3 Twice as many people in 2050

The need for agricultural transformation in Southern Africa

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One of the biggest challenges for Africa is its ongoing population growth. According to the medium variant of the United Nations projections the continent as a whole will double its population until 2050 to an estimated 2.6 billion people. Worldwide, the population is expected to grow only by 30%. Africa will account for half of the global population growth in that period (UN DESA, 2017). The continent has the youngest and least urbanized population of the world, the lowest education and health as well as the highest poverty levels. All these factors favour further population growth.

The southern part of the continent¹ is not an exception to this trend, with a population expected to grow from 176 million in 2017 to nearly 350 million by mid-century. In 1960 the population was 43 million (UN DESA, 2017). Nevertheless, in terms of demographic development Southern Africa is very heterogeneous. Countries that score higher in the Human Development Index (HDI) like South Africa and Botswana already have lower fertility rates and less population growth, whereas women in countries in the lower category of the HDI like Angola, Mozambique and Zambia still have many children. These countries face the challenge to provide anything from schools to housing and meet the increasing demands for ecosystem products like fresh water, food, timber, fibre and fuel for a fast growing population (UN DESA, 2017).

The projected growth might worsen the already existing food insecurity. It will speed up the urbanization trend and will make the countries' various problems more difficult to manage, from extreme poverty to the lack of basic services. Only with investments into the crucial sectors for development and the political will for family planning programmes the countries of Southern Africa will be able to manage the transition from high to low birth rates and to slower population growth.

This socioeconomic process that all countries pass through during their development is called the demographic transition. It starts in every country in the preindustrial age, when women give birth to a large number of children. Fertility rates are high. Mortality rates are high as well, based on limited environmental and economic potentials. Population growth is only minor or absent in this stage. In stage 2, death rates decline as living standards improve through better food supply, improved hygiene and health services, safe drinking water,

etc. Since fertility levels remain high in this stage this results in rapid population growth. With a certain time lag, in stage 3 fertility rates decline, catalyzed by social change like industrialization and urbanization, better (women's) education, women's rights and economic progress. Finally, in stage 4, both mortality and fertility rates reach a low level, population growth fades out and population might eventually decline in numbers when fertility falls below mortality in stage 5.

Mortality, especially of children and mothers, has already declined considerably in Southern Africa. Today in Angola 90 out of 1000 children die before the age of five, compared to 167 in 2005, in South Africa the respective numbers are 38 and 74. But whereas fertility in South Africa, the only industrialized country on the continent, has already declined to 2.4 children per woman, fertility decline in the less developed countries is delayed, resulting in a persisting high population growth. Women in Angola, Zambia, Malawi and Mozambique still give birth to an average of 4.2 (Malawi) to 6.2 (Angola) children (Population Reference Bureau, 2018). Replacement fertility that stands for a stable population in the absence of inward migration is 2.1 children per woman. But even if this level is reached, it takes decades to stop population growth because due to previous high fertility rates there is a large number of girls that have not yet entered their reproductive age (Weeks, 2018). This is why South Africa, which is already close to replacement level, is projected to grow from today's 58 million to 82 million in 2050 (UN DESA, 2017). The country will then be equalled by Angola that will add 52 million to today's population of 30 million in that period, giving Angola one of the fastest growing populations of the world. The pace of fertility decline in Southern Africa is much slower

Figure 3.1 Demographic transition

Figure 3.2a Infant mortality and total fertility rate in Malawi

Source: UN DESA, 2017

Figure 3.2b Infant mortality and total fertility rate in South Africa

Source: UN DESA, 2017

Figure 3.2c Infant mortality and total fertility rate in Zambia

Source: UN DESA, 2017

Figure 3.3a Population development in Southern Africa

Source: UN DESA, 2017

Figure 3.3b Population development in Southern Africa (small states)

Source: UN DESA, 2017

than it was in Asia or Latin America during their demographic transition in the 1970s, forcing the United Nations Population Division to repeatedly correct their population estimates for African countries upward in the past (UN DESA, 2015).

Dividend or disaster?

Whether a growing population is a benefit or a burden to society depends largely on its age structure. As high fertility rates result in large cohorts of children and young adults, this structure causes high costs for families as well as for the public health and education sectors. More problems arise when young adults in great numbers, a so-called youth bulge, enter the workforce without a chance to find meaningful work. This bulge is statistically associated with social instability, an increased risk of conflict and criminal violence. Countries where young people between the ages of 15 and 24 account for more than 25% of the population over 15 years of age, are considered particularly conflict-laden (Kröhnert, 2006). All countries in Southern Africa fall into this category.

Only when fertility rates decline and the share of the working-age population increases relative to the economically dependent population, consisting of children and the elderly, does the age structure become favourable to economic growth and a demographic window of opportunity opens. This “demographic bonus” can be turned into a “demographic dividend” when sufficient employment is provided for the young workforce. In this case, a dynamic economy unfolds. About one-third of the economic growth of the Asian tiger nations can be attributed to the use of this favourable age structure (Canning, 2015).

All less developed countries in Southern Africa are far away from this situation. They have relatively few workers, which have to support large numbers of children. This high youth dependency ratio constrains the chance of rapid per capita income gains. In Angola, Zambia, Mozambique and Malawi the population under 15 makes up between 41% (Malawi) and 48% (Angola) (UN DESA, 2017). At the same time, youth unemployment is widespread because new jobs are not created at nearly the rate at which the population is growing. Official unemployment figures for these countries are not reliable, as there is no regular registration and the majority of the young workforce is active in the informal sector.

South Africa, where statistics are more reliable, reports a youth unemployment rate (ages 15–24) of more than 50% (World Bank, 2018a). This is dramatic because South Africa is further advanced in the demographic transition, and the ratio between individuals in working age and economically dependent young and older people is already better than in the rest of the region. The country already has an age structure that makes it possible to harness a demographic dividend but unfortunately does not make use of it. There are not enough jobs to make the available workforce productive. As a result, South Africa's economy is not growing fast enough to keep pace with population growth, leaving today's population with a lower real per capita income than in 2014 (Bisseker, 2018).

It is possible to speed up the demographic transition that opens the window for more economic growth and to make use of the demographic dividend. This will only happen if fertility rates decline but this requires an improved livelihood. Therefore, it is necessary to enhance educational attainment and quality,

Figure 3.4a Total fertility rate in Southern Africa

Source: UN DESA, 2017

Figure 3.4b Current use of modern contraception by women (in percentage)

Source: The DHS Program. The Demographic and Health Services, 2019.

labour productivity and employment. As a short-term intervention family planning programmes and services, the supply of affordable modern contraception and high-level political commitment for family size limitations can reduce population pressure. Without an active population policy, the current demographic situation in the less developed part of Southern Africa will not improve and this will preclude rapid improvement of livelihood (Cilliers, 2018).

Education is the best contraception

Education is the central instrument for development, as it enhances human capital in terms of skills and health. In addition, education for girls has an enormous effect on fertility rates. The number of children born per woman declines with the number of years young women have spent in school in all developing countries of the world. African women with no education have, on average 5.4 children, whereas women who completed secondary education have 2.7 and those who went to college only 2.2 children (Engelmann, 2016). In Angola, women with upper secondary education have on average of 2.6 children compared to 6.5 children of women that never went to school. In South Africa the numbers are 2.0 and 3.8 respectively (Wittgenstein Centre for Demography and Global Human Capital, 2015).

This fertility gap can be easily explained: a longer time spent in education leads to later pregnancies. If girls in poor countries have the chance of obtaining a higher education we believe they can escape the early marriage market, where they would otherwise be placed at the age of 15 or 16. These girls usually become mothers as teenagers whereas girls with at least secondary education

Figure 3.5a Total fertility rate by education level in Angola, 2010–15

Source: Wittgenstein Centre for Demography and Global Human Capital, 2018

Figure 3.5b Total fertility rate by education level in Malawi, 2010–15

Source: Wittgenstein Centre for Demography and Global Human Capital, 2018

Figure 3.5c Total fertility rate by education level in South Africa, 2010–15

Source: Wittgenstein Centre for Demography and Global Human Capital, 2018

can decide to postpone pregnancy. They have less children in total and can plan for longer intervals between the births, which has a positive effect on the health of the mothers as well as of the newborns. Education for women upgrades a woman's position in the household and affects the bargaining power relative to that of their husbands when it comes to decide on the number of children.

Education for a woman also is an investment in the next generation because educated women tend to invest more into the education of their own children than do educated men. Female education not only reduces population growth but leads to an increase in human capital, elevated female labour force participation and to improved productivity, which makes it easier to unlock economic growth. Finally, less population growth requires less infrastructure investments and allows governments to spend more money per capita on health and education (Canning, 2015; Lutz and Klingholz, 2017).

Crucial development in rural areas

In general, fertility rates in Southern Africa are higher in rural areas compared to urban areas, where education levels are higher, and more jobs are available. In Zambia for example urban fertility stands at 4.4 children per woman vs. 6.4 in rural regions (Republic of Zambia, Central Statistical Office, 2018). This creates even more population pressure in rural areas, where a rising number of young people face unemployment. Many of them are forced to migrate. As a result, population growth in the villages fuels the growth of the cities.

In order to reduce population growth in the countries of Southern Africa, it will be necessary to improve living conditions in rural areas. This requires better access to health and education services in the countryside and more jobs in the agricultural sector, the dominant provider of employment in rural areas.

With the exception of South Africa, Namibia and partly Zambia and Zimbabwe, little has changed to this day in the traditional structure of agriculture. Farming is still carried out mainly on small family farms. Most smallholders are poor, and their output provides mainly for subsistence. Poverty and population growth condemn the majority of these people to remain in subsistence farming. There is a dire need for the transformation of agricultural production systems throughout Southern Africa. Only if productivity increases and households manage to save money, will they have taken an important step towards escaping poverty – a crucial precondition to reduce fertility rates. If that happens, households become less dependent on external support at harvest time. The freed-up workforce can be deployed at new enterprises that emerge in a downstream processing sector that create more value than do raw agricultural products. These enterprises include grain mills, slaughterhouses, dairies, shops selling agricultural supplies, factories and repair shops for agricultural equipment and machinery, among many other things (World Bank, 2018b).

With its vast reservoir of labour simply waiting for jobs to emerge along the agricultural value chain, the less developed countries in Southern Africa possess a valuable resource. This valuable human reservoir should be used to push ahead both economic and demographic transformation. Successful transformation of

agriculture can give communities in rural areas the opportunity to earn a living beyond subsistence, they will be exposed to new prospects. If that happens, an economy develops, where child labour is no longer required, fertility rates will decline and the demographic pressure will ease. Family planning begins only when individuals (people) are in a position to plan their future. This was observed in all early industrialized and emerging countries (Suetterlin, 2018). There is no reason to believe that the least developed countries, which can be found primarily in Africa, cannot follow the same course of development.

Note

1 Defined as all countries including, and south of, Angola, Zambia, Malawi and Mozambique

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