supplements, widespread distribution of impregnated bed nets (to protect against malaria), and improvements in health sector systems have all contributed to this survival revolution. As more people live longer, however, population growth rates have increased.

The second engine of the SSA population growth has been the persistence of high fertility levels. Fertility has declined much more slowly than mortality and the time length between the decline of mortality and the decline of fertility appears to be longer in SSA than in any other developing region. SSA women still have five children on average [Population Reference Bureau (2016)]. When fertility has decreased, the pace of decline has been slow and the fertility decline has stalled in several countries [Population Reference Bureau (2014), see also Bongaarts and Casterline (2012)]. Ghana, for instance, has a total fertility rate of about four children per woman, and has experienced such a fertility level for the past 20 years. However, the sub-regions of Southern Africa and the Eastern Africa are more advanced in their fertility transition, while the sub-regions of Western Africa and in particular the Central Africa are lagging behind [Population Reference Bureau (2014, 2016)].

Third, one should also factor in the role of the youthful age structure, a phenomenon known as the population momentum. Because SSA populations are very young, numerous young people will enter the reproductive age bracket, which will also fuel the population growth in addition to the rapid decrease of mortality and the slow erosion of high fertility levels. If SSA countries were to reach replacement fertility level today (i.e., about 2.1 children per woman), their populations would still continue to increase (and possibly even double) over the next 70 years or so, due to the phenomenon of the population momentum.

Against the backdrop of the slow demographic transition in the region, leaders and policymakers in SSA have been very keen to accelerate the decline of mortality. However, they have been much more reluctant to promote family-planning programs in order to decrease fertility [May (2016)]. The fertility decline will require not only an expansion of contraceptive coverage, but also profound changes of reproductive norms. The latter will be achieved through enhanced female education, stronger empowerment of women, greater gender equality, and better communication campaigns to promote smaller family size. All these goals will

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call for the implementation of extensive multi-sector interventions—a large effort that will need to be sustained over several decades.

2. THE CONCEPT OF DEMOGRAPHIC DIVIDEND

Both the rapid demographic growth and the youthfulness of the SSA population will present the 48 sovereign countries of the region with promising opportunities, but also formidable challenges.

For the proponents of the optimistic view, large populations are perceived as a promise of economic and political strength. In their view, larger populations mean larger markets, more consumers, and faster economic growth. Population densification and rapid urbanization also hold promises of accelerated development. Furthermore, for this camp, larger populations bring stronger geopolitical weight and reach.

The proponents of the pessimistic view, however, argue that social and economic turmoil looms on the horizon when governments are unable to fulfill the aspirations of their populations, especially of the youth (below age 15). They point out that the African youth [about 43% of the total SSA population; see Population Reference Bureau (2016)] will need expanded education and health services as well as new jobs. The International Monetary Fund has estimated that about 18 million new jobs are needed every year in Sub-Saharan Africa, i.e., 450 million new jobs in a period of 25 years [International Monetary Fund (2015)].

In the past 15 years or so, discussions among international development specialists on the linkages between demography and socio-economic development have been informed by the concept of the demographic dividend (DD) [World Bank (2015), see also Bloom et al. (2017)]. The DD can be defined as an economic surplus,[1] resulting from a relative increase of the working-age population as compared to the dependents [Turbat (2017)]. The concept of the DD was formulated after an analysis of the East Asian "economic miracle," which took place between the 1960s and 1990s. In order to fully understand the East Asian rapid economic growth, demographers and economists had to take into account the significant shifts in age structures, which were brought about by rapid fertility declines. It has been estimated that the increasing weight of the number of active adults relative to their dependents accounted for about two-fifths of the economic growth that was observed in East Asia at the time [World Bank (2015)].

According to the concept of the DD, rapidly declining levels of fertility do transform age structures, bringing a rectangular shape to the bottom of the population pyramid because there are fewer births. Thereafter, this process triggers the shift between the adults of working ages and the dependents, opening a demographic window of opportunity, enabling countries to capture a first DD. A second DD may occur in the future when the beneficiaries of the first DD will have sufficiently saved and invested the additional resources they have generated earlier [Lee and Mason (2006)].

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As mentioned, the idea of the first DD is at the heart of the current discussions pertaining to the development of SSA and its integration into the global economy [World Bank (2015)]. Could the 48 sovereign countries of SSA benefit also from an East Asia-style first and thereafter a second DD? What policies should be put into place to obtain such a dividend? Are socio-economic improvements sufficient to bring about the needed demographic transformations or are specific policy interventions necessary as well, particularly on fertility? Last but not least, should additional interventions be put also in place, including human capital investments and good governance practices?

There are no simple answers to these multiple questions, despite the great efforts that have been applied to the examination of the concept of the DD during the past 15 years by the African governments and policymakers as well as their development partners, namely the multilateral and bilateral agencies, the universities and research centers, and the non-governmental organizations (NGOs). Despite this vast body of research, however, it appears that two areas in particular need more attention and research. First, more work is needed into the precise measurement of the working-age and the dependent sub-populations. Second, new insights and policy recommendations are needed in order to accelerate the fertility transition in Sub-Saharan Africa. These two issues are linked because it is the fertility decline that will change the age structure, altering the relationship between the active adults and their dependents.

3. MEASURING THE SUB-POPULATIONS OF WORKING-AGE ADULTS AND DEPENDENTS

One technical issue warrants more research, namely the definition of the active (working-age) and dependent sub-populations. Routinely, working-age adults are defined as those being in the age bracket 15–64, whereas the dependents are those aged 0–14 as well as those being 65 and over. The relationship between the working-age adults and their young (children) and old (senior) dependents yields the "demographic" dependency ratio, defined as the number of dependents per person of working age.

The "demographic" dependency ratio is usually calculated according to the formula:

$$\text{"Demographic" dependency ratio} = \frac{\text{Number of people aged 0 to 14 and 65 and over}}{\text{Number of people aged 15 to 64}} \times 100.$$

However, it appears that this crude measurement needs to be re-examined [Turbat (2017)]. From an economic viewpoint, the dependency ratio should actually be defined as the number of dependents per person *actively involved* in the economy. Indeed, when calculated according to this classic formula, this "demographic" dependency ratio does not capture the actual dependency in many SSA countries.

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First, children remain dependents long beyond 15 years of age. This was demonstrated by research carried out at the *Centre de recherches en économie et finance appliquées de Thiès* (CREFAT) in six West African countries: Burkina Faso, Chad, Côte d'Ivoire, Mali, Mauritania, and Niger. According to this research [CREFAT (2016)], children were starting to generate a surplus (income minus consumption) at about age 28. The CREFAT also found that people started to generate a negative surplus at age 63.

The numerator of the "demographic" dependency ratio should therefore be modified. The dependents would comprise the population 0–27 (or under 28) as well as those 63 years old and above (or over 63). This would reflect more accurately the current child and senior dependency burden supported by the labor force.

Second, the unemployed adult population should be added to the dependents to take into account the fact that, if the labor market cannot absorb the new comers (i.e., the "boom generation"), the once "assisted children" are to be transferred into the category of "assisted jobless" ("official" unemployment rates are above 20% in countries such as Namibia and Lesotho). This does not result in an improved "economic" dependency ratio (as opposed to the "demographic" dependency ratio). It should be noted that these calculations could be further refined by adding the underemployed adults (for whom data are scarce) to the unemployed adults, thereby increasing the pool of dependents.

The "economic" dependency ratio that is suggested herewith should be calculated according to the formula:

$$\text{"Economic" dependency ratio} = \frac{\text{Under 28} + \text{Over 63} + \text{Unemployed 28 to 62}}{\text{Employed 28 to 62}} \times 100.$$

The calculations pertaining to the first DD carried out with these two different formulas, namely the "demographic" dependency ratio and the "economic" dependency ratio yield different results as to the magnitude of the first DD.[2] Therefore, in order to measure the first DD more precisely, it appears crucial to refine the traditional measurement of the dependency ratio by looking at both the actual working population and the actual dependent population, hence the use of an "economic" dependency ratio.

4. PROSPECTS FOR A RAPID FERTILITY DECLINE IN SSA

Another major but often overlooked issue pertaining to the DD is the importance of achieving a fast and significant decline in fertility. This is linked to the issue of the "economic" dependency ratio, because it is the decline in fertility that will change the age structure and thereby the relationship between the active population and the dependents. In short, the faster the fertility decline, the faster the transformation of the age structure, and the faster the change of the "economic" dependency ratio.

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However, there is an ongoing debate in Sub-Saharan Africa as well as in international development circles as to the need to accelerate the fertility transition in the SSA region. Economists tend to assume that fertility levels will decline when economic outcomes will improve. Conversely, "family planners" posit that fertility declines are a prerequisite to improve socio-economic conditions. Furthermore, there is no consensus among these two constituencies about the effectiveness of family planning programs. Available evidence shows that reductions in total fertility rates in the range of 0.5–1.5 children per woman can be attributed directly to family-planning programs, with the actual results being probably closer to the lower end of this range [May (2012: 214)]. This being said, one should appreciate that the effects of family planning go beyond providing contraceptive commodities. Indeed, it has been demonstrated that the supply of family planning services may increase the demand for such services. The uptakes in contraceptive methods may also be triggered by a wide spectrum of other factors than the mere supply dimension, such as improved levels of female literacy and labor participation as well as increased women's autonomy [May (2012: 289)].

At this juncture, many SSA countries are still decades away from achieving the women's health improvements and the contraceptive revolution (when at least 70% of couples use a modern contraceptive method) that are needed to trigger a significant fertility decline. Many countries in SSA do not have yet extensive family-planning programs and do not muster the socio-economic conditions, e.g., female education, women's empowerment, and gender equality, which are required to accelerate the fertility decline. Reproductive norms are still favoring large families in many African societies, especially in rural areas. Last but not least, the political commitment that is needed to bring about all these changes is also lacking in many instances [May (2016), see also May (2012)].

With respect to the lack of political commitment, one should note that the attitude of African policymakers has often been lukewarm toward family-planning programs, although African leaders have supported the provision of family planning for health reasons. As such, the attitudes of the African leaders and policymakers have reflected the opinions of their constituencies. As they have adhered to other development priorities, many African leaders and policymakers have not endorsed the need to promote the expansion of modern contraceptive use.

To some extent, external donors from multilateral, bilateral, and NGOs have attempted to alert African leaders and policymakers about the risks posed by high fertility levels and rapid demographic growth. However, ideas on population issues advanced by donors have occasionally been challenged by African governments and their constituencies.

Finally, on the policy front, population, family planning, and public health paradigms and program priorities have also varied during the past 30 years or so, both among SSA governments and their development partners. Family-planning programs have been prioritized at times, but have fallen out of fashion at others (e.g., during the HIV/AIDS crisis).

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All these factors explain why the need for a rapid and significant fertility decline has not been yet internalized and prioritized in Sub-Saharan Africa. Although African leaders and policymakers are all in favor of capturing a first demography dividend, they still do not truly appreciate the strong linkages between a first DD and a brisk decline of fertility.

5. CONCLUSIONS

This essay has highlighted the need to better define the working-age adult and dependent sub-populations in order to measure with more accuracy the magnitude of the first DD. The paper has also stressed the importance to trigger a fast and significant fertility decline in the SSA region and has offered suggestions to achieve this goal.

In order to accelerate the fertility transition in the region, it appears that the attitudes of African leaders, the role of donors, and the shifting paradigms will need somehow to come together. Today, African leaders appear to be more amenable to fertility-reduction programs, a policy shift explained to a large extent by the potential of capturing a first DD. Donors have also come back to family planning, as illustrated by the 2012 London Summit aimed at expanding family planning services in 69 priority countries, most of them located in SSA. It is hoped that the current momentum will be maintained and that international public health paradigms and priorities will not change again.

The "stop-and-go" approach toward family-planning programs that had prevailed in the past will need to be replaced by an energetic, comprehensive, and sustained engagement of the public and private sectors to put SSA on the path of a contraceptive revolution. This will need to be accomplished one country at a time and with sustained efforts over several decades, a much stronger commitment of the African leadership, and the unflinching financial and technical support of the international donors [May (2016)].

NOTES

1 The surplus is an *amount of resources*, expressed in terms of Gross Domestic Product (GDP), and *in excess of what is needed to cover the dependents' current needs* and which is available either for investment in both fixed and human capital or for additional consumption. This surplus is generated by two elements: (1) the freeing up of resources due to a decrease in the dependency ratios; and (2) an increase in GDP due to the arrival of the "boom generation" on the labor market.

2 Our calculations of dependency ratios in Africa and Asia show an average difference of 0.5 between the demographic ratios calculated with U15 and U19 (this means half a dependent in addition per person in working age). Our first results (to be confirmed by further research) for the "economic" dependency ratios show between 1.2 and 1.6 additional dependents per person in working age.

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