Sub-Saharan Africa in Focus

Anatomy of an ongoing population explosion and its developmental challenges

An analysis

of

Max D. Amstutz

"Africa concerns each and every one of us – Failure is not an option"
Dr. Hans Groth, World Demographic and Ageing Forum St. Gallen

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Foreword

Overshadowed by the current problems of fate in this world, such as climate change, nuclear weapons agreements, geostrategic reorientation of the world powers, pandemic diseases with an uncertain outcome, one of the most important problems of the future is being forgotten: Africa, a continent that has been sinking into poverty for years.

«Africa is neither the continent of the future nor the continent of awakening. Most African countries are laggards in economic development and are poor countries that are finding it particularly difficult to catch up. The high economic growth in some countries is hardly reflected in the number of employees; instead, the number of underemployed continues to rise. Despite growth, catching-up processes like those in East Asia are hardly noticeable in Africa; on the contrary, most African countries remain stuck in the poverty trap," says Robert Kappel from the German Institute of Global Area Studies in Hamburg. These are words that, in contrast to the whitewashing of many business leaders, politicians and Africa experts, describe the harsh reality that we in Europe and therefore also in Switzerland will soon have to face.

I have prepared the present analysis of the socio-economic situation in Africa and specifically Sub-Saharan Africa, a region with a current population of 1.1 billion people, because I am strongly convinced that the backwardness of the black continent and the medium to long-term dangers that this poses for the world, but especially for neighboring Europe, including Switzerland, are not being fully recognized. The still growing overpopulation and increasing poverty threaten the world to a degree that is generally overlooked. An objective, fact-based assessment of these dangers is therefore necessary.

The main task of global development aid is to combat and ultimately conquer poverty and misery in the world. The focus of poverty is on Africa, which lags far behind the other five inhabited continents. With the change in strategy in international cooperation (IZA 2021-24 report), Swiss development aid has created the basis for effective aid thanks to the foresight of the head of the EDA, Foreign Minister Ignazio Cassis. Of course, the contribution of Switzerland is just one piece of the puzzle in the fight against poverty. The task requires the commitment of all UNO states. Under the new conditions, however, Switzerland could play a pioneering role.

It is my belief that Africa needs to be helped. But we mustn't forget one thing: at the end of the day, it is the will of the Africans themselves that determines success. The people and elites must assume their responsibilities. This applies in particular to governments. Their cooperation is crucial. Corruption must be fought; political governance and security must be improved.

Max D. Amstutz

Voices on Africa that should be heard

- **Dr. med. Hans Groth,** Physician, demographer and President of the World Demographic and Aging Forum (WDA Forum), a think tank in St. Gallen: "The number of people on our planet will continue to increase in the 21st century. But this growth displays new and unprecedented dynamics. While the rich OECD countries are stagnating or even shrinking due to persistently low birth rates, the population forecasts for the African continent are significantly different: With average growth of 2.5% per year, Africa will double its population by 2050. (Quoted from: Business Professionals Network - BPN, Bulletin December 2019).

- **Dr. Reiner Klingholz,** former director of the Berlin Institute for Population and Development: «Since 1950, Africa's population has more than quintupled. Unlike in the rest of the world, there is no end in sight to growth. Until the middle of the century, the number of Africans is likely to increase from today's 1.3 to 2.5 billion, i.e. almost double. While today less than a fifth of the world's population lives on the continent, by 2050 it will probably be more than a quarter" (Quoted from: "Africa's Demographic Pioneers - How Declining Numbers of Children Accelerate Development", Berlin Institute for Population and Development, 2019)

- **Prof. Adam Tooze,** Historian (Columbia University New York): "Look at the demography of Africa: Almost all of the world's population growth over the next 50 years will occur in Sub-Saharan Africa. These are societies without a functioning growth model, and this in Europe's neighborhood. Hundreds of millions will be born into absolute poverty. The only answer to this will be radical. We have to do something. It is deeply irresponsible for democratic politicians not to prepare their constituents for something like this. Otherwise, there will be one shock after the other, all exogenous." (Quoted from: "NZZ History", No. 19, December 2018).

- **Prof. Kishore Mahbubani,** Political scientist (National University of Singapore): "I am troubled by Europe's pessimism. Europe knows that great challenges lie ahead, but it refuses to analyze its geopolitical interests coolly. What is the greatest threat to Europe? Not Russia, not China, but Demography. In 1950 Africa had about half the population of Europe, today it is about twice as many, in 2100 it could be ten times as many. If Europe does not export jobs to Africa, Africans will come to Europe". (Quoted from: Spiegel No. 12/03/14/2020).

- **David Signer,** Ethnologist, journalist, and expert on Africa: "It is said that one should not generalize about Africa, it is best to avoid the word "Africa" altogether. But the majority of the population in most countries is badly off, the continent still lags far behind in global economic terms, and for this reason alone one can very well speak of Africa in terms of global economy. It is cynical to pretend that the narrow middle and upper classes are representative of a supposedly new Africa. If everything were so great, why, according to a recent survey, do three quarters of young adults want to leave Senegal, one of the most democratic and stable countries on the continent?" (From a lecture of August 15, 2018 at the University of Bern. David Signer lives in Senegal).

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1. Introduction

1.1 A positive: The change in strategy of Swiss development aid

One of the periodically recurring political topics of discussion in Switzerland is international development cooperation. It bases its justification on the duty of the member countries decided by the United Nations to contribute in solidarity to alleviate the need (humanitarian aid) and to eliminate poverty (development aid) in the world. Because it costs the federal government billions every year, which is financed from taxpayers' money, and because its positive effect is difficult to prove due to its spread and long-term nature, the topic repeatedly concerns the public and politicians and polarizes the discussion regarding its usefulness.

Politically and strategically, the "International Development Cooperation" ("Internationale Entwicklungszusammenarbeit", IZA for short) area is overseen by the Federal Department of Foreign Affairs (EDA), which is responsible for managing the Swiss Agency for Development and Cooperation (DEZA) and receives additional support from the State Secretariat for Economic Affairs (SECO) on issues relevant to development in the areas of trade and finance in third-world countries. In short, the task of international development cooperation is threefold: First, actual development aid to reduce poverty by creating jobs, second, emergency aid in the event of a disaster (humanitarian aid), and third, the promotion of peace and human security. The focus of this analysis is on the first task: overcoming poverty. Around 8.9 billion Swiss francs or around 80% of the total amount is earmarked for this in the new four-year budget for international cooperation from 2021 to 2024.

The 17 development goals (Millennium Development Goals), which were decided on the occasion of the so-called Millennium Summit of the United Nations in 2015, contain the fight against poverty in the world as the first and most important goal. This priority also applies to the work of the DEZA. However, their previous strategy was not very suitable for really doing justice to this demanding task and aroused corresponding criticism from the public and politicians. This criticism was mainly directed at the squandering of the aid money on too many isolated projects scattered all over the world and doubted their lasting effect. It is to the credit of Swiss Foreign Minister Ignazio Cassis, head of the EDA, for taking a close look at the previously valid concept and decreing a change in strategy that is suitable for ensuring the effectiveness and political acceptance of development aid and its specific usefulness for Switzerland. Combating poverty as the most important goal requires the use of massive resources with a deep and broad impact, focused on the areas of the world with extreme poverty. In terms of population, the majority of these areas are now in Sub-Saharan Africa. Its geographical proximity to Europe implies a possible danger as a future source of mass emigration, also towards Switzerland.

The geographical distribution of funds in the IZA planning budget for 2021-2024 shows that significantly more money has now been reserved for development work in Sub-Saharan Africa than before. However, the present analysis will clearly show that the planned development impulses in Sub-Saharan Africa are in no way sufficient to provide the rapidly growing mass of the employable population there with a sufficient number of productive jobs. Poverty will therefore continue to increase. A noticeable reduction in fertility through contraceptives, family planning and the emancipation of women and girls through education and training is a priority. It's disappointing that in the IZA plan 2021-2024 there is insufficient or no clear reference to these measures that are indispensable for development policy. The IZA report even contains a regrettable error when it says on page 14: "The birth rate is falling rapidly in sub-Saharan Africa"; the opposite is the case: the high birth rate is stagnating or falling much too slowly. This is a fatal knowledge gap. Sustainable development planning is not possible without in-depth demographic knowledge — both of the historical course and of the current projections. They also shy away from talking about contraception and family planning. However, the topic of reducing fertility must not remain taboo. Reiner Klingholz, development expert and former director of the Berlin Institute for Population and Development, says: «The question of how high population growth can be reduced democratically and humanely should be addressed openly, clearly and pragmatically, especially if this can lead to an improvement in living conditions in the countries concerned. Admittedly, the subject is sensitive. In many rounds of talks it is the "elephant in the room", i.e., the problem that everyone knows but no one names. This is not in the spirit of sustainable development".

The author of this analysis has no doubt that Swiss Foreign Minister Ignazio Cassis has recognized the problem. The proof of this cannot be overlooked: with remarkable clarity and competence, he recently appointed Patricia Danzi (Fig. 1), a Swiss woman with African roots and many years of experience as the former head of the ICRC in Africa, as the new director of the DEZA. This ensures

Figure 1: Patricia Danzi is the new woman at the head of the Swiss Agency for Development and Cooperation (DEZA). With her many years of experience at the ICRC, the 50-year-old brings a large backpack with her
Image: Keystone/Peter Schneider

that sub-Saharan Africa is recognized as an important focus of public development aid and is looked after accordingly.

It will take a lot of time, work, and patience for the DEZA, which has been committed to the previous concept of widespread and selective development aid, mostly with only a local effect, to commit to the new course for years. This requires firm leadership and a great deal of insight into the causes of poverty from the new management. I do not rule out that Patricia Danzi, thanks to her personality and experience, will take on a leading international role in efforts to achieve effective development in the socio-economically backward region of Sub-Saharan Africa.

Despite this positive development in the strategic orientation of public development policy, the question remains as to which concrete measures the financial and human resources should now be used for. The focus is in particular on Sub-Saharan Africa, which is socio-economically lagging far behind in comparison to the other regions of the world. It is the purpose of my analysis to find possible answers to this question. There are three central causes which, in my opinion, are responsible for the socio-economic backwardness of Sub-Saharan Africa and which endanger the future of our world in the long term:

- The population explosion with an increasing proportion of employable people for whom jobs are missing.
- The poor productive performance of the African economic model.
- The lack of professional human capital that would be necessary for the dynamization of economic growth.

This analysis is intended to show where the levers could be applied to solve these three mega-problems on the African continent and what the development funds should be used for - in the personal opinion of the author of this study - in order to have an effect.

Of course, there are other problems of great importance which cause poverty and misery in Sub-Saharan Africa. Above all, I would like to mention the widespread corruption in Africa, the lack of political governance and security, violence by Islamic terrorist groups, conflicts between ethnic groups and self-defense militias, natural disasters (lack of water, drought, cyclones). But without progress in reducing the high population growth and reforming the less productive African economic model, successes are not very probable here either.

1.2 A demographic megatrend: Africa is replacing Asia as the driver of global population growth

As an introduction to the present analysis, I would like to give the reader an overview of the long-term development of the world population. Its demographic profile will change dramatically in the future. In the current 21st century, Asia will be replaced by Africa as the driver of global population growth. Unlike Africa, the other five inhabited continents on Earth will stagnate or shrink in population through 2050 and beyond. The expected increase in world population from 7.7 billion today to 11.2 billion in 2100 is almost entirely due to Africa.

Population Shares of Continents 2018 to 2100 in %

Region	Share of the total population in %			
	2018	**2030**	**2050**	**2100**
Europe	9.8	8.7	7.4	6.6
Latin America/Caribbean	8.5	8.3	7.9	6.2
North America	4.7	4.6	4.4	4.5
Asia	59.7	57.7	53.3	43.2
Oceania	0.5	0.6	0.6	0.7
Africa	16.8	20.1	26.4	39.2
Regions in Africa				
North Africa	**3.1**	**3.4**	**3.9**	**5.0**
Sub-Saharan Africa	**13.7**	**16.7**	**22.5**	**34.2**

Source: Population Forecasts DSW 2018/UN/Own depiction

These figures show that by 2050 one in four people on earth and by 2100 almost one in two people will be African if the expected development in fertility rates is correct. Such a demographic structural change has major development-relevant consequences: Firstly, it contributes to the threat of overpopulation on earth and makes it more difficult to implement the urgently needed nature and environmental protection. Famine will remain an inevitable side effect. Second, overpopulation continues to generate extreme poverty because sub-Saharan Africa is unlikely to be able to create enough productive jobs to support the rapidly expanding workforce. And thirdly, emigration from Africa, which cannot be avoided, will result in social, political and cultural changes in the immigration countries, with dangerous social and political consequences, as the recent past has shown (e.g., the problem of the social integration of immigrants). Reducing fertility in Africa is therefore of the utmost urgency. The world cannot afford an overpopulated and destitute Sub-Saharan Africa, and Europe even less.

The following graphic (Fig. 2) from the World Demographic and Aging Forum — a think tank in St. Gallen — shows the UN forecast for the world population in billions in the 6 continents in the years 2019, 2050 and 2100. Following this graphic, the total population will increase the world from today's 7.6 billion people to 9.9 billion (2050) and 11.2 billion (2100). The driver of the world population is already Africa and Sub-Saharan Africa - a development whose explosiveness is still almost completely underestimated today.

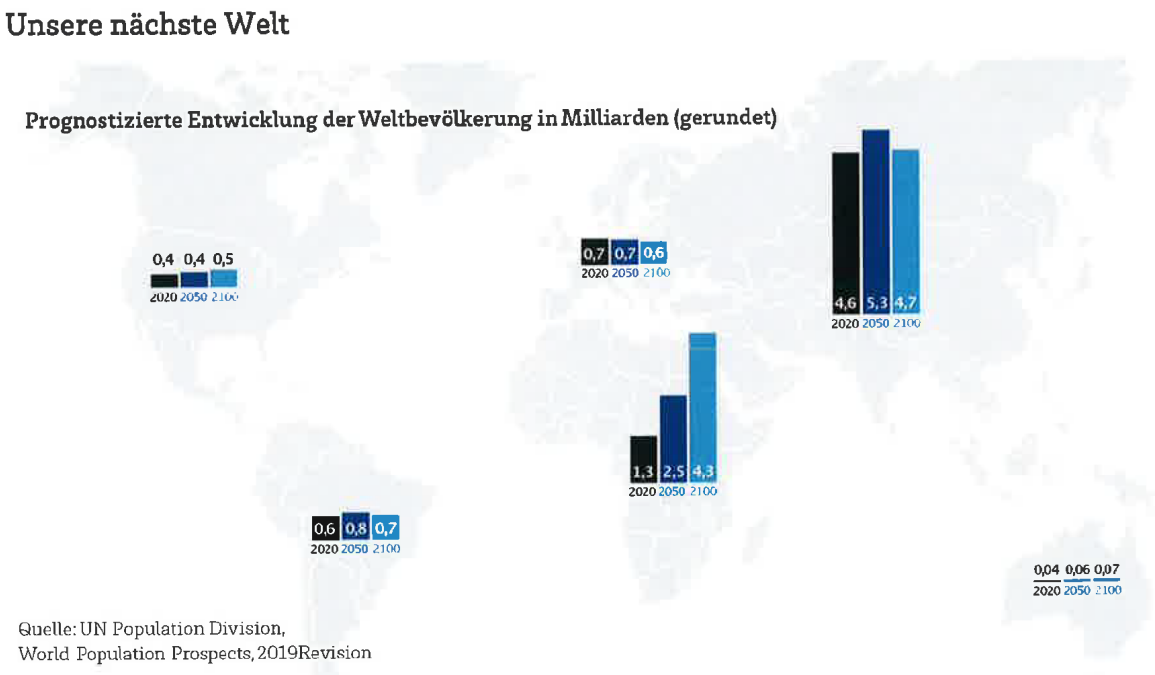

Figure 2: Projected World Population 2020, 2050, 2100. From "Schweizer Monat" 1079, Sept. 2020 Dossier

When calculating future population growth in Africa, the UN assumes a reduction in births of 1.5 children per woman in 30 years; it is therefore not a question of a linear extrapolation of fertility.

However, the African megatrend as the driver of global population growth in the 21st century will in no way be accompanied by corresponding economic growth. Rather, it is Asia that will take the lead here thanks to its developing emerging economies. The graphic below (Fig. 3) from the WDA Forum reflects this process. Asia's share will increase to over 50% of global GDP (Gross Domestic Product) in 2041-50, while the Africa/Middle East region's share will only increase by a few percentage points due to weak productivity. In Chapter 3.2 ("Underdeveloped African economic model") I will try to explain why economic growth in the black continent is practically stagnating.

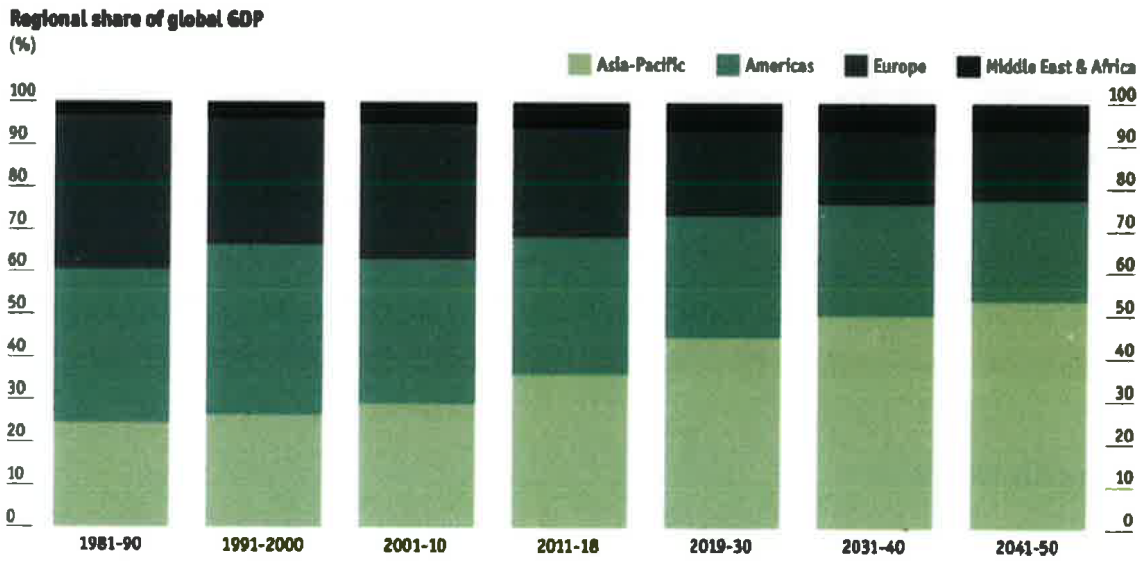

Figure 3: Unequal growth. Source: WDA Forum

2. The Demographic Anatomy of Sub-Saharan Africa — A Population Explosion with Consequences

2.1 Fertility and a country's level of socio-economic development - a correlation

The influence of demographics on a country's economic and social situation is generally underestimated. If you want to realistically forecast a country's level of development and future, you have to consider demographic data such as fertility rates, child mortality, life expectancy and the propensity to migrate over the long term. One of the most important indicators is the fertility rate. Meaning the average number of children that a woman of childbearing age (15 to 50 years) gives birth to. Compared to other demographic data, this value has a decisive influence on the growth of the population and its age structure. The fertility rate also reflects a country's level of socio-economic development.

Demographic research has shown that there is a close correlation between fertility and a country's level of wealth. There are empirical explanations for this. Hannes Schwendt (Stanford University) has studied this phenomenon and found that children have a "price": They cause the parents "investment costs": time and money for education and training, as well as "opportunity costs" because they deny the parents' freedom and possibilities (for leisure, travel, luxury). The fertility rates in a prosperous industrialized country are therefore much lower than in a developing country with a low per capita income, and the families there are therefore usually smaller. This stems from the fact that poverty generates high fertility rates because, as a result of insufficient income from work and a lack of health and old-age provision, children are needed by the parents to improve the family's livelihood (child labor) and later to secure old-age provision. In addition, infant mortality is high. Conclusion: High fertility indicates poverty. The families there usually have numerous children.

The correlation between fertility and wealth is a proven fact. This is confirmed by the following statistics from the OECD:

Fertility Rates and Development Status

OECD regions	Number of children per woman
World Average	2.4
More developed regions	1.7
Less developed regions	2.6
Least developed regions	3.9

Since 1990 there has been a Human Development Index for every country in the world. The Human Development Index (HDI) of the UN Development Program uses the following key data: gross domestic product per capita, level of education (training) and life expectancy of the population of a country. The countries of the world are then divided into four categories of development status: very high, high, medium and low. Although the HDI is controversial, its usefulness as the only general indicator of wealth available is well established. Of the 49 countries in sub-Saharan Africa, 32 now

fall into the "low" category and the remaining 17 into the "medium" category. The graphic below shows this clearly.

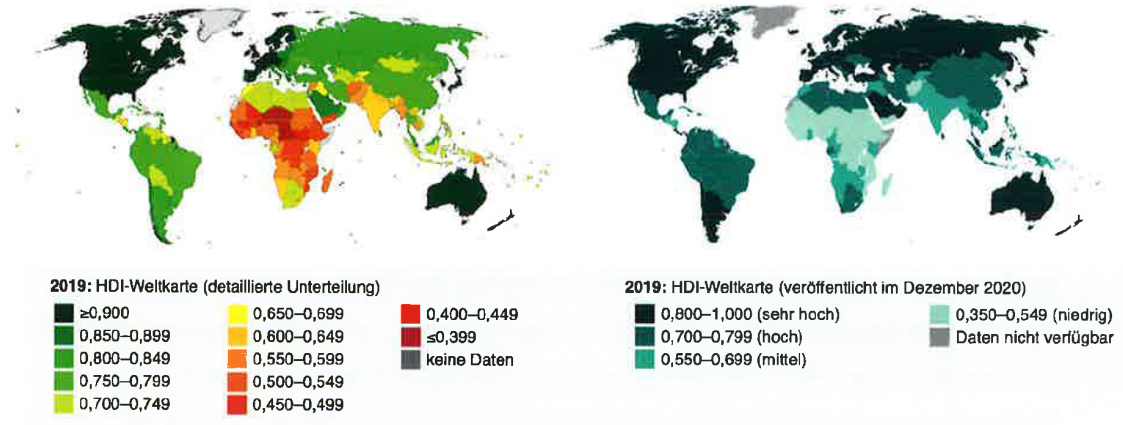

Figure 4: Human Development Index.
Source: UN Human Development Index, Illustration: Wikipedia JackintheBox and Alice Hunter

2.2 Fertility rates and population growth worldwide compared to Sub-Saharan Africa

Because fertility rates are an important indicator of a region's level of development, the table below shows today's fertility rates and the resulting annual population growth worldwide. When interpreting the figures, it is important to note that a fertility rate of 2.1 children per woman is necessary to maintain the population level (zero growth). While this birth rate is already undercut or only slightly exceeded on all continents except Africa, the black continent shows a different picture: With 4.5 children per woman, the population growth is almost explosive. Within Africa, Sub-Saharan Africa, which is now home to 1.1 billion people, or 82% of the continent's population, has an even higher fertility rate, at 4.7 children.

Fertility Rates and Population Growth (2018)

Region	Fertility Rates (children per woman)	Population Growth % p.a.	Population (million)	Population Density (inh. per km^2)
Europe	1.6	0.07	746	33.8
North America	1.8	0.73	367	19.8
Latin America/Caribbean	2.1	0.99	645	32.5
Asia	2.4	0.90	4,587	149.6
Oceania	2.3	1.39	42	5.0
Africa	4.5	2.49	1,305	45.2
World	**2.4**	**1.10**	**7,692**	**59.9**
North Africa	3.3	1.80	235	n / A
Sub-Saharan Africa	**4.7**	**3.00**	**1,070**	**n / A**

Source: DSW- German Foundation for World Population/United Nations 2018/Statista 2019/own illustration

From a development economics perspective, high fertility requires strong economic growth in order to provide enough productive jobs. This condition has not existed in sub-Saharan Africa for years. If the developing countries on other continents have been able to significantly improve their level

of prosperity since 1960 and largely eliminate extreme poverty, they owe this, among other things, to the rapid reduction in their fertility rates. The following graphic (Fig. 5) clearly shows the different course of fertility in the 6 inhabited continents of the earth. Africa is lagging considerably behind in reducing the number of children. The number of unemployed and underemployed is correspondingly high, estimated at 84% of the working population according to recent surveys.

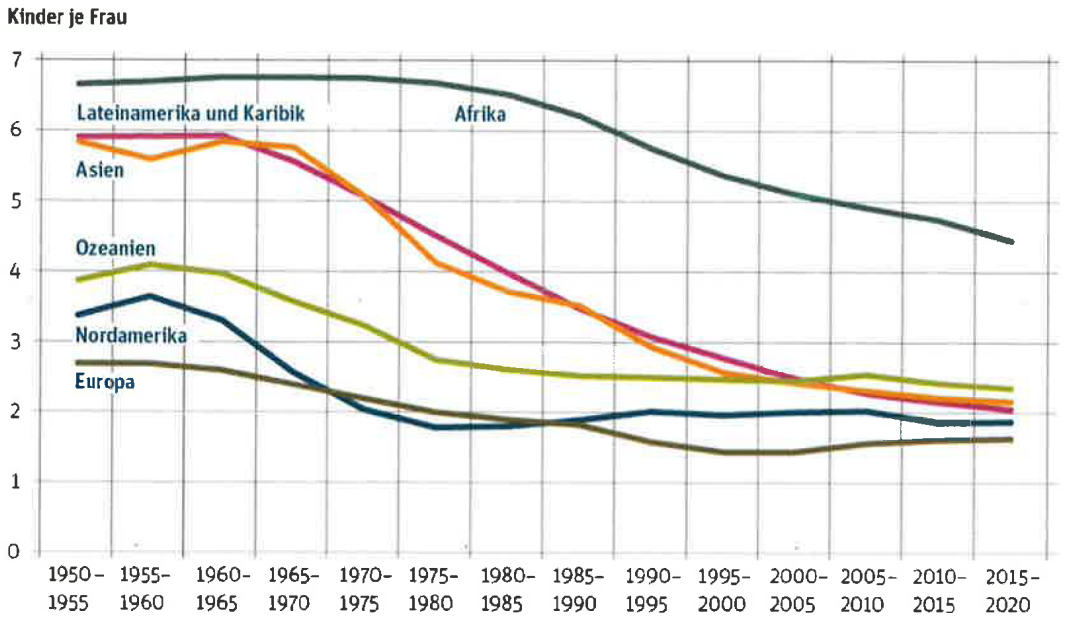

Figure 5: Average number of children per woman in different regions of the world, 1950 to 2015 Source: Berlin Institute for Population and Development

There is a widespread belief, also among development politicians and development experts, where it is predicted that fertility rates in Africa will "automatically" fall, "as was also the case in Latin America and Asia". This is a dangerous misconception that needs to be eradicated. The mere fact that Africa's population growth has not slowed down nearly as much as experts had expected ten years ago speaks for this incorrect prognosis. Since GDP per capita has so far hardly brought any noticeable increase in prosperity to a constantly growing population in sub-Saharan Africa due to weak economic growth, there is no incentive to reduce the number of children per woman.

It must not be forgotten that the conditions for a reduction in birthrates in Latin America and Asia were fundamentally different from Africa: Better political governance, targeted promotion of education and training, introduction of contraception and family planning, expansion of infrastructure and a diversified, productive industry as rich sources for the creation of new productive jobs and modest wealth — all conditions that are still lacking in most of the 49 countries of Sub-Saharan Africa today.[1]

2.3 Disproportionate growth in the working age population and its consequences

In the coming decades, the high fertility rates in Sub-Saharan Africa will lead to a structural change in the age stratification of the population that has received little attention up to now: The proportion

[1] J.A. Goldstone "Africa 2050 – Demographic Truth and Consequences", Hoover Institution, 2019

of the working age group (cohorts from 15 to 64 years) is disproportionately increasing in absolute and relative terms compared to the proportion of the two age groups in childhood (cohorts from 0 to 14 years) and seniors (cohorts from 65+ years). The World Demographic and Aging Forum St. Gallen has calculated these increasing structural changes and recorded them visually. The graph below (Fig. 6) shows the explosive increase in the working age population in sub-Saharan Africa over the next 40 years. The proportion of working-age cohorts (marked red) is from today's 600 million people to 1,600 million in 2060, an increase of 166%.

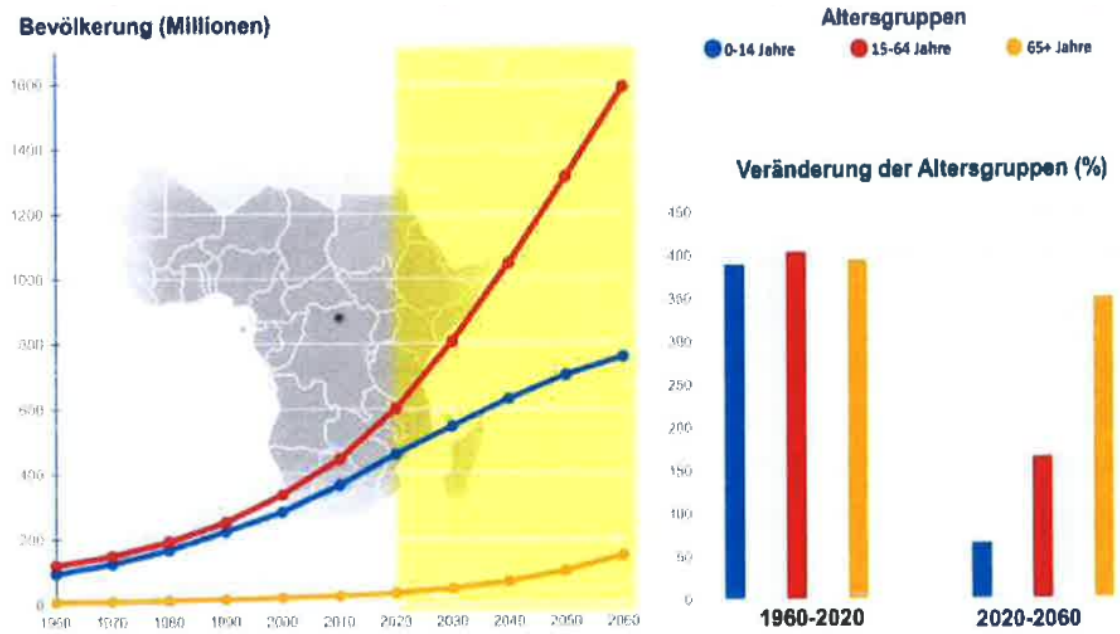

Figure 6: Population growth in sub-Saharan Africa. Illustration: WDA Forum; Data: UN Population Division, World Population Prospects, 2019 Revision

This calculation shows that in the coming 40 years under consideration, an average of 25 million people will enter working age every year: In 2020, this will initially be around 20 million, then increasing up to the year 2060, when it will be around 40 million if nothing happens. If we assume that women account for 50% of the people newly entering working age in sub-Saharan Africa, most of whom have to live without any monetary income, working in the household and in the fields, there will still be 10 million men left in 2020 who are looking for productive jobs. However, the current assumption that very few women are looking for paid jobs is not very realistic in the medium term. In Sub-Saharan Africa, too, thanks to better training and other motives, more and more women are striving for paid work, which will increase demand in the labor market accordingly. Declining numbers of children per woman favor these tendencies.

The previous calculation only relates to people who will start working from 2020 onwards. In order to assess the mass of job seekers realistically, the previously unemployed and underemployed must also be taken into account. Development experts estimate that in Sub-Saharan Africa, around 600 million people fall into this category.

The perspectives for this mass of job seekers and underemployed are conceivably bad. The African Development Bank estimates that given the weakness in African economic growth, only about 3

million productive jobs are created each year.[2] For today's unemployed and underemployed, there is only subsistence farming. A large part lives at the subsistence level; poverty remains and will even increase in the future. The employable population is constantly growing faster than the economy.

The central employment problem in Sub-Saharan Africa is summarized as follows in a study by the German Development Institute: “The main problem is not unemployment, but rather underemployment, a lack of productivity and precarious working conditions. In countries where there is no significant welfare system, very few people can afford to be truly unemployed. In order to secure at least a minimum income to survive, people who cannot find regular wage work look for alternative jobs. 84% of the labor force in Sub-Saharan Africa is informally and irregularly employed, most of which are self-employed. What is missing are productive and stable jobs.”[3]

The ILO (International Labor Organization) has calculated the proportion of the working-age population in Sub-Saharan Africa according to their status in the labor market as a percentage (people aged 15 to 64, today a total of around 600 million):

Employable population - shares by status in the labor market 2018

Informal workers, subsistence farming	52.1%
Employers and entrepreneurs (patrons)	1.6%
Wage and salary earners	14.3%
Unemployed (jobseekers)	4.0%
Not working (mostly women)	32.0%

Source: "World Employment Social Outlook", International Labor Organization (ILO) Geneva 2020

Sub-Saharan Africa's economic model is based on a high proportion of low-productive agriculture and a basic service sector, has a weak infrastructure and industrial base and a poorly diversified export, mainly raw materials with commodity character. This model will not be able to create enough productive jobs for decades to come. The rapid reduction of the high fertility rates is therefore one of the most urgent tasks for the organs of development aid. The Berlin Institute for Development and Population says: "As long as the birth rates in the African countries remain at a high level, any effort to achieve development progress will be a fight against windmills".[4]

2.4 The "demographic dividend" as an incentive and hope for the future

Demographers and economists coined the term “demographic dividend”. In order to be realized, it requires falling birth rates so that the dependency ratio in the population structure - fewer dependents (children and seniors) per employed person - improves accordingly. The experts assume that the preliminary stage to the “demographic dividend”, namely the “demographic transition” only occurs when there are at least 1.7 employable persons for every dependent person (see chart). Only then will developing countries achieve a favorable starting point that makes an economic upswing possible. Prerequisite for entering the «demographic dividend", which is intended to trigger a

[2] African Development Bank (2018), Jobs for Youth in Africa.
[3] «Arbeitsplatzoffensive für Afrika», Tilman Altenburg, Deutsches Institut für Entwicklungspolitik, 2017
[4] Berlin-Institut für Bevölkerung und Entwicklung: «Afrikas demographische Vorreiter» 2019, Page 47

development spurt, is also that the structure of the economy and economic growth have improved to such an extent that enough new productive jobs are being created.

In the opinion of the author of this analysis, this additional condition cannot be fulfilled for the time being given the weak economic growth forecast in most of the countries of Sub-Saharan Africa. Nevertheless, the goal of the "demographic dividend" remains a hope for the future and an incentive to take measures that can lead to a reduction in the number of children. Dr. Hans Groth, President of the WDA Forum, estimates that fertility rates of 3.0 to 3.5 would have to be achieved in the next 10 to 20 years in order to meet the prerequisite for a “demographic dividend”. The following graph (Fig. 7), prepared by the Berlin Institute for Population and Development in 2019, shows the ratio of the working-age population to the dependent population (children and the elderly) since 1950 and forecasts this ratio up to the year 2100 for some African countries.

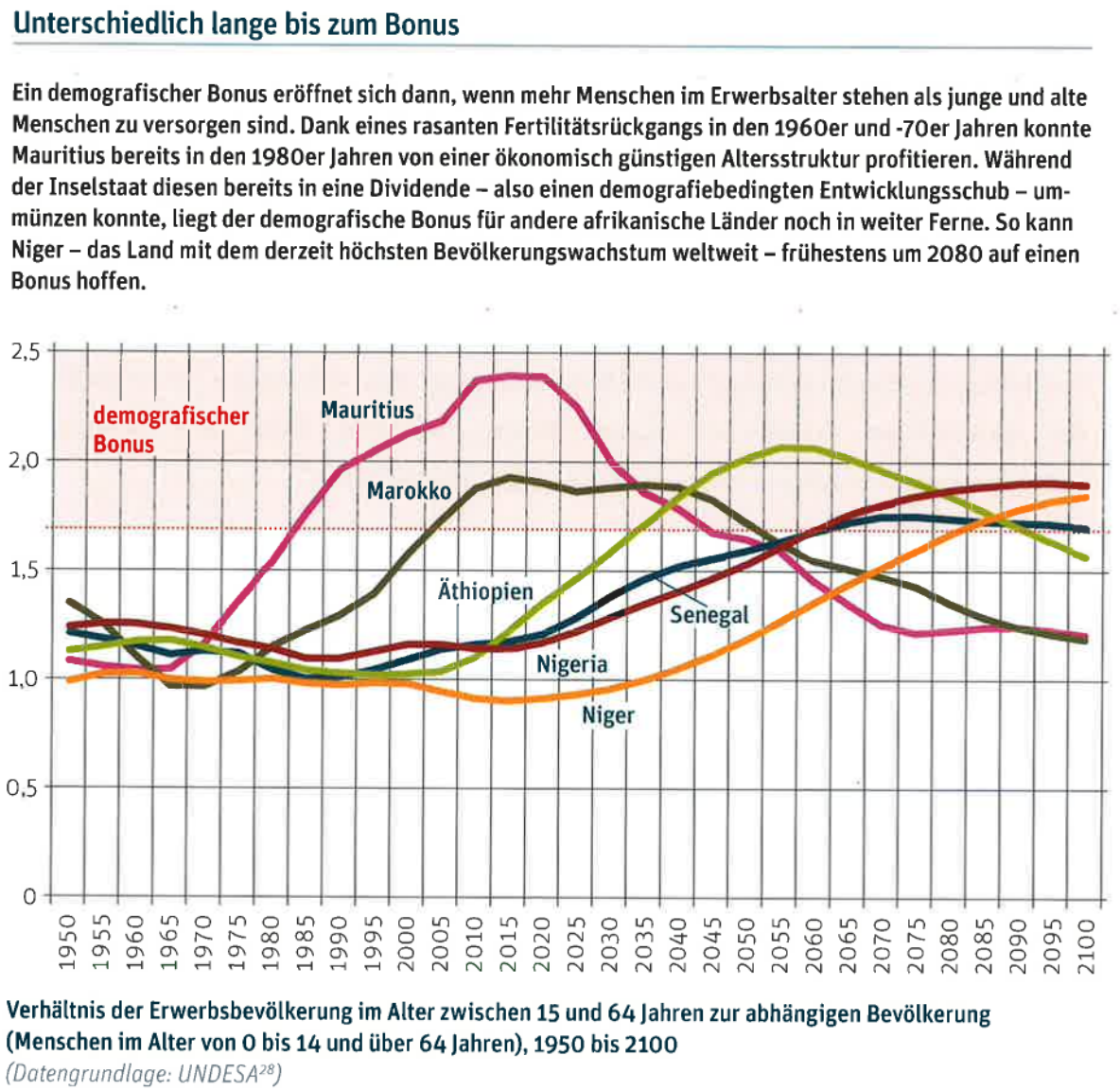

Figure 7: Source: Afrikanische demografische Vorreiter. Berlin-Institut für Bevölkerung und Entwicklung, 2019

The graph shows that thanks to the sharp drop in fertility rates since 1970, Mauritius in Sub-Saharan Africa (today 1.4 children per woman) and Morocco in North Africa (today 2.2 children per woman)

have benefited from a favorable age structure - fewer dependents per employable person - and were able to make the demographic transition to the "dividend" early on, while Niger, for example (today with 7.2 children per woman) can only hope for a demographic transition with a subsequent “dividend” in 2080. But we should not overlook the fact that both Mauritius and Morocco are among those countries whose industrial value creation was well developed early on and played a decisive role in realizing the demographic dividend.

The Berlin Institute for Population and Development, which developed the above graphic, summarizes its findings as follows: “Whether and how quickly Africa can reduce its developmental deficit and offer its people prospects depends largely on how quickly the demographic transition progresses. Declining numbers of children per woman are an imperative for this».

The author of this study recognizes demographers' thinking about the "demographic dividend". The concept is realistic and explainable. The designation "Dividend" irritates and confuses, however, because this term is located in the financial sector. In his opinion, "transition bonus" would be easier to understand.

2.5 Extreme poverty in the world: Sub-Saharan Africa at the top

Poverty is a relative term. Statistically, it is defined in terms of income. In modern industrialized countries, a social class is usually considered poor if its per capita income is less than 50% of the median income. The World Bank introduced the term "extreme poverty" for developing countries with the aim of eradicating such poverty in the world as a priority. The World Bank defines "extreme poverty" as a condition where a person's income is less than US$1.90 per day or less than US$700 per year. These are people who must survive at subsistence levels. Subsistence farming is a type of economy in which families have no access to the market and have to live off the meager yield of their mostly agricultural activities (self-sufficiency).

The graph below (Fig. 8) from the World Bank shows the development of the number of people living in extreme poverty in the world since 1990 and provides a forecast for the next 10 years (until 2030). It expects that extreme poverty will have been practically eliminated on all continents except Africa by then. The exception is Sub-Saharan Africa: Of the around 500 million people in extreme poverty, 80% or 400 million will live in this region south of the Sahara.

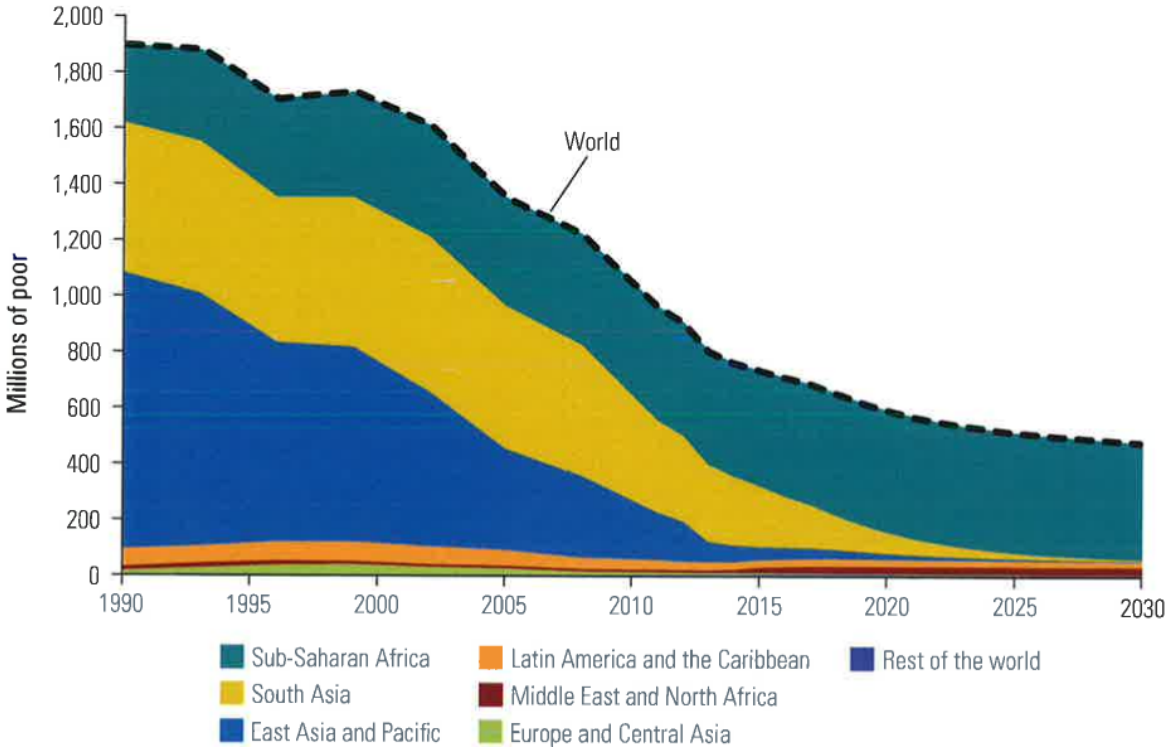

Figure 8: Number of people (in millions) living in extreme poverty (<19.0US$/day).
Source: Piecing together the poverty puzzle, World Bank Group 2018

This graphic is shown on page 15 of the Federal Council's IZA report 2021-2024 and commented as follows: "Thanks to the constant growth of the global economy in recent decades, thanks to social programs and also thanks to official development aid, the proportion of people living in extreme poverty dropped from 41% in 1981 to 10% in 2015. According to the latest estimates by the World Bank, as of mid-2019, 8% of the world population or 600 million people were still affected by extreme poverty. After East Asia, South Asia is likely to overcome extreme poverty almost entirely over the next decade." In the future, it will therefore primarily be found in Sub-Saharan Africa - a wake-up call for international development cooperation, which must focus its aid there. It is about reducing the high fertility rate of 4.7 children per woman today and about boosting the insufficient annual economic growth of 3 to 4% so far, which is almost completely absorbed by the high population growth of 3%. The result is that per capita there can be no significant increase in prosperity - sub-Saharan Africa is caught in the poverty trap. In addition, the 2020 Corona Pandemic will significantly delay the reduction in the poverty rate, as the following graphic (Fig. 9) shows.

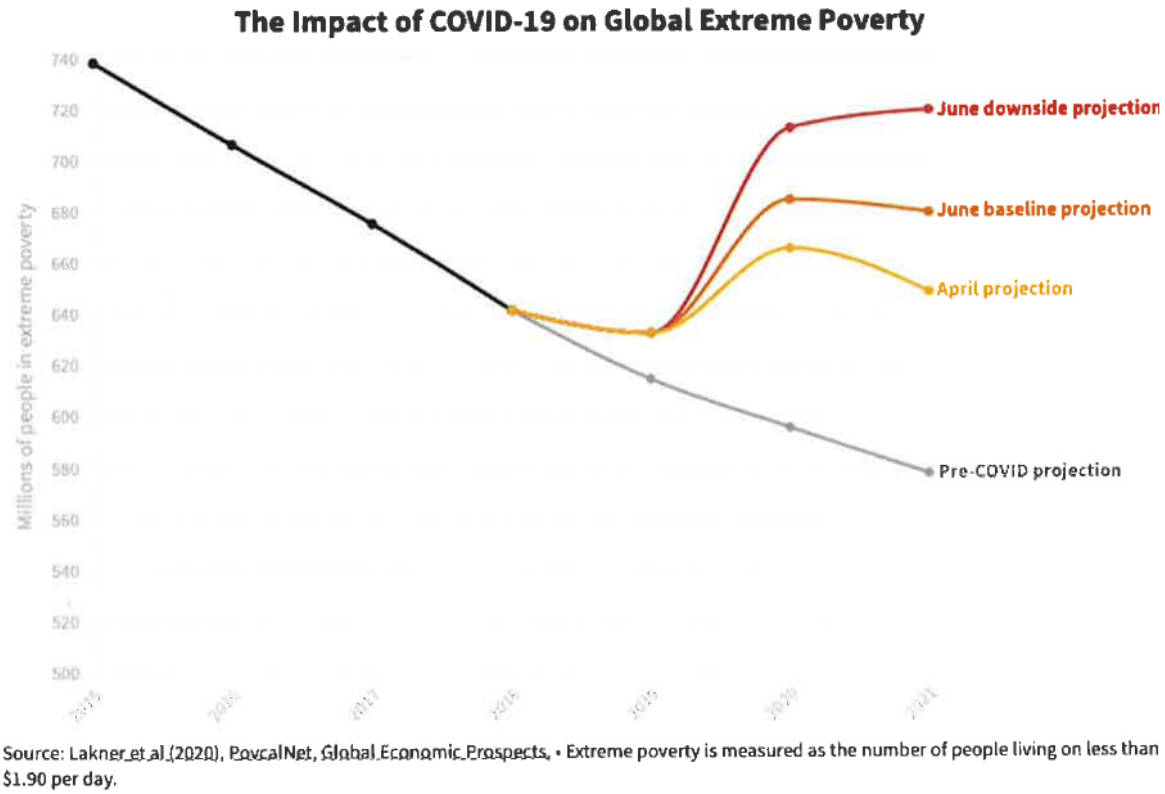

Figure 9: Impact of COVID 19 on global extreme poverty.
Source: https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty

A review of these forecasts regarding a possible increase in extreme poverty in the world due to the corona pandemic will be necessary in one to two years, when the damage will finally be manageable, and its impact can be realistically assessed. Finally, it seems important and evident to me to point out that the successful eradication of "extreme poverty" - a social term created by the World Bank - is only a small step towards poverty reduction. Severe poverty will continue to exist, and socio-economic sustainable growth will therefore not lose its great importance as the goal of adequate prosperity in all regions of our world. The graph below (Fig. 10) with estimated figures from the World Bank makes this clear: In 2015, around 50% of the world's people were still trapped in poverty at the income limit of US$ 5.50 per day or US$ 2008 per year. It is no speculation to foresee that Sub-Saharan Africa has a disproportionate share in these categories of poverty as well.

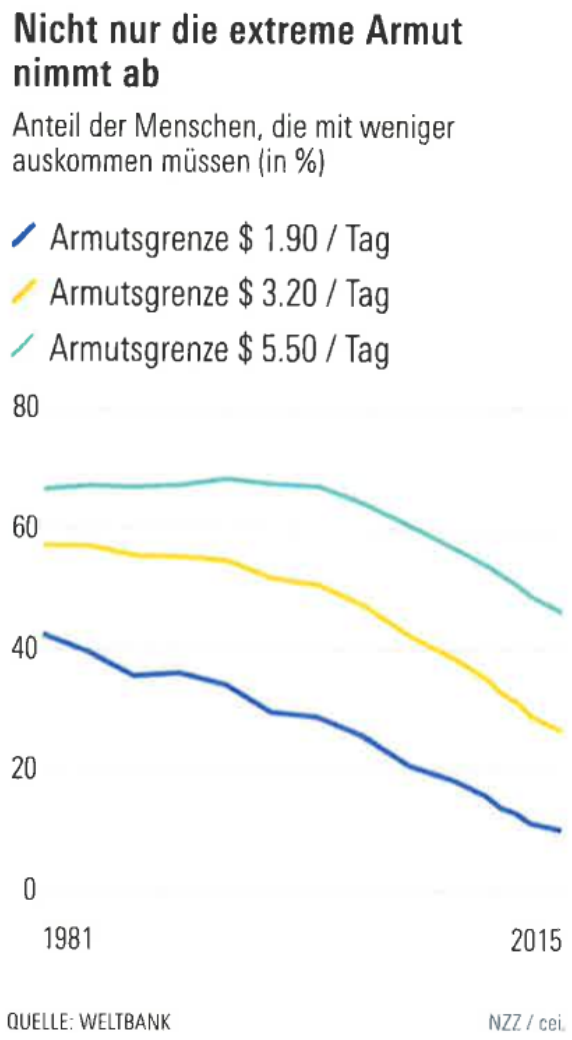

Figure 10: Decrease in extreme poverty. Illustration: NZZ July 20, 2020.
Source: World Bank

The corona pandemic contributes a lot to the further impoverishment of Africa. I refer to the following chart "Foreign direct investment and remittances" (Fig. 11) on cash flow to Africa in the years 2005-2018. It shows that remittances (i.e., the money that Africans working abroad send to their families) accounted for around 40% of international financial flows to Africa in 2018, i.e., around USD 80 billion. This is much more than the much-needed FDI (Foreign Direct Investments), which reached a share of around 24% or USD 45 billion in the same year.[5] Many Africans working abroad have lost their jobs as a result of the pandemic or have been put on short-time work.

[5] African Economic Outlook 2020, African Development Bank, “Africa’s Macroeconomic Performance and Prospects”.

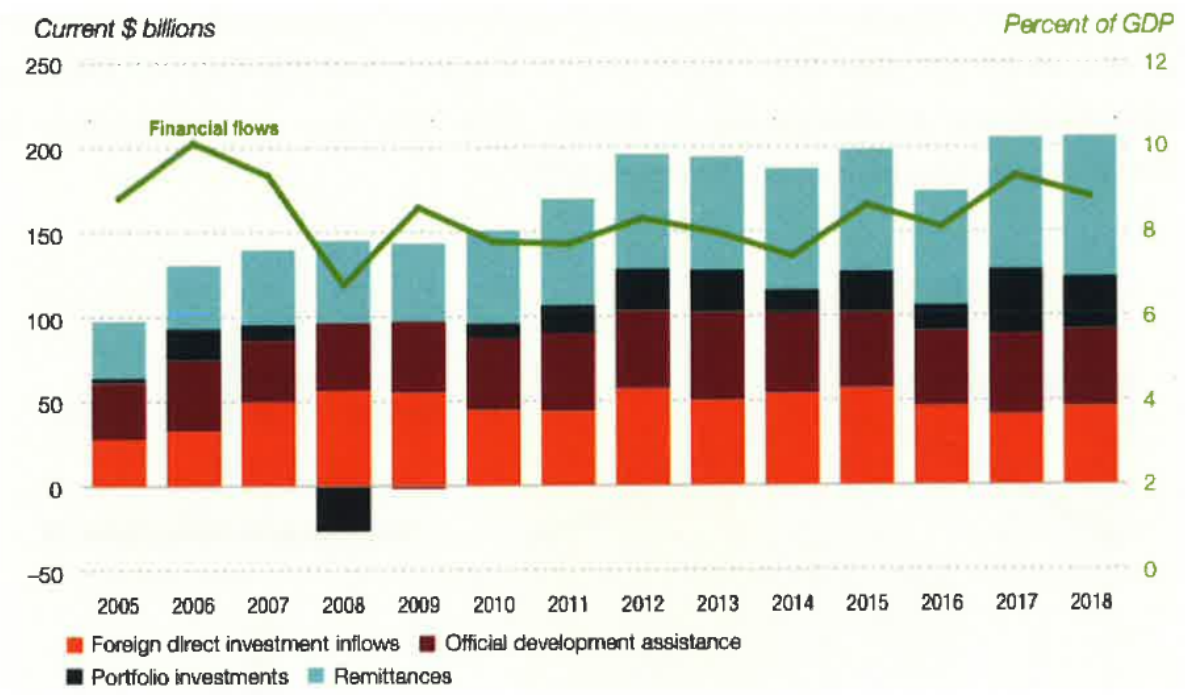

Figure 11: Growth in remittances and direct investment
Source: African Economic Outlook 2020, African Development Bank Group

2.6 The increasing pressure to emigrate from Sub-Saharan Africa to Europe

When we speak here of emigration from Africa, we do not mean politically persecuted people or Africans displaced by riots and wars (real refugees), but emigration motivated by economic reasons. As long as it is not possible to lower the high fertility rates and strengthen the notoriously weak economic growth in Sub-Saharan Africa, the incentive for economic emigration will increase. Intra-African migration cannot absorb this pressure because jobs are missing everywhere. Therefore, there is a strong incentive to emigrate directly to the closest Non-African labor markets, and these are mainly in Europe. The question is whether Europe is capable of absorbing an increasing number of African emigrants into their workforce. In order to be able to answer this question, we examine the future development of the labor supply in Europe. We use the interpretation of the graphic below from the WDA forum (Fig. 12):

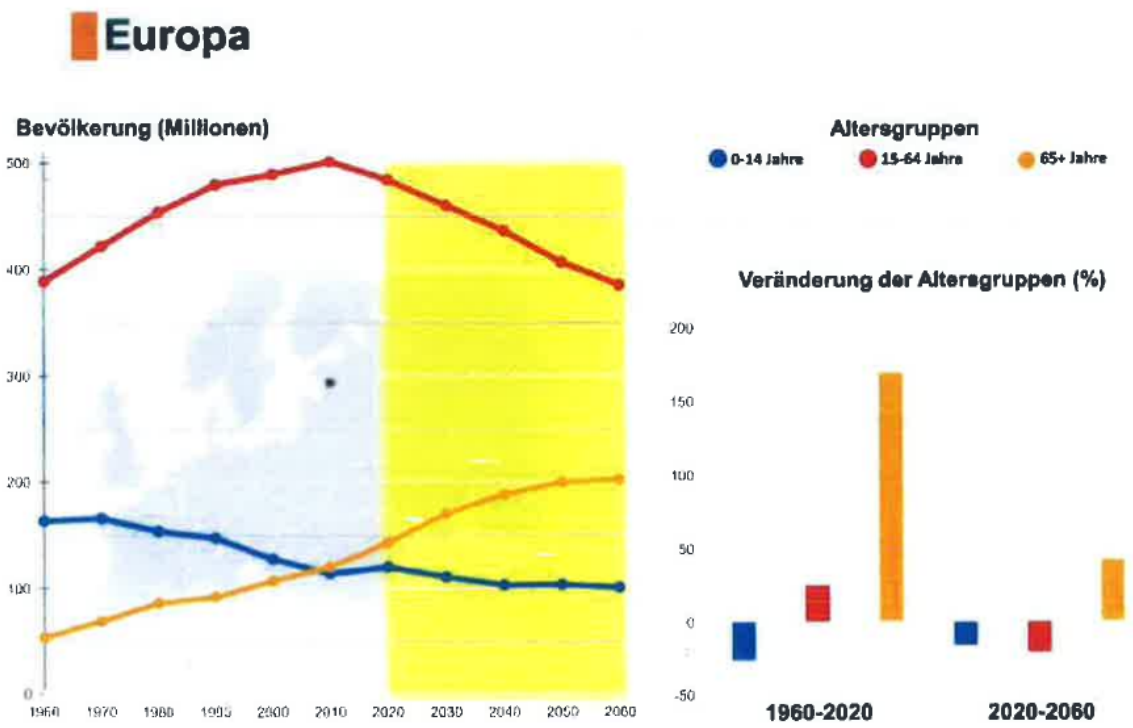

Figure 12: Change in age groups in Europe
Illustration: WDA Forum. Source: UN Population Division, World Population Prospects, 2019 Revision

Triggered by the continuing decline in fertility rates, which at 1.6 children per woman are already well below the population-based maintenance level of 2.1 children, the age group of the working-age population (15 to 64 years) will shrink in Europe. The European labor supply will fall from 490 million people today to 390 million in 2060 (red markers in the graph above). There will therefore be fewer and fewer employable people in Europe to fill the existing jobs, who will now even have to take care of more dependent people (mainly the elderly) because of the increasing life expectancy. We are very familiar with this problem in Switzerland from the already existing problem of threatened old-age provision (including deficits in the AHV). The graph shows that in Europe we have an inverse trend in terms of structural changes compared to sub-Saharan Africa.

The dwindling supply of employable people in Europe is being solved mainly by technological progress: Digitization, automation, robotization replace human work. In addition, the retirement age will be raised (extension of working life). As a result, economic output gains in productivity, although fewer people will be involved in the work process. Should there nevertheless be a shortage of highly qualified workers in Europe, they would have to be brought from other continents. Africa can only make a contribution here in very few cases. In a wide-ranging study "Skills in African Labor Markets and Implications for Migration to Europe", Andreas Backhaus identified the following core findings: "Skilled labor migration from African countries will unlikely be a remedy for skill shortages in Europe, unless migrants are positively selected on their skills. In that case, however, additional opportunities for skilled labor migration would risk a brain drain from African countries that could harm economic development there. Improving the quality of education in Sub-Saharan Africa on a broad scale remains indispensable for mutually beneficial migration between

Africa and Europe".[6] We will go into the question of the completely inadequate education and training in Africa elsewhere (Chapter 3.4 Lack of productive human capital).

However, the structural changes in the composition of the three age groups of the population and in the social system in Europe will create new jobs, mostly for semi-skilled workers, which will be opportunities for "low-skilled" African emigrants. Due to the increasing aging and increasing prosperity of the European population, there is an additional demand for special services, such as in nursing, in care for the elderly, in agriculture and construction and in the household, thanks to the fact that more and more women with children are working. These jobs are increasingly more difficult to fill, because it is a question of services that are not considered very attractive by the local population and are not remunerated particularly well. For this reason, such jobs have often been filled with semi-skilled workers from developing countries, and increasingly also from Africa.

These considerations clearly show that Europe will never be able to absorb large numbers of African economic emigrants. On the other hand, it can be assumed with certainty that the incentive to emigrate will continue to increase because of the continuing poverty and the lack of productive jobs in Sub-Saharan Africa. Simple calculations show that this could result in millions of strong and ongoing streams of emigrants, which threaten to become a danger for Europe in the future. Everyone who knows Africa knows that, but it hasn't reached the politicians yet. David Signer, ethnologist and now Africa correspondent for the NZZ based in Senegal, is one of the best experts on the situation in Sub-Saharan Africa. Based on surveys, he found that in West African countries, a majority of young people of working age intend to leave their country because the economy of their home country is not able to guarantee them a decent living.

Meanwhile, the population explosion in Sub-Saharan Africa continues to intensify. Since the fertility rate of 4.7 children per woman can only be reduced in the long term, an average of 25 million people will enter working age and look for paid employment in the following years. And because today only 3 to 4 million productive, paid jobs are created every year (expert estimate), the number of unemployed and underemployed continues to increase every year. The explosive nature of this for Europe becomes clear if we hypothetically assume that the unemployment rate - excluding underemployed persons - for Sub-Saharan Africa is currently the same as in South Africa at 30%. That would result in massive unemployment of around 180 million people today, 90 million of them men. If 10% of these unemployed young men started the march towards Europe, there would be a storming of the "Fortress Europe" of 9 million young people every year. The fact that family members - women and children - would also accompany the job seekers in this stream of emigrants and that immigrants from North Africa are also permanently striving for the European labor market has not yet been taken into account here. Streams of refugees, which have their origins in the numerous conflicts in African countries, could be added. As recent experience has shown time and time again, strong and unbridled immigration generally creates social tensions because it is usually not possible to integrate the immigrants into the existing national community. As we know, there is a lack of political will in Europe to accept emigrants with modest education and in large numbers.

[6] Andreas Backhaus: "Skills in African Labor Markets and Implications for Migration to Europe", April 2020, Kiel Institute for World Economy

The following illustration (Fig. 13) in a global overview shows the far-reaching structural changes in the labor markets in the 21st century. The rapidly increasing supply of workers in Africa is clearly visible, as is the downward trend in supply on the other continents. If nothing is done, the lack of productive jobs in Sub-Saharan Africa will turn from a human catastrophe in the dark continent to a permanent burden for the entire world.

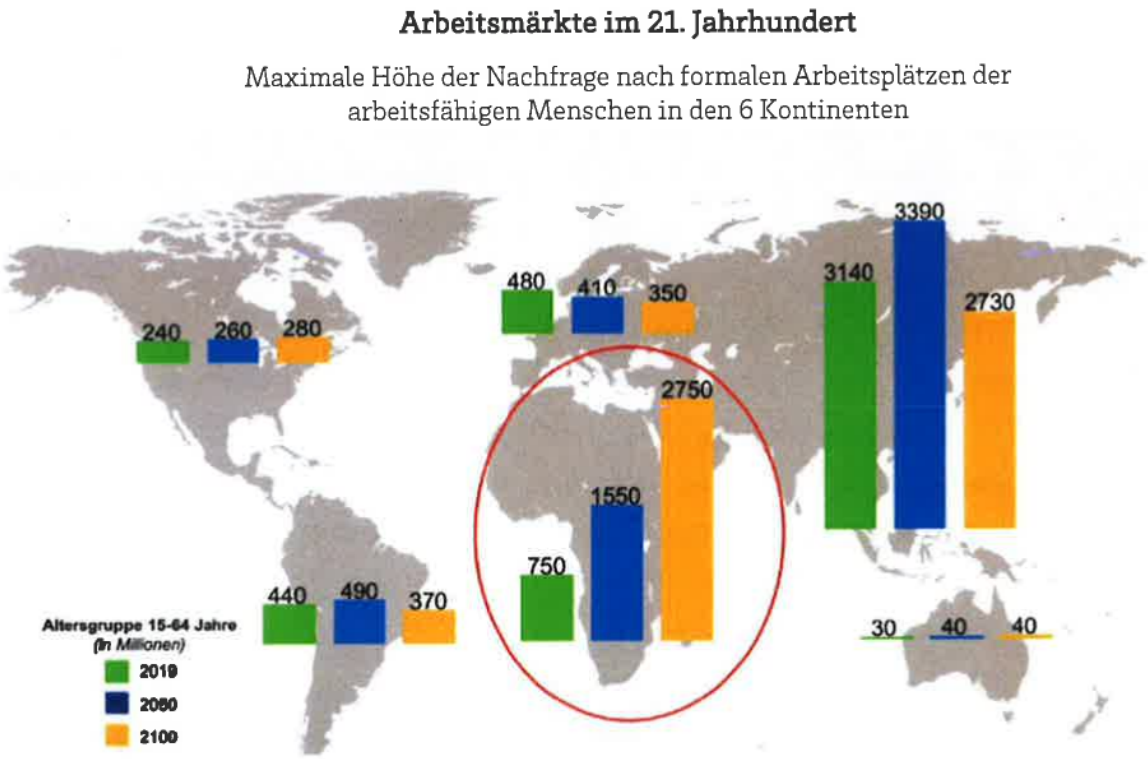

Figure 13: Labor markets in the 21st century.
Illustration: WDA Forum 2019; Source: UN Population Division, World Population Prospects, 2019 Revision

2.7 Ways out of the development-inhibiting fertility handicap

The high fertility rates are demonstrably the primary obstacle to a productive and pro-economic development in Sub-Saharan Africa. In 2011, the Berlin Institute for Population and Development therefore published a pioneering study entitled "Africa's Demographic Challenge". I quote two core insights from it: "Poor countries with high population growth only have a chance of development if population growth slows down and birth rates fall". And further: "In the ongoing discussions about the development goals in Africa, demographic aspects as a development obstacle must be considered far more than before".

And in another study from 2019, the Berlin Institute doubles down: “In the future, the issue of population growth should be placed more at the center of development policy relations with the African continent and objective discussions about it should be made socially acceptable on the international stage”![7]

[7] Berlin Institute for Population and Development "Schnell, bezahlbar...", 2020

These findings have been clearly confirmed by the analysis presented here: Overpopulation in Sub-Saharan Africa and its negative socio-economic consequences are a fact. The conclusion to be drawn is clear: global official development assistance must focus on massive measures that lead to faster reductions in fertility rates. What should be done? In my opinion, two main thrusts should be pursued as a matter of priority and as a matter of urgency:

- Better education for girls and women to enable them to exercise their sexual and repro-reproductive rights. It's about the emancipation of African women. This requires more competent teaching staff, better presence of the students, better school buildings, expansion of the secondary school.
- An expansion of health care for women and intensification of contraceptive and family planning measures. Governments and political authorities, especially in the health sector, must be won over to this goal.

More education - fewer children

Educated women have fewer children than uneducated women throughout less developed countries. The effect is greatest when they attend secondary school after primary school. On average, Senegalese women with secondary education have two children less than those who have never attended school. One of the reasons for this is that they only marry and become mothers later because of their longer school attendance.

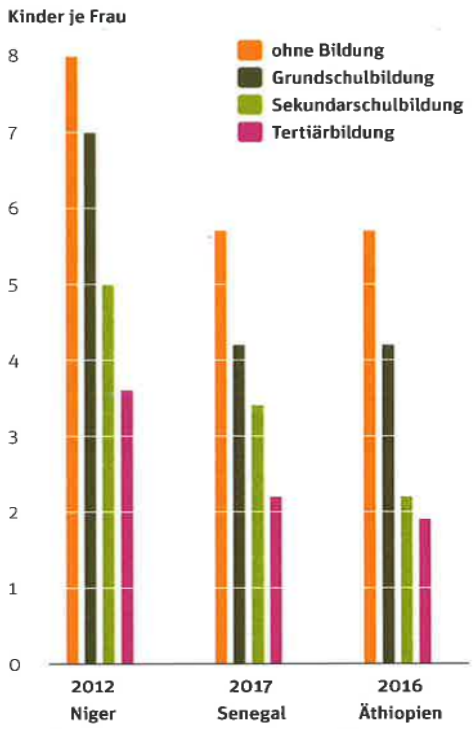

Figure 14: Average number of children by education level. Source: Afrikanische demografische Vorreiter (2019) – Berlin Institut für Bevölkerung und Entwicklung

To the first goal: Science and practice have confirmed that birth rates demonstrably decrease when girls and women gain better education. The graphic on the left (Fig. 14) proves this fact. The Berlin Institute for Population and Development says on this: “Everywhere in less developed countries the average number of children falls with the level of education of women. Attending school is a very important protection against forced marriages and early pregnancy. Women with a higher education have better professional opportunities, want fewer offspring, and can assert this wish more easily with their partners. The African school system has not managed to grow beyond the primary level. A broad expansion of the underdeveloped secondary school is urgently needed. Public development aid must invest massively here. With access to education and knowledge, having children is increasingly developing from an act of fate into a conscious decision. Experts estimate that today less than 20% of girls complete secondary school. Only a direct and massive financial and personal use of development aid can create remedy here. In his research report “Africa 2050: Demographic Truth and Consequences” Jack A. Goldstone says: “For women, it appears that secondary education is the critical arena for reducing fertility. Women who leave school after primary education, which ends at age 12, are readily available for very early marriage, and have no distinctive skills that allow them to be more productive or stand up to their husbands. Women who complete high school, by contrast, are unlikely to marry before age 18, and emerge with greater confidence and skills that allow them to shape their own fertility and make a greater economic contribution to their families." He thus confirms the findings of the Berlin Institute for Population and Development.

And that brings us to the second focus of the necessary development policy measures taken: Increased use of contraceptives and family planning. Sub-Saharan Africa is also the bottom of the world here. The WDA Forum found that only 26% of Africa's population use modern contraceptives, compared to 50% in Asia. The graph below (Fig. 15) shows how even relatively advanced countries such as Kenya have lagged behind in contraception.

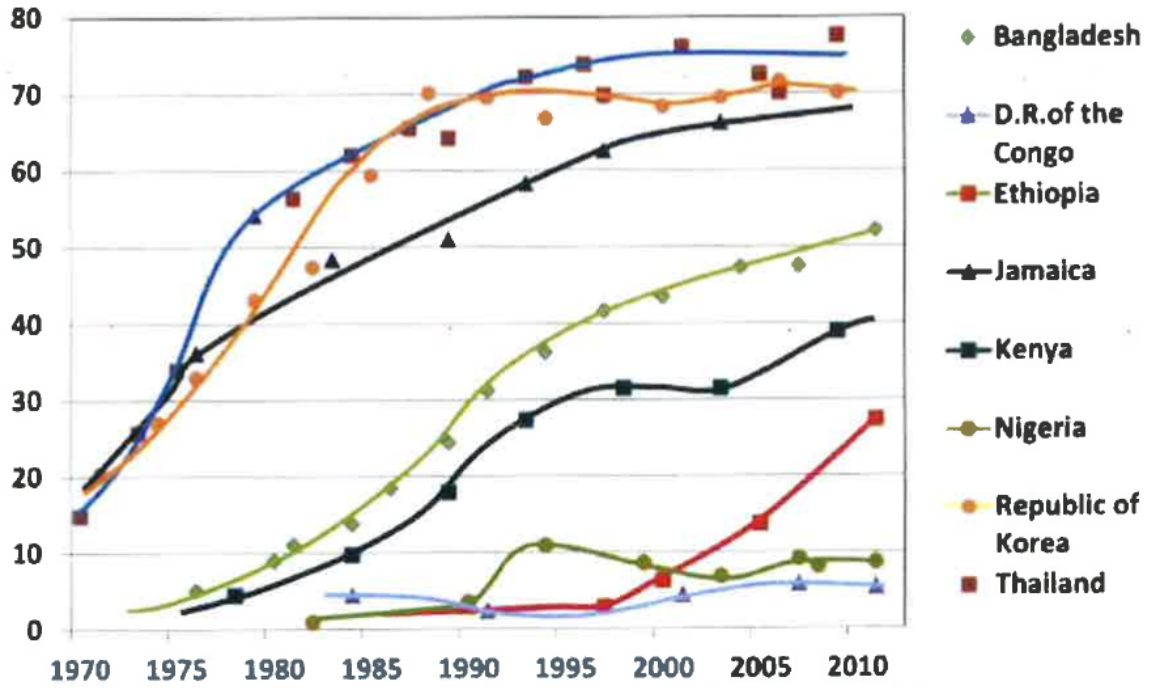

Figure 15: Use of modern contraceptive methods in %.
Source: Jean Pierre Guengat, in World Demographic and Aging Forum

The WDA Forum says: "Efforts to protect human rights and improve the quality of life are increasingly pushing family planning programs into the background. But ignoring family planning is not an option». It must once again become a recognized priority because only it brings real progress in improving the quality of life in Sub-Saharan Africa. Countries like Bangladesh, Thailand and Jamaica are conclusive examples here.

Family planning and contraception can only be successful if access to sufficient contraceptives is ensured. The Berlin Institute for Population pointed out this essential prerequisite as early as 2011: "Various modern contraceptives should be available everywhere, from which women can choose freely. These must also be accessible to young and unmarried women, since teenage pregnancies in particular are associated with a high risk for mother and child. Contraceptives are not only used for family planning, but ultimately also contribute to reducing mortality, since the chances of survival of newborns and mothers increase when the spacing between births can be reliably regulated and is two years or more. In addition, funds for family planning reduce the number of abortions».

In my opinion, ensuring access to contraceptives is one of the most important development aid measures in Sub-Saharan Africa. This requires a close partnership with private organizations and foundations that are active in the health sector in Africa and have a corresponding network, in particular with doctors, hospitals and the state health authorities.

The basis for the social progress of a people is always a well-developed school system. There is a correlation between a lack of education and poverty. The overview compiled by the Berlin Institute for Population and Development shows how bad things are here in Africa (Fig. 16).

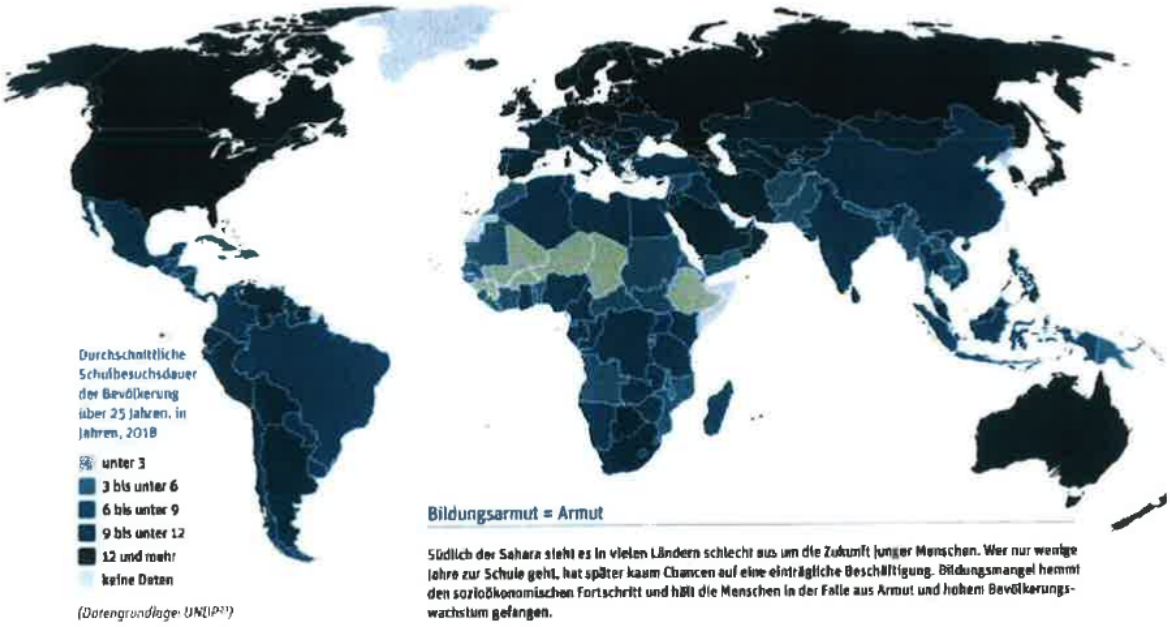

Figure 16: Average length of school attendance of the population over 25 years (2018).
Source: Berlin Institute for Population and Development

3. Sub-Saharan Africa's economy and its weaknesses

3.1 Extremely low productivity of African economies

Poverty in the world has decreased step by step over the past few decades. Thanks to technological progress, increasing free trade under the aegis of the WTO and the international division of labor, which has led to globalization, the productivity of human work increased and with it prosperity. International development cooperation has also contributed to reducing poverty in the so-called Third World. On every continent, with one exception, the economic growth generated in this way has increased prosperity and almost eradicated extreme poverty. The exception is Africa and especially Sub-Saharan Africa, where 82% of the 1.3 billion people of this continent live today. The table below shows the comparison of the nominal gross domestic product (GDP) for the six inhabited continents of the world in billions of US dollars — as a total amount, as an amount per capita and in comparison with the population shares:

GDP nominal in US$ per continent 2019

Continent	GDP Billions	GDP %	GDP per Capita	Population %
Oceania	1,630	1.1	53,220	0.5
North America	24,430	28.8	49,240	4.8
Europe	21,790	25.7	20,410	9.7
South America	3,640	4.3	8,560	8.5
Asia	31,580	37.2	7,350	59.6
Africa	**2,450**	**2.9**	**1,930**	**16.9**
World	85,520	100.0	11570	100.0

Source: IMF Staff Estimation / DSW Datenreport 2018/own illustration

With a share of around 17% of today's world population, the dark continent generates only 3% of global gross domestic product. This poor productive performance alone shows how poor Africa is. The numbers prove that this populous continent has missed the connection to the positive socio-economic development that industrialization and networking with the world economy has brought and continues to bring to other continents. It will take decades to catch up with the rest of the world. Sub-Saharan Africa has remained poor to this day. The weakness of the African economy in comparison with Germany is particularly impressive (Fig. 17). Certainly, Germany is one of the richest countries in the world. But one mustn't forget that Africa is one of the richest regions in the world when it comes to raw materials, while Germany - and also Switzerland - practically only lives from the work of its people. The deficient African economic model explains why the wealth of people and raw materials in Africa has so far not led to prosperity.

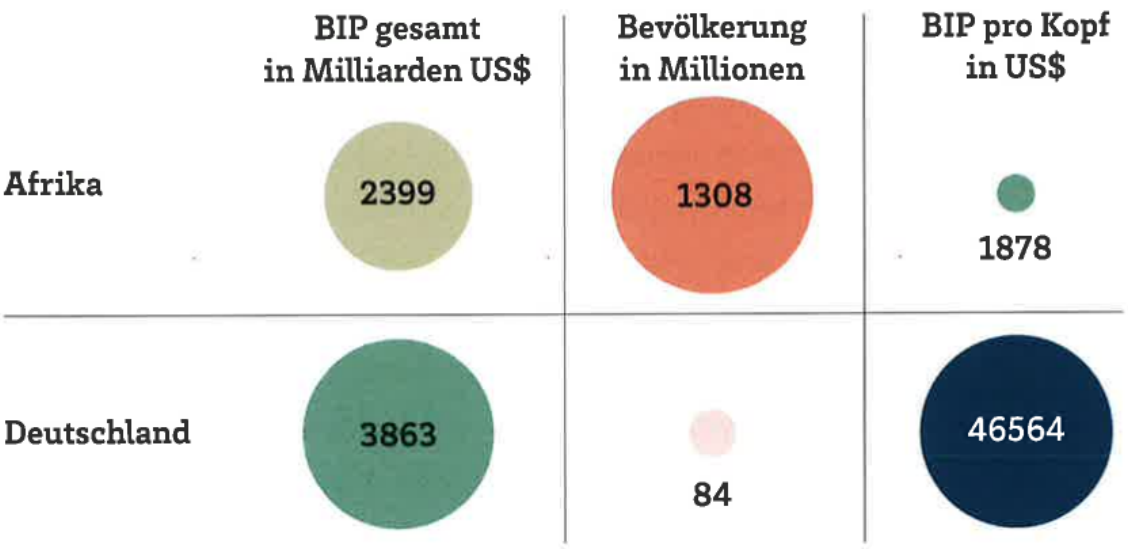

Figure 17: Comparison of total GDP, population and GDP per capita between Africa and Germany (2019).
Source: Mo Ibrahim Foundation (2019) based on MIF and UN DESA

In the following chapters I will try to show that today's economic model in Africa - south of the Sahara - has two pronounced structural weaknesses that are preventing the economy from becoming more dynamic. If growth is to be generated, a structural change is therefore required. This not only requires high and continuous investments in the areas of industry and economic infrastructure, but also an upgrading of human capital through future-oriented training and the promotion of entrepreneurship in the young cohorts of the employable population. The necessary structural change in the economy cannot be achieved without entrepreneurial initiatives by African people with professional training and vision.

3.2 Underdeveloped African economic model: Lack of industrialization and infrastructure

The following explanations are largely based on the findings of the annual "African Economic Outlook" study, editions 2018 to 2020, published by the African Development Bank (AfDB) in Abidjan (Ivory Coast). I believe that the researchers at this multinational African institution are competent and objective, do not try to hide the delicate African economic situation and make useful proposals, which often fail to be implemented due to a lack of financial resources and administrative or political obstacles. It can also be assumed that the statistical data in these reports correspond most closely to reality. The example of Tanzania shows that certain African governments falsify statistics in order to whitewash the socio-economic situation for political reasons.[8]

It is not possible in this study to give more than a rough overview of the macroeconomic peculiarities of today's economic model in the countries south of the Sahara. But the diagnosis is clear. All countries — except South Africa and Mauritius — suffer from its weaknesses to varying degrees. The point is to show why these economies are unable to generate economic growth that can create enough formal, remunerated jobs. All surveys of productivity in these countries show that little more

[8] «A Potemkin economy? Tanzania's recent economic success may not be what it seems». The Economist, July 25, 2020

than 3 million new formal jobs are created there each year, despite the fact that around 20 million new employable people (aged 15) enter the economy each year.

The economies of the 49 states of Sub-Saharan Africa suffer from two structural disadvantages that can only be overcome in the very long term and require the use of large financial resources: A completely inadequate infrastructure and an insufficient industrial base. Both together make it difficult for the economy to develop dynamically and limit its growth, which is stagnating at a low level in view of the accumulated pent-up demand. The following two graphs from the AfDB's "African Economic Outlook 2018" illustrate these disadvantages.[9] They show the three classic sources of employment in an economy — first, primary production (agriculture and mining), second, industry, and third, services. Africa, and even more Sub-Saharan Africa, in comparison with the economic models that emerged on other continents, has remained a predominantly agricultural economy in terms of employment; which is underdeveloped and absorbs most of the workers, mostly farming families who support themselves (subsistence farming). On the other hand, in Africa the industry, whose expansion in the past decades until today has been the real engine of global economic growth in the world, stayed behind. The graph on the left (Fig. 18) shows that the African model has not experienced any structural changes since 2008. The AfDB economists confirm this: "Labor has not moved from low to high productivity sectors".

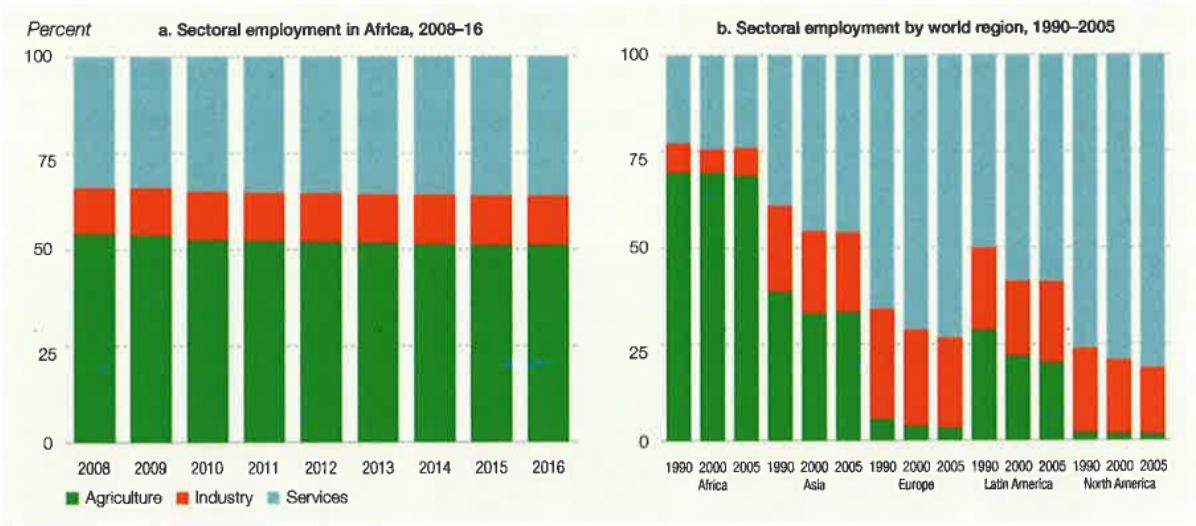

Figure 18: Sectoral employment shares in Africa and other world regions.
Source: AfDB

The aforementioned study by the German Development Institute (DIE) draws similar conclusions. DIE also points to the lack of structural change. “Formerly poor countries in other regions, especially Asia, have undergone a structural change in which workers moved from subsistence agriculture and small-scale trade to work-sharing and diversified occupations in industry and production-oriented services, so that productivity and income increased across the board. Such a productivity-enhancing structural change is not taking place in Africa or is taking place extremely slowly».[10] This diagnosis is confirmed in the AfDB’s “African Economic Outlook 2019”: “African economies have

[9] The two graphs show Africa as a whole, with sub-Saharan Africa being the weaker part.
[10] Tilman Altenburg: «Arbeitsoffensive für Afrika, 2017 Deutsches Institut für Entwicklungspolitik (D.I.E.) Bonn

prematurely deindustrialized as the reallocation of Labor has tilted towards services, limiting the growth potential of the manufacturing sector. To dodge the informality trap and chronic unemployment, Africa needs to industrialize. Key factors impeding industrialization, particularly manufacturing growth, are limiting enterprise dynamism. Enterprise growth and survival are held back by corruption, and inadequate infrastructure. Estimates from Enterprise Surveys show that 1.3 to 3.0 million jobs are lost every year due to administrative hurdles, corruption, inadequate infrastructure, poor tax administration, and other red tape. Small and medium businesses have had very little chance of growing into large firms".

Africa's wealth of raw materials has not yet been used as a source for industrial expansion because these materials have been exported directly instead of being processed into exportable products or to replace imported goods in the country itself. The mining of raw materials alone - petroleum, gas, metal ores, gold, diamonds - is not labor-intensive and therefore creates only a few jobs - probably no more than 1-2 percent of total employment - but generates cash flow for the state (license fees, export taxes), provided that it does not end up in the pockets of the ruling elites.

The next two charts (Fig. 19 Et 20) show these weaknesses even more clearly: The composition of GDP did not change significantly between 2000 and 2016. The desired structural change to an industrial economy has not materialized so far.

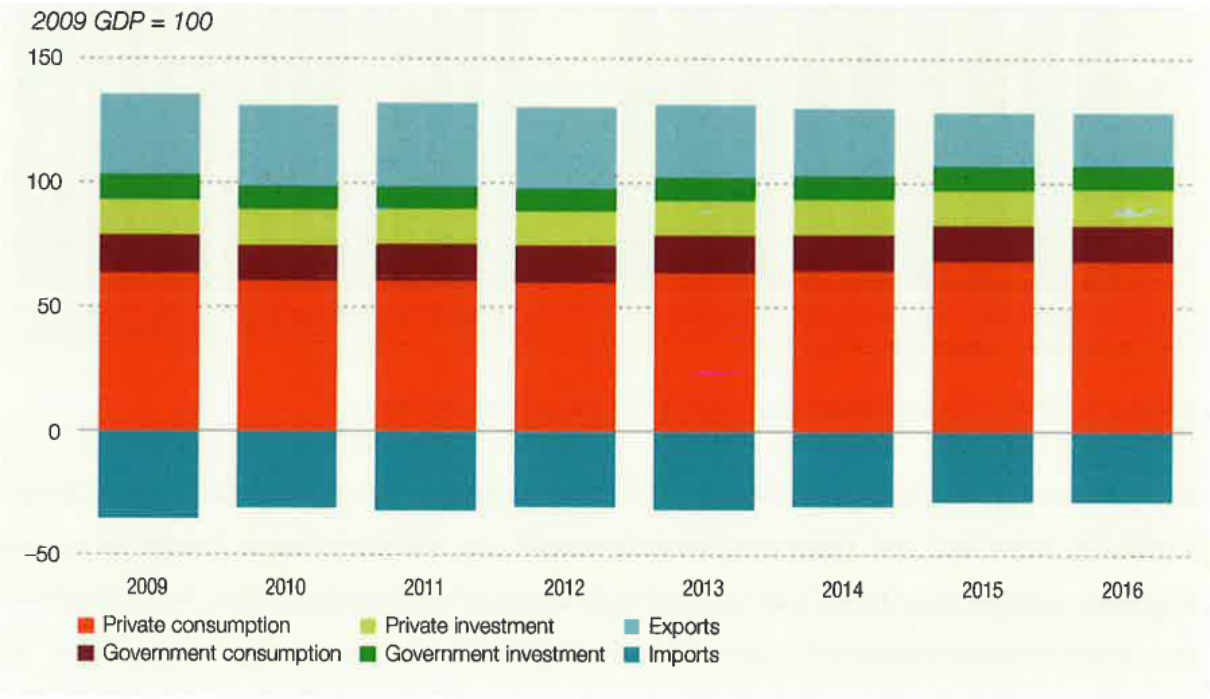

Figure 19: Economic shares in Africa's GDP 2009 – 2016.
Source: African Economic Outlook, AfDB statistics

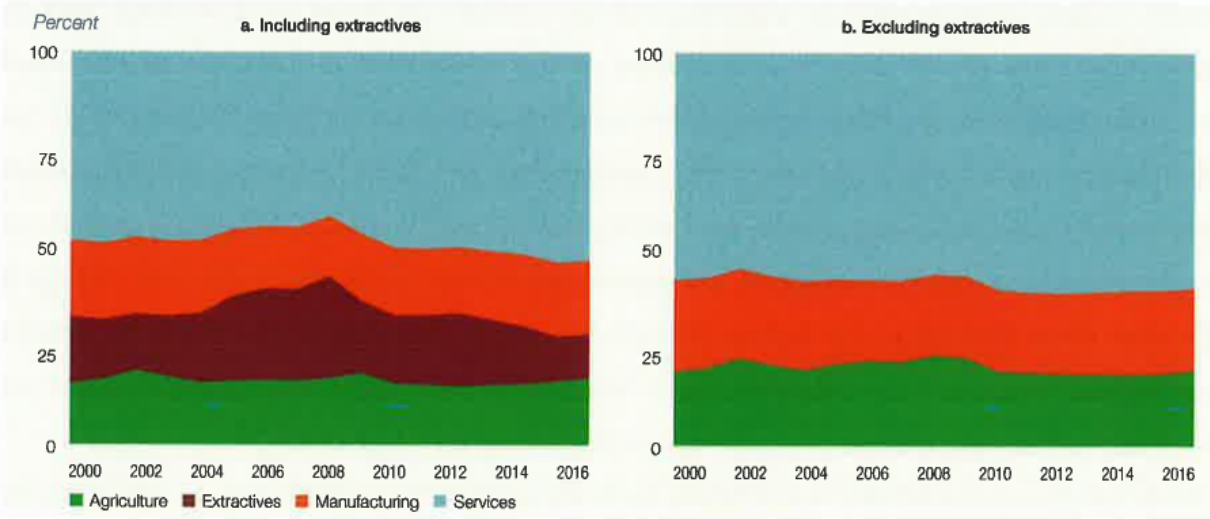

Figure 20: Sectoral composition of Africa's GDP 2000-2016.
Source: African Economic Outlook, AfDB statistics

An even more serious economic problem for sub-Saharan Africa is the completely inadequate infrastructure in the areas of roads, bridges, railways, electricity, communications, water supply and sewage systems. A dynamization of the insufficient economic growth and a development of the deficient industrial sector, which experience has shown to create a particularly large number of new remunerated jobs, is not possible without expanding the infrastructure in Sub-Saharan Africa. A 2010 report by the World Bank together with the Agence Française de Développement entitled "Africa's Infrastructure: A time for Transportation" stated: "Africa's infrastructure networks increasingly lag behind those of other developing countries and are characterized by missing regional links and stagnant household access". The chart below (Fig. 21) shows the gap in access the African population had to key infrastructure areas at the time.[11]

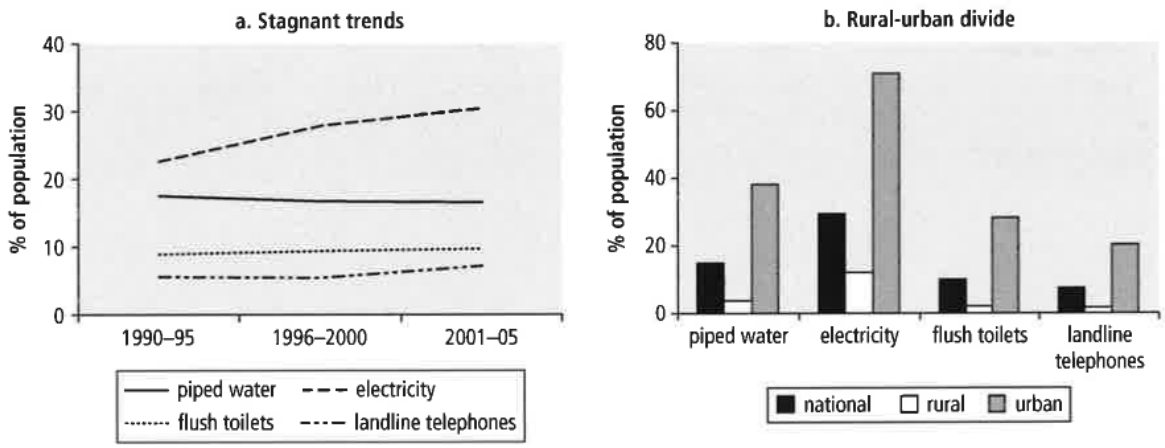

Figure 21: Public access to basic infrastructure.
Source: The World Bank, Africa's Infrastructure, a Time for Transformation, 2010

[11] Vivien Forster and Cecilia Bricedno-Garmendia: "Africas Infrastructure" 2010, a co-publication of Agence Française de Développement and the World Bank".

Since then, the situation has worsened in most Sub-Saharan African countries due to the population explosion and the lack of financial resources, with perhaps one exception: the rapid spread of smartphones has made it easier for people to communicate, and there is no longer any need to build out an extensive, costly landline network.

The above-mentioned Agence Française de Développement / World Bank co-publication estimates that USD 93 billion would be needed, about a third of which for the maintenance of the existing network. Even then there was a funding gap of USD 31 billion. In the AfDB's "African Economic Outlook 2018", today's infrastructure investment needs are recalculated. They are way higher. "One of the key factors retarding industrialization has been the insufficient stock of productive infrastructure in power, water and transport services that would allow firms to thrive in industries with strong comparative advantages. New estimates by the AfDB suggest that the continent's infrastructure needs amounts of USD 130-170 billion a year, with a financing gap in the range of USD 68-108 billion. Those figures are far higher than previous estimates of USD 93Billion in annual needs and a financing gap of USD 31 Billion published by Agence Française de Développement and Worldbank".

The table below shows the sources of infrastructure funding in Africa for the years 2012-16.

TABLE 3.5 Trends in infrastructure finance in Africa, by source ($ billion)

Source	2012	2013	2014	2015	2016	Average
African governments	26.3	30.5	43.6	24	26.3	30.1
Donors (ICA members)	18.7	25.3	18.8	19.8	18.6	20.2
MDBs and other bilaterals	1.7	2	3.5	2.4	3.1	2.5
China	13.7	13.4	3.1	20.9	6.4	11.5
Arab countries	5.2	3.3	3.4	4.4	5.5	4.4
Private sector	9.5	8.8	2.9	7.4	2.6	6.2
Total	75.1	83.3	75.4	78.9	62.5	75.0

Source: ICA 2017.

On average, USD 75 billion was invested per year, far less than the AfDB considered necessary. Of the 75 billion, 67% was financed by state funds and by donations from the ICA (Infrastructure Consortium for Africa). China's investments are significant: USD 11.5 billion or 15% per year. There is only one way to cover the deficit of more than 50%: contributions from the international community. The AfDB says in its African Economic Outlook 2018: "Institutional investors such as insurance companies, pension funds and sovereign wealth funds have more than USD 100 trillion in assets under management globally. A small fraction of the excess global savings and low yield resources would be enough to plug Africa's financing gap and finance productive and profitable infrastructure". The quarrels between the world powers and the COVID 19 pandemic are shattering such dreams, although the reasoning is correct. It is clear that without massive and continuous international loans at minimum interest rates or interest waivers, it will not be possible to close the financial gap.

In this context, it should be remembered that developing countries in Asia have infrastructure financing gaps similar to those in Africa. That is why they founded the Asia Infrastructure Investment Bank (AIIB) under Chinese leadership in 2015. Today, 78 countries, including Switzerland, are involved in this multinational institution. It could serve as an example for the establishment of a similar institution for Africa. Perhaps it would be possible to expand the already existing ICA (Infrastructure Consortium for Africa) in this way. It was launched in 2005 by the G8 countries.

Closing this chapter, I quote Prof. Robert Kappel ("Africa needs a different development path", Makronom 2018), as a kind of development policy conclusion: "Today, African companies no longer produce behind protective walls in their own country but are in competition with producers from all over the world. The application of the latest technologies, which could in principle bring about a surge in industrialization, is limited by rising capital costs, a lack of R&D and underdeveloped human capital. Investing in R&D could generate technological externalities, but with the exception of a few countries (South Africa, Morocco, Egypt), R&D expenditures, both private and public, are extremely low. The consequences of this lag in global competition are manifold: Foreign direct investment in Africa's manufacturing industries remains low, finished goods exports are negligible, and Africa's share of this has fallen rather than risen. High trade and transport costs (ports, land transport), high non-tariff trade barriers in Africa, the EU, the USA and China further limit export opportunities. Intra-African trade also remains limited for the time being (and therefore expandable) due to high transport costs, high informal barriers and non-complementary markets. The conditions for the growth of local industry are severely restricted, companies are mostly small, and medium-sized companies are only gradually beginning to emerge. African companies are hardly integrated into global or regional value chains."

3.3 How high birth rates dilute economic growth

The economic growth of an economy is generally measured by the increase in real gross domestic product (GDP), mostly in constant US dollars. Converted per capita, it serves as a rough indicator of a country's prosperity. If GDP per capita increases in real terms, one concludes that the material prosperity of the population has improved accordingly.

According to the African Development Bank, real GDP growth in sub-Saharan Africa between 2010 and 2014 averaged 5.2%, before falling to an average of 3% per year in the years that followed, negatively influenced by global economic effects. For sub-Saharan Africa, whose 49 countries, with the exception of South Africa, are among the poorest countries in the world, these values are too low. This is particularly evident when we calculate the GDP growth per capita of the rapidly increasing population, as shown in the table below.

Real GDP Growth in Sub-Saharan Africa 2010 – 2019

Year	Real GDP %	Population Growth %	GDP per Capita %
2010-2014	5.2	2.7	2.5
2015	3.4	2.7	0.7
2016	1.5	2.7	- 1.2
2017	2.9	2.7	0.2
2018	3.1	2.7	0.4
2019	3.7	2.7	1.0
Average	4.0	2.7	1.4

Source: African Economic Outlook 2019, publication of the African Development Bank/own representation

The table clearly illustrates the negative effect of the population explosion. Of the average economic growth of 4% per year, 2.7% is neutralized by population growth. In the period of 10 years under consideration, only 1.4% of economic growth remained for the general public, too little to noticeably raise the standard of living of the masses and to effectively reduce poverty. It is proof that it is worth avoiding a dilution of economic progress and raising the standard of living through family planning and contraception measures. In addition, such low net economic growth rates do not allow enough new jobs to be created. The key finding is that real economic growth is growth per capita. In order for the increase in prosperity to have a noticeable impact on the people in Sub-Saharan Africa, current economic growth needs to be at least doubled in addition to a reduction in fertility.

What is expressed in the table above is also visible in the two following charts (Fig. 22 & 23) with regard to the performance of the GDP. The black lines show the course of percentage economic growth in sub-Saharan Africa over the period 2009-19, first total GDP and then also GDP per capita. North Africa (blue line) will be less diluted by population growth than Sub-Saharan Africa, thanks to lower birth rates (3.3 children per woman instead of 4.9).

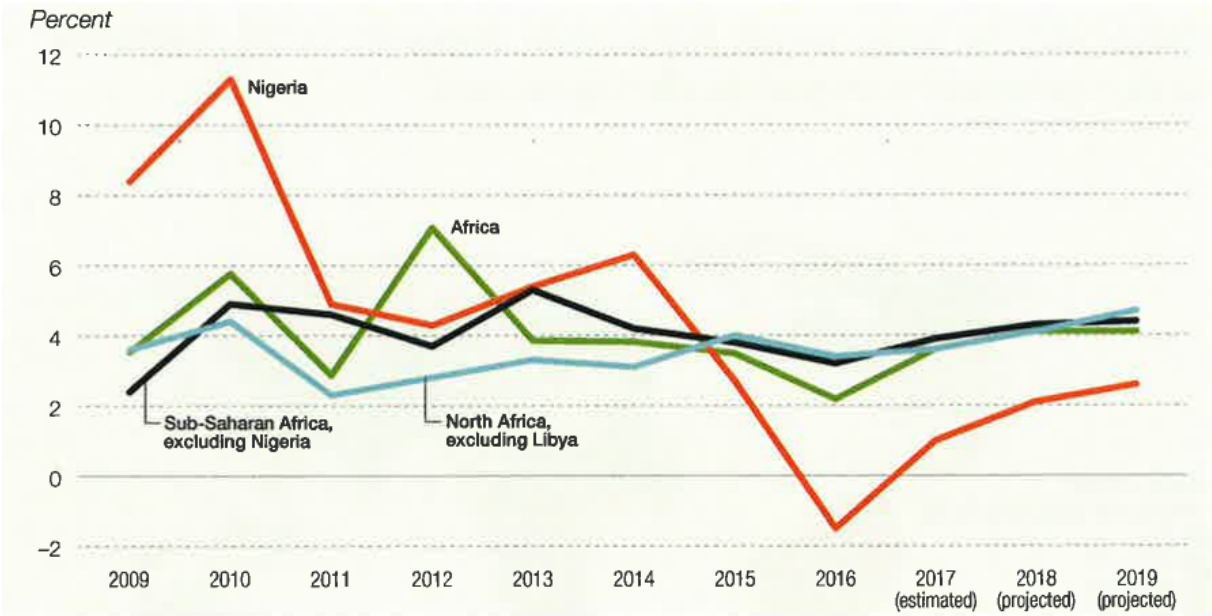

Figure 22: Real GDP growth in Africa 2009-19.
Source: African Economic Outlook 2018

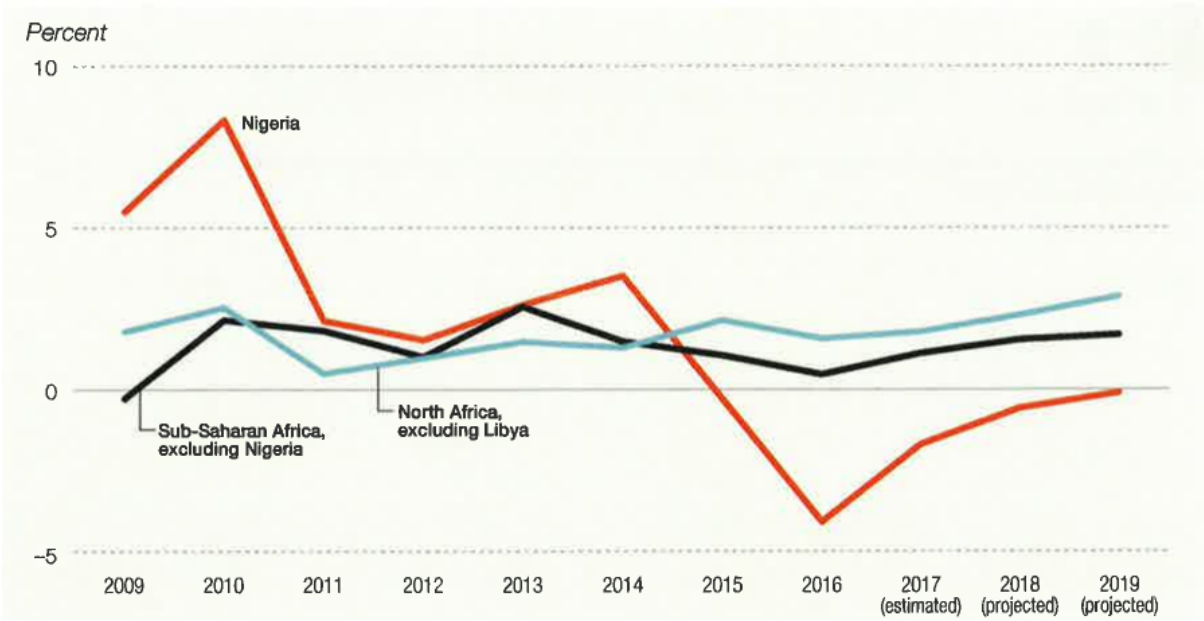

Figure 23: Real GDP per capita growth in Africa, 2009-19.
Source: African Economic Outlook 2018

With regard to the importance of GDP per capita, I would like to add a caveat. The term is a mathematical mean. It represents the level of prosperity of a country in general, but not the state of prosperity of the individual, because another factor has to be taken into account here: the distribution of income. This is different in every country in the world. This inequality is measured using the Gini coefficient, which reflects «income equality». The higher the Gini coefficient, the more unequal the distribution of income in the country concerned. Many of the 49 countries in Sub-Saharan Africa show large inequalities in the income distribution as shown in the graph below. The conclusion is compelling: economic growth in these states is not sufficient to bring added value to people, and

poverty continues to grow. It is all the more urgent to combat the population explosion by reducing excessively high fertility.

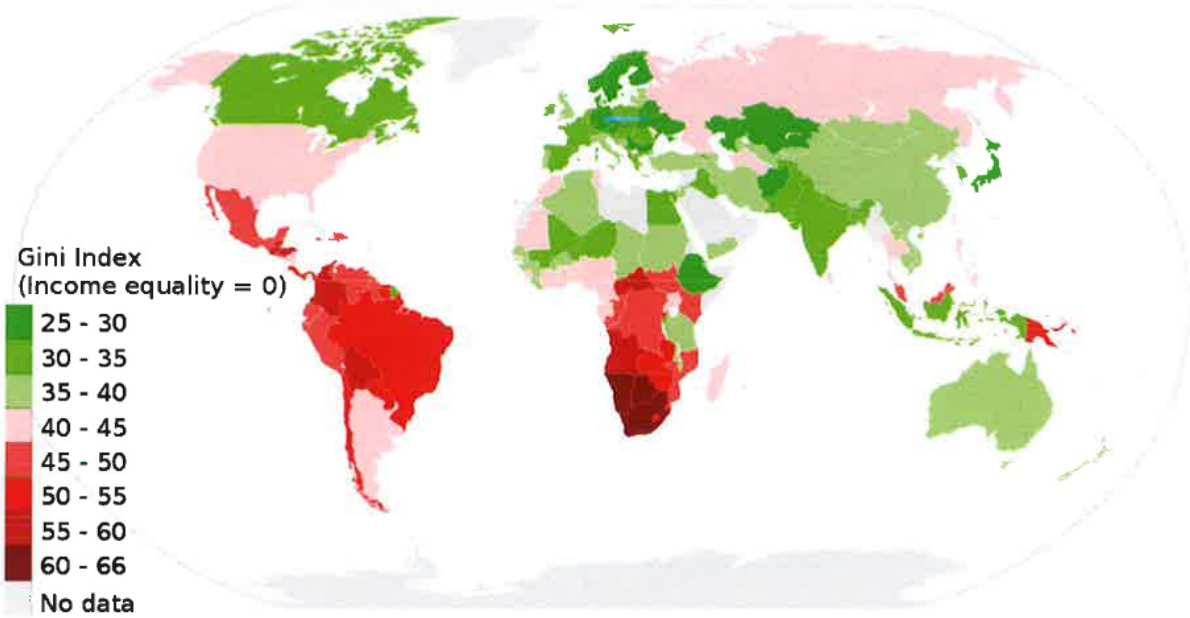

Figure 24: Figure 24: Gini coefficient. Statistical measure for the representation of unequal distributions.
Source: World Bank 2014

3.4 Upgrading of African human capital as a prerequisite for dynamization and restructuring of the economy

The performance of an economy can be measured on the basis of the available human capital. Education and knowledge are viewed as essential factors for long-term economic growth. Duration of basic education, school degrees and vocational training are important components. Sub-Saharan Africa is at the bottom of all other regions of the world in this respect. This is also tragic because education is central to a life that secures a living, which the vast majority of people south of the Sahara do not have.

The AfDB's "African Economic Outlook 2020" states: "Africa has the highest share of people employed in low-skilled jobs and the lowest share employed in medium- and highest-skilled jobs globally. (Fig. 25). A skilled work force is vital for achieving structural transformation, by spurring technical progress and innovation which are important determinants of economic growth".[12]

[12] African Economic Outlook 2020, "Developing Africa's Workforce for the Future", African Development Bank

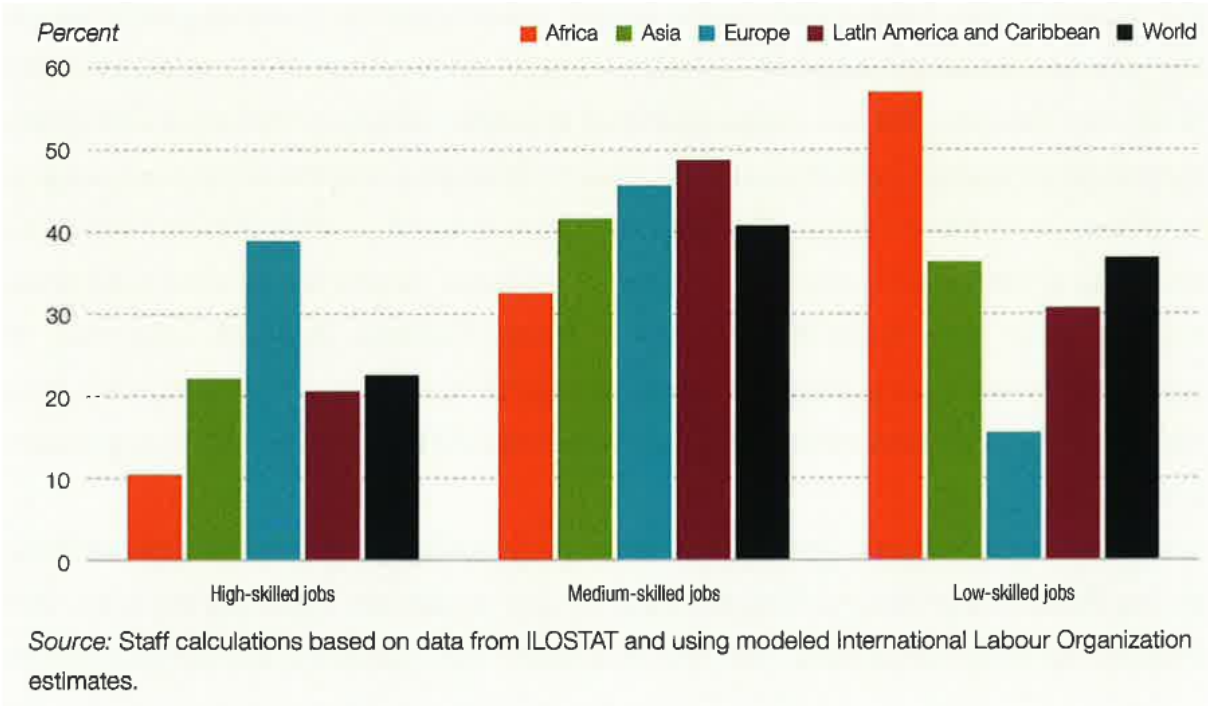

Figure 25: Percentage of employees in low, medium and high-skilled occupations.
Source: African Economic Outlook 2020

If a transformation of the economic structure to increase productivity is really to be achieved, this also requires a change in mentality among the working-age population, which is difficult to achieve because formal jobs with fixed wages are rare. As we know, 84% of the working age population is informally and irregularly employed.

The African does not know any work discipline, this collides with his informal way of life, which is mainly based on casual work and subsistence farming. The AfDB describes this state of affairs as follows: "One of the most salient features of labor markets in Africa is the high prevalence of informal employment, the default for a large majority of the growing labor force. The vast majority of jobs created in Africa in the past three decades have been informal jobs, defined by the International Labor Organization as noncontracted jobs that are not regulated or protected and that confer no rights to social protection."

In its article "Industry in Africa: Will it bloom?", "The Economist"[13] reports on the experiences in a newly built industrial park in Ethiopia: "In its first year of operation, attrition rates at the industrial park were roughly 100%. Chris Blattman of the University of Chicago and Stefan Dercon of the University of Oxford tracked new hires in Ethiopian factories and commercial farms. A third quit within three months, and 77% within a year. This Ethiopian experience points to the paradoxes at the heart of Africa's transformation. While economists worry about jobless millions, factory bosses struggle to find pliant labour. Workers arrive late and quit at harvest time. Contracts are hard to enforce. Markets gum up. In societies set to agrarian rhythms, the transition to industrial capitalism is a profound social rupture of law, time and discipline, and creates new kinds of people: commercial farmers, docile workers, methodical managers. It means loss as well as gain. It should be no surprise

[13] The Economist, June 13th, 2020, page 24

when many people are indifferent or hostile to change. The same hesitation is found in some African leaders, long cushioned by aid and oil money. "The urgency for economic transformation is not making them lose any sleep", says Abebe Shimeles of the African Economic Research Consortium. Yet demographic destiny is pushing the continent towards a reckoning. Some 15m-20m young Africans are entering the workforce each year. Without good jobs, many may take their grievances to the streets."

An important task for development policy results from these findings: promotion of vocational training as a prerequisite for a structural change of today's less productive economic model. Who wants to invest and create productive jobs when there is a lack of specialists for industrial companies? Productive human capital is essential for this. It is therefore not surprising that the industrial sector in the countries south of the Sahara is stagnating at a low level. Private foreign direct investments have remained at a low level in the past. The lack of large companies in Africa reflects the lack of entrepreneurship, of skilled personnel, of global and intra-African market access and of infrastructure (Fig. 26).

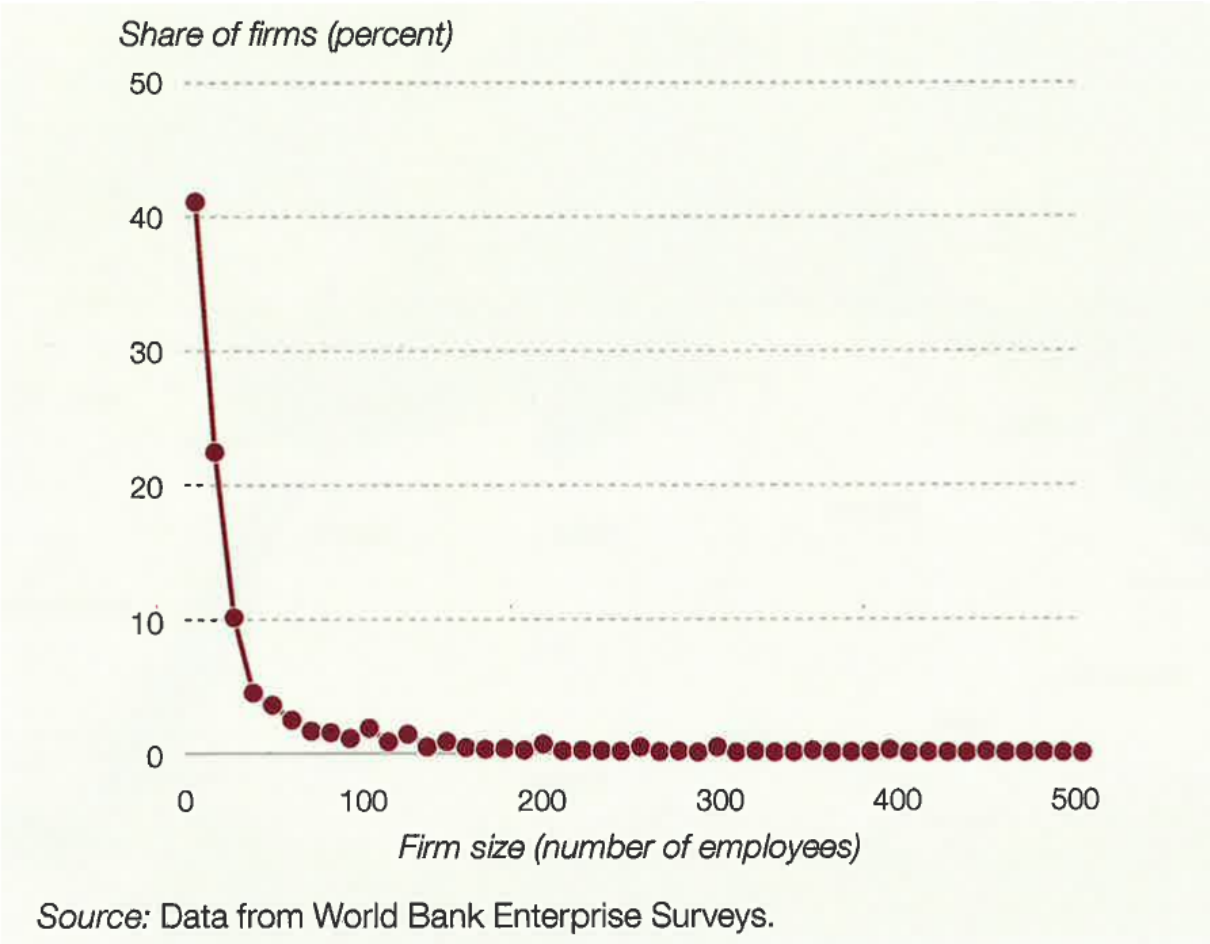

Figure 26: Africa has mostly small firms, from available data 2006 - 2017.
Source: African Economic Outlook 2019

In addition to the widespread lack of vocational schools, there is another category of human resources that needs to be promoted: African entrepreneurs. Suitable young intelligent people should be sought and trained in cadre schools and seminars. The WDA Forum in St. Gallen has taken on

this task for Ethiopia. Together with the Government of Ethiopia, the Forum founded the Job Creation Commission (JCC) with the mission "Entrepreneurship in Ethiopia: A Powerful Tool to Unlock the Demographic Potential". The initiative of the WDA Forum is exemplary and should be examined in all Sub-Saharan African states.

Figure 27: Political Map of Africa.
Source: Google Maps

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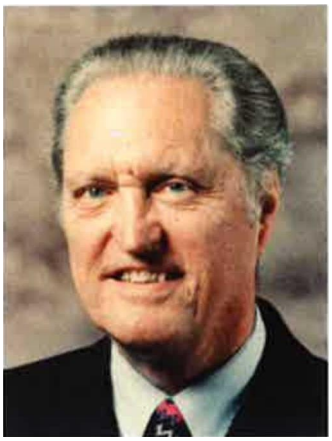
Biography of Max D. Amstutz



Personal data

- Born on January 19, 1929 in Spiez, Citizen of Engelberg OW
- 1953 degree as Dr.rer.pol. University of Bern
- Secretariat: Rue de la Combe 15, CH-1260 Nyon

Professional career

- 1953/54 Research Institute for Tourism at the University of Bern, reports and publications as a tourism expert
- 1954-1959 Executive Secretary, Head of Human Resources and later Commercial Director (Deputy Director) of CJ Bucher AG, Lucerne (printing and publishing house, later Ringier Group)
- 1959-1999 Career at «Holderbank» Financière Glarus AG (today the LafargeHolcim Group)
    - 1959-1964 Executive Director of the Companhia de Cimento Ipanema, Sao Paulo, Brazil
    - 1964 Assistant to the President of the Board of Directors, Dr. hc Ernst Schmidheiny, Céligny GE
    - 1967 director
    - 1969/70 Participation in the transformation of «Holderbank» Financiere Glarus AG from a finance company into a group holding company, development of the concepts for group organization and group strategy
    - 1970-1994 Delegate of the Board of Directors, responsible for operational management and shared responsibility for the strategic management of the Group. Establishment and expansion of the Latin America, France and Spain groups
    - 1994 resignation as executive manager and until 1999 member of the board of directors
- 1986-1999 Vice-Chairman of the Board of Directors of algroup (Alusuisse-Lonza AG), Zurich, 1999 interim President
- 1991-2000 member of the board of directors, from 1992 vice-president and from 1994 president of Von Roll Holding AG, Gerlafingen (also interim CEO 1995-1997).

- 1998-2003 President of the Board of Directors of SGS - Société Générale de Surveillance, Geneva
- 1993-2005 Member of the Board of Directors and Chairman of the Audit Committee of PreciousWoods Ltd., Zurich
- 1994 Member of the Board of Directors of Finter Bank Zurich, 2001-2003 interim Chairman (until 2004)
- 1995-2007 Member of the Board of Directors and the Audit Committee of RPM International Inc., Cleveland, Ohio, USA
- President of the Advisory Committee of the Graduate School of Business Administration Zurich (G SBA), 1994 Member, 2005 Chairman (until 2012)
- President of the Board of Trustees of the Foundation "EDUCATION, Swiss Foundation for the Advancement of Young People in Latin America" and the "Max D. Amstutz Foundation for the Advancement of Talented Young People in Latin America" sponsored by Holcim (until 2012)
- 2009 resignation from all functions, then freelance consultant for questions of strategy

Books

- Passiver Fremdenverkehr. Diss. 1953 University of Bern
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