

The Future of Africa: The Future of China in Africa 2035

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Prepared by (b) (7)(C) [REDACTED]

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Prefatory Note¹

The author interviewed several Africa and China experts, as well as the handful of China in Africa specialists, to test various hypotheses and gain their assessments of the long term future of China in Africa. One person that the author wishes to single out, (b) (7)(C), who collaborated with the author to identify and analyze the three basic research questions and other issues discussed in the China in Africa section of this Report. A native of (b) (7)(C) recently received his Ph.D from George Mason University. His thesis advisor, the noted political demographer and Africa watcher, (b) (7)(C), also introduced the author to his colleague, (b) (7)(C), a demographic specialist on Africa. She has challenged some of the optimistic projections about Africa's expected demographic convergence with the rest of the developing world. The Report benefits from her skepticism about the expected fertility decline from Africa's demographic transition that usually accompanies modernization, urbanization and a growing middle class. In fact, (b) (7) data in this Report shows a fertility stall in nearly all the countries in East, West and Central Africa, in which already high fertility rates have essentially flattened out and in some cases increased.

The author travelled to two African countries and was effectively hosted by (b) (7)(C) in Johannesburg. (b) organized a meeting with the South African chapter of the African Leadership Institute in which he and the author co-presented on prospects for rising Africa. In Nairobi, the author was similarly hosted by (b) (7)(C), who arranged a seminar with key Kenyan policy experts at his Africa Policy Institute, where the author joined in presentations on the future of Africa in 2063, which is the centenary of Kenya's independence. The author thanks (b) (7)(C), who wrote his doctorate on Kenya, and who introduced the author to America's leading Kenyan specialist, (b) (7)(C), just a short time before (b) (7) untimely death.

Thanks also go to an authority on modern China, (b) (7)(C), who kindly introduced me to the China in Africa specialists in London, including (b) (7)(C), and in Washington, including (b) (7)(C). (b) (7)(C) China in Africa Research Initiative (CARI) at SAIS held a conference in May 2014 on 'China in Africa – Agriculture: Land Grabbing or Friendship Farms', which the author attended and found quite useful.

The author thanks (b) (7)(C) at Booz Allen Hamilton for his feedback and support and, last but not least, to (b) (7)(C), and his colleagues, (b) (7), for making this Study possible. (7)

¹ (b) (7)(C) is a London-based analyst specializing in comparative political and economic systems. He is currently a Senior Advisor at the Chertoff Group and an Associate Fellow at the International Center for the Study of Radicalization (ICSR) at King's College London. He was a Middle East Fellow at the Council on Foreign Relations in New York from 1995-2000 and a Senior Associate Member of St. Antony's College, Oxford from 2004-2005.

The Office of Net Assessment (ONA) of the US Department of Defense, through Booz Allen Hamilton, commissioned (b) (7)(C) to write this Report, which follows on several previous studies for ONA including the Future of Europe (2013), Europe and its Muslims (2008), Counter-radicalization Strategies in Europe (2006), the Future of Pakistan (2009) and two shorter reports on China (2010 and 2012). The author's inaugural study for ONA (and NESAs) was a diagnostic study of the Future of Saudi Arabia completed in 2003.

Introduction

China's engagement in Africa is expanding rapidly on all levels from migrants settling throughout Africa to state-owned enterprises and private companies. Since 1996, at the start of the institutionalization of China's investment in Africa through FOCAC (Forum on China-Africa Cooperation), China has been gaining resources in long term deals at bargain prices in exchange mainly for infrastructure development and trophy buildings that meet the needs of African governing elites, but not the people. African governments have generally been outmaneuvered and corrupted by the 'easy' money and a short-term outlook. China's longer-term geo-economic strategy has been very successful since China ramped up its investments in Africa after the millennium.

But looking ahead, this author sees a more educated Sub-Saharan Africa (hereinafter "Africa"), a more assertive Africa and a more populous Africa. The current trade of 'resources for infrastructure' have resulted too often in shoddy infrastructure that collapses in three years or bridges to nowhere or roads and trains that primarily help Chinese companies get their resources from the interior to the coast so that Chinese-built ports can ship them to China.² They are not assisting in the overall development of Africa, except for those who live along these new roads, and, of course, the ministers and their cronies who pocket Chinese bribes. Will an assertive civil society, free press and democratic process change the bargain with China?

With rapid urbanization and a looming 'child-youth' bulge throughout West, East and Central Africa, a better formula for Africa is 'Resources for Manufacturing', including development of agri-business/food-related manufacturing. The upside for Africa is it provides employment for their surging population. China gains cheap labor and products close to emerging African markets with large populations, as well as nearby markets in Europe.

This new 'resources for manufacturing' bargain presupposes a higher level of local education and a minimum level of political and economic stability and services provided by African states. China will not engage in technical transfer to people who are not equipped in skills and to governments not attuned to the processes that make offshore manufacturing a promising venture. Shoe factories in Ethiopia may be replicated, but not yet the more sophisticated manufacturing that Africa may aspire to. Agribusiness/food related manufacturing, in particular, is a collaboration that makes sense for China and Africa for several reasons:

1. It increases jobs in rural areas where the demographic explosion is most intense;
2. It stems rural to urban migration;
3. It increases food productivity, which is currently highly inefficient;
4. To the extent that it helps Africa feed itself, it lessens the intensity of conflict and instability on the continent, which is a plus for Chinese investment; and
5. If there is excess food, Chinese companies can sell it abroad commercially.

The wrong way for China to tackle their food security challenges is to view Africa as a breadbasket for China. The demographic story suggests Africa will have great difficulty feeding its own child-youth bulge and rapidly growing cities. Nothing would be more politically clumsy than for Chinese companies to engage in land grabbing for export. Instances of land grabbing by Chinese are scarce today, but that could change tomorrow and needs to be monitored closely.

² See Koffi Alle, "Africa: Minerals for Manufacturing - Towards a Bolder China Strategy" in IMF's *AI-Africa* magazine, June 2, 2014 at <http://allafrica.com/stories/201406022546.html?viewall=1>

The other issue raised in this interim report is the relation of Chinese migration settling all across Africa, mainly but not only as shopkeepers, on the one hand, and the SOE's and large private companies doing business in resource extraction and infrastructure construction, etc. These groups are hardly monolithic. The author's experience living in Singapore as an international lawyer and working with Indonesian clients in the early 1980s demonstrated just how de-linked the Chinese Diaspora is from China. Indonesian Chinese tycoons were proud Indonesians, especially during the long anti-Communist Suharto rule from 1966 to 1998. Yet many Chinese see a rising China as a hedge. They did business with the local authorities, paying off generals under Suharto,³ and subsidizing political parties and their candidates in today's democratic Indonesia. In the unlikely but possible event that China ever came south and succeeded in 'taking over' Indonesia, one local Indonesian Chinese tycoon, Joko Soegiarto, explained to the author back in the late 1980s how he would seamlessly switch allegiance to the new political set-up controlled by China. 'Tida-apa' (which is Indonesian for 'no problem'), the industrious Chinese Diaspora will adapt and succeed.

This brings us to the main feature of Chinese in Africa: their infinite pragmatism and adaptability. In well-governed African states or fragile ones, the Chinese will do business with both. As described in Appendix 3, migrants will attract their cousins from China to emigrate to Africa because business opportunities for hard working immigrants abound and will continue to attract, especially if unemployment rises and the economy stagnates back home. From time to time, tensions will mount between Africans and Chinese migrants, but the Chinese state through its embassies and enterprises will find a way to tamp down those tensions.⁴

Chinese migrants are not agents of the Chinese state, but they can and are doing damage to the China brand when they flout local laws and engage in rapacious and monopolistic business practices. Yet the core issues of China's future ability to extract resources from Africa will depend more on the bigger players – SOE's and large private companies – than on petty traders and entrepreneurs. Can these larger companies adapt to a more assertive African public opinion and to a stronger regulatory regime with higher labor and environmental standards? CSR (Corporate Social Responsibility) is the new mantra when senior officials from Beijing make state visits to African capitals.

The question of Chinese military bases in Africa in 2035 remains unanswered in this interim report. Some of the answers require more research into Chinese strategy elsewhere, including the ASEAN countries. Much will depend on the evolution of US-China relations. It would be fair to assume that the more hostile and adversarial the relationship becomes, the more likely China will resort to unilateral measures to protect its growing investment in Africa. But military bases in far-away Africa is a major strategic leap forward in Chinese strategic thinking. It might happen incrementally, as Ed Lindblom would say, not as a carefully planned decision made at, for example, the CISS military think tank in Beijing. Start with free-riding and outsourcing security to the US and French and other powers already in the region, move to active participation in multi-lateral peace keeping missions, and perhaps down the road, strengthen security at Chinese owned mines and factories using Chinese engineers with a double security function, and only then, in exigent circumstances, consider sending in the military. Still, the requisites are there for

³ The author wrote an article in 1998 for The New Republic called 'the Golden Handshake' that described the Chinese Indonesian tycoons favors to Indonesian generals in exchange for physical and economic security. Interestingly, these same Chinese tycoons were able to adapt to the post-Suharto transition to democracy, substituting local and national politicians for Suharto's generals.

⁴ Africa has yet to erupt in the kind of anti-Chinese riots seen in Malaysia in the late 1960s, which led to affirmative action laws to assist the local Malays. In the end, the Chinese in Malaysia continued to prosper and even engage in political parties. This is in contrast to the Indonesian Chinese, a relatively small minority in an ocean of indigenous 'pribumi' Indonesian. These Chinese have largely kept a low-profile in politics, focusing strictly on business and political patronage behind the scenes.

China gaining military bases at African ports as a by-product of their extensive relations with African governments.⁵

⁵ Chinese security strategy in the region can be linked to cooperation and competition between China, and the West and other BRICs. These dynamic relations between China and other Western powers and BRICs will affect China's approaches to some African countries, particularly the 'extremely fragile' countries and those 'in between.'

Executive Summary

China's engagement in Africa is evolving. In some respects, the Chinese honeymoon in Africa is over. Well-governed African countries are demanding more economic development in exchange for long term contracts to sell China their natural resources. Opaque deals usually involving corruption on the part of African government officials will be challenged by a growing civil society, free press and democratic elections. The first question, then, is whether China is becoming neo-colonial in its relationship with Africa, leading to scenarios where China may press for a military presence to protect its ever expanding investments in Africa.

In fragile states rich with natural resources, China will continue to do unconditional deals whose leaders pocket payoffs from Chinese sources. In the 'in-between' countries that are not yet democratic but are cognizant of public opinion, egregious one-sided deals favoring China will be scrutinized more closely and even overturned in some instances. Finally, in fragile countries that continue to make secret deals with Chinese companies, the possibility of civil war and other security challenges that put Chinese assets and people at risk could lead the Chinese government to become more involved militarily in securing their investments and citizens.

The Chinese heretofore have been free riding or outsourcing their security to the US, France and other more established powers in Africa and its adjacent seas. More recently, China has been joining multilateral peace keeping missions, usually involving African forces supported by the UN or other international or regional organizations. Its ships engage in joint patrols against Somali pirates. The question that this Report cannot yet definitively answer without further research is whether China will go beyond joining multilaterals to asserting a unilateral military presence to protect its interests in Africa.⁶

There are signs that China is laying the groundwork for more military engagement, such as warehouses in Lamu, an eventual port in northeastern Kenya, and securing an invitation from the Djibouti government to establish a base in Djibouti, alongside the US, France and possibly Japan.⁷ Senior Chinese army officers are also leading peacekeeping missions in Western Sahara, where they are gaining experience on the ground, which may be a precursor of future Chinese land operations in Africa.

Given the leverage China has over the leadership in several fragile African countries, it would not be hard to imagine such countries granting basing privileges to the Chinese military in return for lucrative payments. Yet, there are sound reasons why China will not seek formal bases. First, long distance creates logistical problems for China; second, there is no precedent in Chinese military history or strategy for maintaining far flung bases.⁸ Third, military bases have the potential

⁶ Outsourcing or free riding is stage one. Stage two is Chinese military participation in multilateral security and anti-piracy missions, which is going on now in the Gulf of Aden off the Somali coast, as well as other places where Chinese contribute to UN and regional peacekeeping forces. The next stage, stage three, may occur sometime within the next 20 years, in which the Chinese deploy in Africa with double-hatted engineers/security people and, perhaps, military units offshore or in temporary or permanent bases on the continent.

⁷ On February 25, 2014, Djiboutian Minister of Defense Hassan Darar Houffaneh and his Chinese counterpart General Chang Wanquan signed a security and defense strategic partnership agreement at the Cheikh Osman military camp. Under the partnership, Djibouti has offered military facilities such as a home port to the Chinese navy. China is well into building a military presence in Zimbabwe; they are also building a base in the island of Seychelles to protect their supply route in the Indian Ocean.

⁸ Zheng He's naval expeditions to the east coast of Africa during the Ming Dynasty in 1405-1433 were the last time China had a naval presence in Africa, and such presence was short-lived. China's strategy

of allowing minor confrontations to escalate into a cold war with the US and possibly France that could lead to proxy wars. Such proxy wars could occur in the Gulf of Guinea where several unstable and resource-rich West and Central Africa countries could become battlegrounds in a scramble for resources.

China may opt instead for more “places instead of bases.”⁹ China’s participation in the Gulf of Aden’s anti-piracy operation has generated a debate in China on the need for some sort of over-sea infrastructure to support deployed naval forces. But they are more likely to build a regional support network, allowing Chinese military ships access and support from foreign ports, than to establish expensive, permanent naval bases. “The bottom line is that China is developing a network of places not bases in the Indian Ocean in order to support non-traditional security missions such as the anti-piracy operation in the Gulf of Aden.”¹⁰

Current or future arrangements could evolve into formal agreements, particularly as Chinese investment in resource rich fragile states increases and the sheer number of Chinese migrants working in Africa increases from one to two million. (Nobody really knows how many ethnic Chinese live in Africa but a conservative estimate is one million or higher).¹¹ It is unclear to what extent the Chinese government will feel compelled to defend Chinese migrants, including village shopkeepers located throughout the countryside of Africa. If there are anti-Chinese riots with fatalities from attacks on Chinese migrants, public opinion in China might compel a vociferous response from Beijing.

On balance, China’s interests to be protected are more likely to be inside Africa at its mines and construction projects and, possibly in the future, its farms and factories, than in anti-piracy activities in the Gulf of Aden. Thus far, we do not have enough precedents, context or information to speculate on whether and how China will try to ‘securitize’ their considerable investments in Africa. This is an area for further investigation in Phase 2 of the Study.

A second question is how the African public’s growing assertiveness, as a result of an expanding educated middle class and more democratic governments, will impact China’s current way of doing business in Africa. This Report identifies four areas of potential tensions.

1. One issue, the alleged ‘land grabbing’ – the purchase of large tracts of land for exclusive Chinese use - by Chinese companies, has not yet been borne out by fact-based evidence.¹² Medium sized farms, but not large ones, have been purchased by Chinese directly or using non-Chinese corporations or joint ventures to disguise their ownership. Looking ahead, there are compelling reasons for China to seek alternative food sources in Africa, particularly as China’s demand for animal feed stocks such as soy increases. However, the political realities in an Africa with surging population growth (as this Report graphically demonstrates in Section 2), means that food shortages are likely to break out in many regions of Africa before 2035. It is hard to imagine a scenario where China will export food products from Africa without precipitating serious tensions with Africans. We do know that Chinese migrants are growing green vegetables for Chinese living in

has been traditionally focused closer to home, protecting China from external invasion and internal civil war and conflict.

⁹ See Kostecka, Daniel. 2012. Places and Bases: The Chinese Navy's Emerging Support Network in the Indian Ocean on the Chinese Navy’s emerging support networks in the Indian ocean. David Shinn’s course syllabus, p. 6 summarizes Kostecka’s argument.

¹⁰ Daniel Kostecka, *Ibid*.

¹¹ See Howard French, China's Second Continent: How a Million Migrants Are Building a New Empire in Africa (Knopf Doubleday 2014).

¹² See McMahon, Paul. 2013. *Feeding Frenzy: The New Politics of Food*. London: Profile Books. pp. 181-210.

Africa on small to medium sized farms. Even this scale of farming will attract negative attention unless some Africans change their food preferences and begin to consume such greens.

2. The rise of regional economic communities or RECs are a natural response to the need for land locked countries, as well as small countries, to trade with their neighbors for access to global markets via the coastal countries, and to achieve economies of scale in trade and security arrangements. China benefits by building infrastructure projects that connect these small or landlocked countries. China will also find RECs easier to access with larger markets than individual countries. The added stability that RECs bring to their regions will generally benefit Chinese interests. However, China will have to be responsive to new requirements for adherence to stronger social, environmental and labor regulations as well as increased competition from other foreign investors in such RECs. China's failure to respond to the challenges presented by RECs could become a source of tension between China, Africa and foreign competitors trading with RECs.
3. CSR or Corporate Social Responsibility is the new mantra for Chinese SOEs and private companies investing in Africa in 2014. This comes from a belated recognition from the top of the CCP that the China brand has been tarnished by egregious behavior of Chinese companies and migrants. CSR will only be required in well governed countries or in countries with an active civil society and public opinion that cannot be easily ignored by the government. Chinese businesses will continue to conduct their practices the old way in fragile states where CSR requirements are likely to be stymied by corrupt political elites as in the case of the present day Democratic Republic of Congo (DRC). Failure to operate under the CSR code will create tensions with civil society and labor unions in these fragile states.
4. Technology Transfer. Presently, few African countries have enough skilled engineers to take on new technologies from Chinese investors. This could change in 2035 as education improves human capital and as progressive African countries adopt policies to support Special Economic Zones (SEZ) and institutions favorable to incorporating Chinese technology and manufacturing facilities. Tensions could spike if Chinese companies demur in sharing technology and establishing manufacturing facilities based in Africa to serve local and regional markets. What it comes down is Chinese companies are unwilling to hire and train Africans for skilled positions in their African operations. China is likely to follow a pragmatic approach based on economic realities (i.e., the supply of skilled African technicians) and market opportunities (especially in populous African countries).

The final question in Section 1 is whether China enhances or hinders good governance and broad economic development in Africa. The main criticism leveled against China is its willingness to do business without conditions.¹³ Chinese businesses look askance at corruption of high officials, reinforcing the pattern of poor governance and weak rule of law.

Africa is too diverse to generalize whether Chinese engagement is good or bad for African governance. The simple answer is in states with decent governance and, usually, democracy, Chinese FDI will be transparent, its willingness to engage in technology transfer improved, and its commitment to CSR and to the overall development of the country enhanced.

The problem is in fragile states as well as in those countries lying on the spectrum in between well-governed and fragile, i.e., "fragile but improving" and "fragile and worsening" states. The

¹³ Other than refraining from trading with Taiwan.

governments of those ‘in between’ countries are less likely to follow through on painstaking reforms if Chinese companies throw ‘easy’ money at them to secure contracts.

China is likely to maintain or increase FDI in those African countries, well governed or not, that have abundant natural resources and/or large populations that provide potential markets for China’s manufacturers. In the states that are fragile or close to fragile, China will likely continue to be agnostic and avoid interfering in or imposing conditions on the likes of Robert Mugabe and Omar Bashir.

The *Africa rising* scenario sees those countries with good governance modernizing and prospering. Predatory Chinese policies will be resisted but enlightened Chinese policies and offshore manufacturing plants located in SEZ’s will be encouraged. Chinese businesses will have to adhere to tougher labor and environmental regulations and conduct their business and bidding practices transparently.

In the *Africa lagging* scenario, China will continue to do business non-transparently with political elites and those government ministers who can deliver large contracts for the sale of natural resources at less than their market value. The danger for China is the inherent instability of corrupt dictatorships who squander their country’s natural resources, and the potential for conflict, revolution, coups, expropriation and physical violence against Chinese companies, workers and migrants.

This dilemma returns us to the question raised at the outset. What will China’s leadership do to protect its citizens and assets at risk in a collapsing or conflict-ridden African country? Will Beijing send in the military to evacuate its citizens? Will they pre-position the military in ready-made bases to prepare for adverse contingencies?

The worst case scenario is where China props up a corrupt failing state, like Mugabe’s Zimbabwe, abandoning its principle of non-interference. Analogous to Putin’s Russia and Assad, the Chinese may feel they have no choice but to stick with their African ally especially if the African regime has bestowed upon the Chinese a military base on terms that cannot be refused. The US and the West could easily end up supporting the opposition, leading to a proxy war between US and China with the Chinese military onsite.

Demography

How does demography affect China’s future in Africa? China benefits most from an Africa rising scenario. Less conflict and more economic growth is better for China’s engagement. An Africa lagging scenario, by contrast, leads to a variety of unpleasant consequences including anti-Chinese violence that could provoke China into a unilateral military intervention.

One factor that tempers the optimistic Africa rising scenario is Africa’s demographic projections to 2035. Except for southern Africa and Ghana in East Africa, and Rwanda in Central Africa, **African countries will double in population in 2035 if fertility trends continue at their current pace.** Niger’s population is projected to triple in this period. See the table below.

Table 1.1 - 2035 Population estimates (in millions) for countries in Sub-Saharan Africa according to various scenarios, millions of people

	2010 population (for comparison)	Accelerated fertility decline to 1.8 children per woman	Accelerated fertility decline to 2.1 children per woman	Inertial scenario (continuation of current fertility trends at their current pace)
Ethiopia	87.1	142.9	144.0	160.0
Malawi	15.0	24.7	24.7	30.2
Mozambique	24.0	38.2	38.4	50.4
Niger	15.9	29.8	30.0	43.1
Nigeria	159.7	248.2	249.5	317.9
Senegal	13.0	21.8	21.9	27.4
Tanzania	45.0	76.4	76.8	91.3
Uganda	34.0	61.6	61.9	73.9

This table shows that if fertility rates continue at their current pace, these countries will approximately double in population between 2010 and 2035.

Why does Africa's fertility rate remain high as the rest of the world's fertility rates decline? The decline in Africa's fertility rate under the euphemism of 'demographic transition' has not taken place as expected in some of the optimistic UN projections. Perhaps over-analogizing to other parts of the developing world such as Latin America and Asia led to the assumption that Africa's fertility rate would come down rapidly as economic growth takes hold.

In fact, there has been economic growth in countries like Nigeria, which nevertheless has one of the highest birth rates in the continent (and the world), just behind the Sahel countries, Niger, Mali and Chad. In Nigeria there is a stark difference between the economically backward and Muslim north, with fertility rates close to 8 children per family, and the more developed Christian and animist south with a fertility rate of 4.7-5.0. Poverty, polygamy, religion, early marriage and low status for women are all factors in the higher fertility rate in northern Nigeria.

In Tanzania, an East African country with a stable political system and slow and steady economic growth, fertility rates have ceased to decline, resulting in a 'fertility stall.' Partly this is attributable to less rapid urbanization taking place than expected. Rural areas have higher fertility rates than urban areas. But Tanzania is not alone, as similar fertility stalls are occurring in 16 African countries in West, East and Central Africa and a few more countries are actually experiencing fertility increases. The only bright spots are in Ghana, which has a highly educated and large middle class, Rwanda, whose 'no nonsense' authoritarian leader, Paul Kagame, has pushed family planning and secondary education for girls, Ethiopia in the Horn of Africa, Kenya in East Africa, and South Africa/Botswana and neighboring countries that are in a more advanced stage of development.

The inertial scenario, in which fertility rates continue as they are, will lead to a combined 'child-youth bulge' with rapid increases in young children from 0-14. If fertility rates decline to world norms of 2.1 total fertility rate (TFR), a highly unlikely scenario given that the average fertility

rate in Africa is currently close to 6.0 TFR, Africa would still have a youth bulge in the 15-24 age bracket. In any scenario, Africa's population will increase significantly.

The consequences of the inertial scenario would be catastrophic in many countries for several reasons:

1. Economic growth has not been accompanied by a rise in caloric consumption per capita, which remains flat. A rapidly increasing population without a commensurate increase in agricultural productivity will lead to a decline in caloric consumption per capita, especially in areas where economic growth stalls, resulting in possible famine and political instability.
2. The doubling of population in 2035 will put strains on rural infrastructure, causing water and health problems, over-cultivation of land, and land scarcity leading to disputes.¹⁴
3. There will be an acceleration of rural to urban migration, straining the ability of overburdened cities to provide housing and jobs for the influx of youth.
4. Conflicts will be exacerbated by overpopulation, leading to famine and large death tolls, particularly in the rural areas. The precedents of neo-Malthusian conditions aggravating pre-existing ethnic or social conflict are the Ethiopian famine during the Mengistu dictatorship in 1989 and Rwanda's genocide in the early 1990s. It is interesting to note that both Ethiopia and Rwanda currently have impressive programs for family planning and support for secondary education for girls.

In order for the optimistic scenario of rapid fertility decline to occur, family planning, euphemistically called 'women's reproductive health,' needs to be reinstated and reinvigorated,¹⁵ the age of parental consent for marriage needs to be raised well above the current age of 14 or 15, and girls need to stay in school through secondary level. Put simply, the older that girls marry, the less children they will have, and increased education for girls leads to deferred marriage.

The implications of Africa's demographic trends on China's engagement in Africa are:

- Increased prospects for conflict and famine will jeopardize Chinese investments and China's relationship with political elites in fragile countries;
- 'In-between' countries are more likely to descend into fragile states;
- China will need to rebalance its preference for high visibility infrastructure projects in capital cities, such as stadiums, towards much needed infrastructure, schools and family planning in rural areas;
- China might increase the number of agricultural training programs for local Africans to increase food productivity in order to feed the growing African population and lessen the

¹⁴ Africa has less precise land tenure and ownership, with much of the land available communally for grazing by nomadic tribes. As land becomes more densely settled, such communal uses will be curtailed leading to tensions among those nomadic tribes, villagers and farmers.

¹⁵ Family planning has been largely financed by international agencies such as DFID in the UK and US AID. In the late 1980s, forced sterilization in India (which took place earlier) led to a phobic reaction in Africa to family planning, enhanced by pronouncements from the Vatican and anti-abortionist advocates in the US. The outbreak of the HIV virus on the continent further diverted attention from family planning. It is interesting to note that the 1994 Cairo Conference on Population and Development made no mention of family planning. Hence, the term 'reinstatement' of family planning. One can assume that had family planning continued without a twenty year hiatus, the fertility rates and population of African countries would be lower than they are today.

need for imported food. One of the consequences of Africa becoming a food importer would be higher international food prices driving up China's own cost of food imports; and

- China needs to accelerate offshore manufacturing in African cities to employ a portion of the youth bulge. Massive unemployment in urban areas will otherwise feed conflict and instability.¹⁶

All of the above implications apply whether the inertial scenario or the accelerated decline in fertility rates scenario occur. The author's own forecast is somewhere in between these two scenarios. This less pessimistic view is partly due to an aversion to 'demographic determinism', which ignores other subtle factors such as changes in life style. For example, in Kenya it is becoming less likely that the 'auntie' in the extended family will pitch in to care for a mother's 5th or 6th child, because people are becoming busier and more productive, which could accelerate the decline in the fertility rate. Another factor is enhanced communication by mobile phones and other social media between villages and cities in Ethiopia, which is shrinking the rural urban divide when it comes to female assertiveness and birth control.¹⁷ This anecdotal evidence is supported by the high rates of **unwanted births** in countries like Ethiopia, meaning that women would have fewer children if more family planning was available in the rural areas. Still, even a scenario midway between inertial high birth rates and accelerated fertility decline will result in dramatic increases in population in most of Africa, with all of its implications for China's investments in the continent.

¹⁶ There is always the glass half full argument, used by some Pakistanis to explain the demographic dividends from its rapidly growing population during the author's Future of Pakistan research in 2009. The reason the African glass is likelier to be half empty is the sheer magnitude of development required in the urbanizing areas to accommodate the rural migration and youth bulge. Just to feed the unemployed will be a challenge for city authorities.

¹⁷ Meeting with Prof. Lawrence Ikamari, Kenyan demographer, Nairobi, January 26, 2014

Section 1. The Future of China in Africa 2035

Summary

To get an idea of the future of China in Africa in 2035, this section discusses three clusters of questions and explores a couple of scenarios for Africa and their impact on China's long term engagement in Africa.

The questions considered in this Report are:

1. Will China gradually adopt a neocolonial relationship with resource rich or fertile African countries? In practice, will China ultimately opt for a robust foreign policy driven by economic interests and security concerns to the point of adopting a more assertive military presence to protect its interests in Africa? How will China's approach to resource-rich or fertile countries differ from resource-poor countries in Africa and will China invest in resource-poor countries? What are and will be Chinese security concerns as it continues to engage with Africa?
2. As Africa's population grows and becomes more educated between now and 2035, Africans will expect more opportunities, services, accountability and transparency from their governments. What tensions will more active African public opinion cause in China-Africa relations? Four issues where these tensions may play out are:
 - a. Land grabbing
 - b. Regional integration and trade issues
 - c. Corporate Social Responsibility and labor rights issues
 - d. Technology transfer
3. Will Chinese engagement with Africa strengthen African growth or distract African countries from achieving good governance, accountability and transparency? In other words, is China good for Africa? Two related sub-questions are:
 - a. How will countries that are somewhat well governed (potential "winners") relate to China?
 - b. What impact does China's particular approach to foreign investment have on governance in Africa?

It might be useful looking ahead to suggest two scenarios for the future of Africa 2035: *Africa rising* or *Africa lagging*. *Africa rising* creates a *virtuous circle* with 'winners' dominating the continent. *Africa lagging* leads to a *vicious circle* in which political survival and proxy wars, mostly in the fragile states, prevail. The main difference between the two scenarios comes down to governance and state fragility. How do these two different scenarios for African governance and fragility impact on China's engagement with various countries in the continent?

The Virtuous circle: This is a win-win between somewhat well-governed countries and China. The African modernizers are able to use China's investments to increase local productivity for the benefits of their population. Countries such as Ghana, South Africa, Senegal and Kenya might form the core group of the winners in 2035 because of their relatively high standards of governance, the relative large size of their population and/or their endowment in natural resources. For these countries, Chinese investment presents an alternative to other foreign investors, generating leverage in their bilateral negotiations with those other countries or blocks such

as the European Union, the United States, Japan and other BRICS. All of this is healthy competition and a win-win.

The Vicious circle: This is a situation where fragile countries with poor governance look to China for their political survival. This could encompass, for example, countries in Central Africa, particularly in the strategic western part along the Gulf of Guinea, such as Gabon, Equatorial Guinea, Cameroon, Republic of Congo, Angola and Democratic Republic of Congo. China's engagement will perpetuate poor governance, as authoritarian leaders and elites in these countries find in China a reliable source of aid and foreign direct investment (FDI) and an underwriter of their political survival strategy. A negative effect of China's engagement is especially seen in 'in-between countries' like Gabon that are struggling to implement good governance. The "easy" money from China corrupts officials and weakens the impetus behind Gabon's positive governmental reform efforts. The *Africa lagging* scenario contains an added risk of proxy warfare between China and other foreign countries in the scramble for resources, resulting in further destabilization of fragile states, particularly those bordering on the Gulf of Guinea.

Factors that may hinder or challenge China's expansion in Africa include

1. the transformation of China's engagement from an integrated model of aid, trade and investment to a less integrated one where aid, trade and investment are driven by different independent Chinese actors with conflicting priorities, especially in countries that have few natural resources;¹⁸
2. the emergence of other BRICS in the region, namely, Brazil and India;
3. the assertiveness of traditional powers in Africa (France and the US in particular); and
4. well-governed African countries' economic priorities being increasingly driven by regional integration and inclusive economic development emphasizing industrialization, the development of its agricultural potential and job creation for its millions of youth. These African countries individually or as a regional group may drive a harder bargain with China, demanding not just infrastructure 'sweeteners' in exchange for African resources, but Chinese investment in local 'manufacturing for resources'.¹⁹

Some preliminary conclusions are:

¹⁸ Countries with low or no natural resources will see a less integrated approach (as is the case in Rwanda, Malawi, etc.). Meanwhile resource rich countries (Angola, DRC, Nigeria, etc.) because of their strategic importance, will see a more integrated approach, albeit with private Chinese investors and merchants free riding alongside the more centralized and coordinated investments.

¹⁹ Some of China infrastructure projects or "symbolic gifts of friendship" (e.g: stadium, hospitals, roads, etc.) are used as sweeteners for major concessions and access to natural resources. The primary objective of major roads and railways built by China is to help transport natural resources exploited by China. The beneficence to host country is a secondary objective. These "sweeteners" or "symbolic" gifts are also a way to help local politicians "show" for something in the short term; some will say, it also allows them to siphon resources or provide some of their local supporters opportunities to win local bids for services to these "sweeteners". For example, a stadium deal may come with the requirement that the pitch (playing field) must be built and maintained by local entrepreneur (who will never maintain nor build it to the standard specified in the bid but will be paid nevertheless for service not provided). China "symbolic gifts" are opportunities for corruption and collusion of interests between local elites and some Chinese investors.

- China will most likely continue to cement or ‘institutionalize’ its relations with African countries (e.g., through the strengthening of the Forum on China-Africa Cooperation or FOCAC) to secure its economic interests.
- China may cooperate on the security front with other foreign countries in the region.
- China may also consider unilaterally deploying navy task forces or platforms to protect its interests, particularly in the Gulf of Guinea, risking an escalation of tensions with the United States and France who have traditionally dominated that maritime route.
- China will engage with both resource rich and resource-poor countries in the region. However, China’s FDI will continue to be higher in natural resource rich countries and those with large populations such as Ethiopia and Nigeria.
- The impact of evolving China-African relations on governance in Africa will vary from one country to the other. Generally, the more well-governed the country, the more transparent the relationship with China.

Some facts and figures

Unlike many world powers whose economic growth was accompanied by a projection of military might and territorial conquest, China’s economic ascendance emphasizes its expanding trade deals and investments worldwide.²⁰ No other region is experiencing the impact of Chinese economic expansion more than Africa. The flow of Chinese investment and aid is creating new pathways to economic growth and an improved quality of life, as well as resentment and suspicion among the general population and elites. According to the Heritage Foundation China Global Investment Tracker,²¹ China initiated in Africa contracts worth about \$120 billion in sectors such as energy, metal, and transportation out of the \$688 billion of Chinese investments and contracts worldwide (excluding bonds) between 2005-2013. There is a growing interdependent relationship between China and Africa. China has become Africa's largest trade partner. Africa has become China's major source of imports, second largest overseas construction projects contract market, and fourth largest investment destination.²²

China’s footprint in Africa will continue to grow due to its appetite for energy and raw materials. With approximately 40 percent of global natural resource reserves, almost 75 percent of the world’s uncultivated agricultural land, and a growing market of one billion potential consumers and low-wage workers, Africa is an attractive destination for Chinese investment.²³

The relationship between China, the world’s largest developing country, and Africa, the world’s fastest growing region, is reshaping the global marketplace and geo-strategic landscape, creating new opportunities and uncertainties.

²⁰ “In 2009, China became Africa's No. 1 trade partner. In 2012, the total volume of China-Africa trade reached \$198 billion, a year-on-year growth of 19.3%. \$85 billion consisted of China's exports to Africa, up 16.7%, and \$113 billion was contributed by China's imports from Africa, up 21.4% [over the previous year].” White Paper on China-Africa Economic Trade and Cooperation <http://www.scio.gov.cn/zxbd/wz/Document/1344818/1344818.htm>

²¹ The [China Global Investment Tracker](http://www.heritage.org/research/projects/china-global-investment-tracker-interactive-map) created by The Heritage Foundation and American Enterprise Institute. <http://www.heritage.org/research/projects/china-global-investment-tracker-interactive-map>

²² White Paper on China and Africa Economic cooperation and Trade 2013. Ibid.

²³ “From 2009 to 2012, China's agricultural exports to Africa grew from \$1.58 billion to \$2.49 billion, an increase of 57.6%. During the same period, China's agricultural imports from Africa grew from \$1.16 billion to \$2.86 billion, a 146% increase.” See <http://www.chinaafricarealstory.com/2013/09/china-africa-economic-and-trade.html>

Different perspectives on China in Africa. China is painted at worst as a threat disrupting local economies, increasing African countries debt and running the risk of unraveling the progress made by some African countries in the areas of governance, accountability and transparency.²⁴ At best, China is viewed as an alternative development partner for Africa, and an opportunity for Africa to integrate with the global marketplace and reduce its marginalization in the world economy.²⁵ See a description of the evolution in China-African relations from the 1950s to 2014 in Appendix 1.

New challenges for China. The growing presence of Chinese migrants on the continent exposes China to new risks. From the disruption of oil supplies in South Sudan to the kidnapping and killing of Chinese workers and traders in different countries of the region, Chinese investments, citizens and supplies of natural resources are no longer immune to the threats posed by the Africa's fragility. Convincing the Sudanese government to allow a peacekeeping mission, and helping to quell the recent conflict in South Sudan, along with its increasing contribution to regional peacekeeping, indicate that China may be reconsidering its security strategy in the region.

Three Research Questions

The important role Africa is playing as a growing market as well as a supplier of natural resources presents added risks due to conflicts and political instability related to weak governance, which create uncertainties, complexity and volatility. It is within this mixed context that one must look at the future of China-African relations.

First Research Question: Will China gradually transform into a neocolonial power with resource rich or fertile African countries, and pursue a robust foreign policy driven by economic interests and security concerns to the point of adopting a more assertive military presence to protect its interests in Africa?

In contrasting Chinese and Western approaches to aid in Africa, Chinese aid is quick; relatively inexpensive; highly visible; and results-oriented. By contrast, western aid (the Washington Consensus as opposed to the Beijing Consensus) is aiming for sustainability; quality-driven; participatory; and process-oriented.²⁶

Will China's role evolve into a win-win relation or another colonization of the continent? The 'win-win' view is epitomized by this African Development Bank pronouncement:

²⁴ Adama Gaye, (2006) *China-Africa-The Dragon and the Ostrich*, Ed. L'Harmattan, Paris ; Gaye and Brautigam, (2002): Online debate: Is Chinese Investment Good for Africa? Council on foreign Relations, <http://www.cfr.org/china/chinese-investment-good-africa/p12622>

²⁵ Zafar, Ali. 2007. "The Growing Relationship Between China and Sub-Saharan Africa Macroeconomic, Trade, Investment, and Aid Links." *World Bank Research Observer* Volume 22, Issue 1 Pages: 103 – 130. Muekalia, D. Jardo. 2004. 'Africa and China's Strategic Partnership', *African Security Review* 13(1): 5–11. Brautigam Deborah, (2009) *The Dragon's Gift: The Real Story of China in Africa*, Oxford University Press; Ramo, Joshua C. 2004. "The Beijing Consensus", London Foreign Policy Center.

²⁶ Asche Helmut. Domestic Policy Implications of Chinese Economic Engagement in Africa. OECD Development Centre Background Paper For the African Economic Outlook 2011. P.23

“China is a valuable trading partner, a source of investment financing, and an important complement to traditional development partners. China is investing massively in infrastructure, which helps alleviate supply bottlenecks and improve competitiveness”.²⁷

Examples of a more skeptical view of China’s intervention and motives are:

“China’s intent is not to compete on the open market for natural resources, but to own [those natural resources] and their associated infrastructure to create a secure source of supply.”²⁸

The neo-colonial viewpoint²⁹ appeared in the headline of a local newspaper in Tanzania: “Africa: Tanzania becoming the new Chinese province in Africa.”³⁰

Can some of the drivers of China-African relations [described more fully in Appendix 1] shed light on this question?

Driver 1. Chinese political dynamics and economic orientations, particularly the *marketization* of the Chinese economy: Researchers forecast that the Chinese service economy will grow to become approximately 48 percent of the economy by 2035. The minimum wage will also be on the rise and the perception of China as the “world factory” will be a thing of the past. Instead of producing cheap goods of poor quality, China will be looking for new African markets for its cars and high end technological gadgets.

The Third Plenum of the Communist Party in 2013 further introduced market principles to the Chinese economy, increasing the private sector share of SOE’s. With the possibly diminished influence of state controlled entities, we may see a multiplicity of independent Chinese actors who will drive China’s expansion in Africa.

Driver 2. Africa’s political choices and economic imperatives

It has recently been estimated that more than half of Africa’s population will be urban by 2035. This growing urbanization will be accompanied by a growing demand for energy, resulting in reduced energy exports and an increased demand for renewable energies, such as solar and hydropower. This is good news for China, whose companies have a competitive advantage due to their market penetration and established influence in the African market.

Perhaps a bigger African story will be increasing regional economic integration through the consolidation of Regional Economic Communities (RECs), particularly the East African Community (EAC) and the larger Common Market for Eastern and Southern Africa (COMESA), Economic Community of West African States (ECOWAS) and the Southern Africa Development Community (SADC). These RECs will help drive inter-state trade, which is particularly important given the small populations and size of many African countries. They need to integrate regionally to compete. The RECs have the potential to become important markets and integrated economic and monetary zones, partially due to the transportation infrastructure built by China to link different countries within each region.

The common markets in the RECs will present both market opportunities and commercial challenges for Chinese firms. Chinese actors will likely face difficulties in some protected sectors

²⁷ Schiere, R. 2011, ‘China and Africa: An Emerging Partnership for Development? – An overview of issues,’ Working Paper, No. 125, May 2011, African Development Bank Group, p. 17.

²⁸ . Kent Hughes Butts and Brent Bankus, (2009) ‘China’s Pursuit of Africa’s Natural Resources’, Collins Center Study, Center for Strategic Leadership, Vol. 1, No 9,1-14. P.4

²⁹ Gaye, Adama. 2006. *China-Africa-The Dragon and the Ostrich*, Ed. L’Harmattan, Paris.

³⁰ News article written by Daniel Mbega and published by Pambazuka News on January 29, 2014. <http://www.pambazuka.org/en/category/features/90344>

such as textiles and processed agricultural products because some African countries, particularly those with good economic governance, will prioritize the development of their embryonic garment and agro-industries.

Other countries, notably those in the Economic Community of Central African States (ECCAS) (which consists of Angola, Burundi, Cameroon, Chad, Central African Republic, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Sao Tome e Principe, and Rwanda) are still marred by fragility-driven conflicts, poverty, political instability and social tension. ECCAS has a ways to go before it becomes a viable 'single address'. These Central African countries' weak regulations and enforcement mechanisms will create a fertile ground for many Chinese migrants, entrepreneurs and corporations to engage in predatory investment practices and exploitation of natural resources with negative environmental and social consequences.

Driver 3. Security concerns and increased fragility. In 2035, Africa will present China with two main types of security challenges posing threats to Chinese citizens and supply routes:

- Conflict-led state fragility that will affect some of China's key suppliers of natural resources, like DRC, Chad, Sudan, Angola; and
- maritime piracy along the west side of the Gulf of Guinea in the Atlantic Ocean, and to a declining extent, the Gulf of Aden adjacent to the Indian Ocean³¹

Given these security challenges, China's principle of "non-interference" may become less tenable.

Driver 4. China's interaction with other powers. France and United States have developed an important sphere of influence in Africa both diplomatically and militarily in countries along the Gulf of Guinea in order to protect against maritime piracy and secure their access to natural resources and critical trade routes.³² On the eastern side of Africa, India has established a strong presence in the Indian Ocean, a key supply route for China.

Despite the growth of China's military and the expansion of its blue-water naval capabilities, as well as domestic nationalistic pressure to protect its interests in the region, China might be hesitant to project a unilateral military presence in Africa out of concerns that this might create a detrimental Cold War-like atmosphere with the Western powers (notably the United States and France in the Gulf of Guinea).³³ An assertive military presence on the continent would tarnish one of China's competitive advantages, which is its anti-colonial narrative.

There now seems to be an emerging consensus in Beijing that "multifield, multilevel, and multi-channel cooperation within the international community has become a realistic choice."³⁴ In the Gulf of Guinea unlike in the Gulf of Aden and Indian Ocean³⁵, China has opted for an outsourc-

³¹ With the exception of South Sudan and Chad, the Gulf of Guinea includes major oil producers in Sub-Saharan Africa: Angola, Cameroon, Congo (Brazzaville), Democratic Republic of Congo (DRC), Equatorial Guinea, Gabon, Sao Tome & Principe and Nigeria. Even though Chad is not a country of the Gulf of Guinea, its oil exports are transported through a pipeline via Cameroon.

³² The United States has signed agreements with Cameroon, Gabon and Equatorial Guinea for eventual use of their airports by U.S. forces.

³³ Holslag, Jonathan. 2009, "China's New Security Strategy for Africa" Parameter, 39, no. 2.; Andrew Erickson and Gale Collins, China's real Blue Water Navy, in *The Diplomat*, August 30, 2012 <http://thediplomat.com/2012/08/chinas-not-so-scary-navy/>

³⁴ Holslag, Jonathan. 2009, "China's New Security Strategy for Africa" Parameter, 39, no. 2. P.25

³⁵ In the Gulf of Aden and Indian Ocean, China has been active in joint anti-piracy mission with the US and European countries; but also in solo missions. China is also actively seeking to build naval bases in

ing model of security strategy for its supplies and citizens, focusing more on working in collaboration with the United States, France and African countries, while addressing its security vulnerabilities in Africa through the following three pronged strategy:³⁶

- a. ensuring a military presence on the continent within the framework of United Nations peacekeeping forces, and through operations endorsed by the International Maritime Organization (IMO), particularly to fight maritime piracy along the Gulf of Guinea and the Gulf of Aden;
- b. entering into bilateral military exchanges that includes military training, sale of weapons and intelligence sharing with some countries in the region; and
- c. strengthening the capacity of sub-regional forces such as the future African Standby Force (AFS) to address security issues affecting both African countries and Chinese interests.

China will also continue to build up its soft power through its Confucian Institutes, the Central China Television Network (CCTN) and massive aid packages and exchange programs to try to gain popularity among the African elite and general population.

Preliminary conclusion. Faced with a stiff competition from other world powers and emerging economies, as well as security challenges in Africa, China will more likely continue the institutionalization of its bilateral relations with African countries to secure its economic interests, and for the time being cooperate on the security front with other world powers and emerging countries acting in the region, without excluding the option of deploying navy task forces or platforms in the future to protect its interests.³⁷

Second Research Question: What tensions will a more active African public opinion cause in China-Africa relations?

As Africa's population grows and becomes more educated, Africans will expect more opportunities, services, accountability and transparency from their governments. What tensions will this more active African public opinion cause in China-Africa relations? Four issues where these tensions may play out are:

- a. Land grabbing
- b. Regional integration and trade issues
- c. Corporate Social Responsibility and labor rights issues
- d. Technology transfer

Djibouti and Seychelles; a strategy that the US (in Djibouti) and India (in the Seychelles) are monitoring with concerns.

³⁶ The Chinese don't think they are free riding when they let the US provide public goods like security in international seas. Like the Russians, the Chinese see the US operating under a set of global rules that discriminates against the Chinese. From their perspective, perhaps free riding is a form of passive resistance. But economically, passive resistance provides the same result as free riding, saving China money, time and responsibility.

³⁷ The three stages of Chinese engagement can be termed: stage one: outsourcing, stage two: joining multi-lateral peacekeeping missions, and stage three: providing their own security (which may first take form of Chinese engineers who double as security personnel, and only where absolutely necessary, requiring military personnel).

Land Grabbing issues

Land grabbing by Chinese companies and migrants is an obvious source of future tension with African countries trying to feed a burgeoning young population. But first, some observations:

1. 86% of food in the world is consumed within the country where it is produced. Some economists view 14% of agricultural product being traded across borders as too low, and argue that greater efficiency would support more food exports, not less.³⁸
2. Even if Chinese land grabbing for food export was viewed negatively among African public opinion, fact-based evidence of large scale Chinese investment in land for agriculture is mixed. Chinese companies may be testing the water for future large scale acquisitions. They may be buying land surreptitiously through foreign companies (like one Chinese migrant incorporating his Africa land owning company in his adopted country, Australia)³⁹ or through joint ventures where the Chinese ownership is harder to detect.
3. Chinese migrants and companies would find it very difficult to transfer agricultural product from their farms if an African government deemed it in the public interest to restrict such food exports.⁴⁰
4. What we do know is that Chinese migrants are farming small to medium landholdings up to 5,000 hectares to grow ‘green vegetables’ that are favored by the local Chinese community but not by the Africans. In a limited sense, their farming deprives Africans from a source of food unless some Africans eventually acquire a taste for healthier foods like Chinese greens.

China certainly has compelling reasons to expand food imports throughout the world, ranging from Africa to Latin America to North America and even Russia and the Ukraine.⁴¹ Soy production is in particular demand as the growing Chinese middle class show an appetite for meat products, raising animal feed requirements. Unlike grain/wheat/corn, which have experienced leaps in output due to advances in technology, soy production per acre has remained fairly constant. Either market pricing will induce more farmers to grow soy or China will seek to grab land where it is possible to grow soy and other foods in high demand back home.

Against China’s compelling needs for stable supply of certain foods lies Africa’s own food insecurity. Today, even in countries experiencing steady economic growth, like Kenya, the domestic caloric consumption per capita has stayed flat. If food production is not improved significantly – and if 15-20% or more of crop yield continues to be lost through inefficient harvesting and farming techniques in much of Africa – then Africa’s coming demographic explosion will create serious food scarcity in many areas. Any attempt to export food from Africa by China or the Gulf states, which have been buying land in Africa, will become politically untenable. Today’s media has hyped Chinese land grabbing stories, often without hard evidence. The political sensitivity of land grabbing will likely make the Chinese more cautious, at least in Africa. Perhaps Ukraine, Russia and other countries with slow population growth or even population declines offer China greener pastures.

³⁸ Conversation with John Lipsky, former Acting Director of the IMF, in London, May 24, 2014.

³⁹ Howard French, *ibid.* See Appendix 3.

⁴⁰ Lipsky, *ibid.*

⁴¹ See investment in soybean and rapeseed in “Chinese, Mideast Funds to Invest in Russian Agricultural Venture,” *Wall Street Journal*, March 27th, 2014 at <http://online.wsj.com/news/articles/SB10001424052702304688104579465811297636066?KEYWORDS=chinese+investment++Ukraine&mg=reno64-wsj>

Regional integration and trade issues

In Africa, the question of regional trade will be intimately linked to the larger issue of regional integration of the continent. In order to capture some of the issues China will face in trade with Africa, it is useful to look at these issues from the prism of regional integration. The current patterns of integration observed in most regional economic communities (RECs) in Africa show the increasing awareness by African policy-makers of the importance of economies of scale for both economic and security reasons.

In fact, regional integration will help Africa address the following three geographic challenges⁴²:

- a) The continent has the highest number of landlocked countries in the world (nearly a dozen countries equal to one-third of continental Africa, and much higher if one excludes coastal North Africa). This problem is aggravated by poor transportation infrastructure, incoherent transport, and customs regulations in both landlocked and coastal countries.
- b) Landlocked countries have limited access to the global market, which requires collective action on issues related to integrative infrastructure (roads, railways, telecommunication), logistics, transportation and harmonization of trade policies, customs, standards and one-stop border facilities.⁴³ Think of Malawi, a poor, small country wedged between central and northern Mozambique, southern Tanzania and eastern Zambia, another land-locked country.
- c) The small size of African countries economies does not allow them to reap the benefits of economies of scale important not only for trade and investment but also for transnational issues relating to security, terrorism and the adverse effects of conflicts (refugee flows, proliferation of small arms, etc.).

China is part of the evolving story of Africa's regional integration. Major Chinese investments on roads and railways infrastructure will support not only the movement of natural resources, for which China is mainly interested, but also goods, capital and people, thus accelerating trade between African countries. Chinese-built infrastructure is strengthening the process of regional integration already underway in RECs such as the East Africa Community (EAC), Common Market for Eastern and Southern Africa (COMESA) and the Economic Community of West Africa (ECOWAS). In the long term, however, China will have to deal with a more regionalized regulatory environment and newly robust regional institutions. Chinese investors will be subject to a higher level of scrutiny, making it more difficult and costly to violate laws and procedures than when dealing with individual countries of the region. The upside for China and other donor countries is easier access to larger markets for their goods and services, as well as a possibly more stable and coherent institutional and regulatory environment.

In the long term, regional integration will require Chinese investors, both private and governmental, to be responsive to social, environmental and labor regulations and risks. In addition, a more integrated Africa will attract other BRICS countries and Western countries, creating more competition for Chinese investors.

⁴² African Development Bank. "Africa in 50 Years' Time: The Road toward Inclusive Growth". September 2011

⁴³ African Development Bank. "Africa in 50 Years' Time: The Road toward Inclusive Growth". September 2011. See also Paul Collier, The Bottom Billion (2008) pp. 53-63.

Corporate Social Responsibility (CSR) and labor rights issues

In general, CSR is grounded in the belief and expectation that businesses should contribute to local economic development, abide by local laws and regulations, respect the environment, and engage in social and philanthropic investments as ‘good corporate citizens.’ Expectations for CSR are even higher in activities related to the exploitation of natural resources. There are growing concerns within the Chinese business community that in communities across Africa, the image of Chinese investment and businesses has suffered from frequent scandals and failures in Chinese business practices. The reality is that Chinese businesses are not significantly less socially responsible than any other businesses operating in the context of incoherent policies and weak rule of law. However, the size and diversity of Chinese investments give China a larger imprint in the continent, thus exposing its investments to greater public criticism.

With increasing regional integration, CSR issues will become more pressing. The degree to which Chinese businesses adhere to CSR practices and respond to local concerns will largely depend on the quality of governance and the regulatory framework in the host country. Well governed and regionally integrated countries, like South Africa, Ghana and Senegal, will enforce and encourage CSR practices. On the other hand, poorly governed countries and/or those trapped in conflict and instability will present a weaker institutional and law enforcement environment where enforcement of CSR practices are likely to be stymied by collusion with corrupt political elites. Think of the Democratic Republic of Congo.⁴⁴

Technology transfer

Technology transfer as a process of transferring skills, competencies, techniques, production processes and facilities has been a key issue of concern in Africa since independence. The recent engagement of China fuels this ongoing concern.

One of the questions that arises around China’s investment in Africa has always been whether China intends to keep the technology internal (within its own workers and engineers and experts). Alternatively, will China share and transfer its technology so that instead of seeing Chinese engineers in construction sites and mines designing, managing production processes and leading underpaid and unqualified African workers, there might be a sprinkling of local African engineers. Seeing Chinese technologies and know-how might enable Africans to use such technology in other areas of activity, leading to local innovations and improvements. This topic can be framed around two opposite poles: *Africa readiness to technology transfer* and *Chinese willingness to transfer its technology*.

Africa readiness to technology transfer . Technology transfer requires a relevant and reliable education system that teaches the basic skills and competencies capable of accessing, adapting or improving new knowledge, techniques and processes brought in by the transfer. In addition to education, there must also be policies that promote and support the establishment of facilities and processes for technology transfer. The education system in Africa does not currently support the development of human capital ready to take advantage of Chinese technology.⁴⁵ Nor are there many African countries with institutions and policies favorable to incorporating Chinese technological and industrial facilities and processes. Optimistically, if current trends in education and institutional development hold, several African countries, particularly the stable and well governed ones, will be ready to absorb such technology. Will China be amenable to transfer?

⁴⁴ See Jacob Kushner, China’s Congo Plan: what the economic superpower sees in the world’s poorest country (2013).

⁴⁵ Howard French, *ibid.*, p. 53-55.

Chinese willingness to transfer technology. China's engagement in Africa is partly inspired by China's own development experience, which is based on provisions of grants and aid to underdeveloped provinces, and promotion of commercial activities and infrastructure development to boost economic activity. The creation of Special Economic Zones (SEZ) for manufacturing, construction materials, or mining-related industries has been one of the key drivers of China's internal regional development.

The attempt to replicate the model of SEZ in Africa is an example of this mirroring China's successful domestic approach.⁴⁶ Six special economic zones (SEZ) are under formation in Africa, offering a deliberate political attempt by the Chinese to create industrial clusters and synergies for the transfer of technology. China has a more institutional bilateral approach to transfer of technology that favors mutual gains as a way to reinforce exclusive ties with Africa to counterbalance the influence of western countries and other BRICS. The FOCAC (Forum for China-Africa Cooperation), SEZ, and multiple bilateral 'exchange and cooperation' agreements will remain the preferred mechanisms to address issues related to transfer of technology. Although only one SEZ has taken off, and that one is located in the island of Mauritius in the Indian Ocean, some large African continental countries could see an increase in off-shoring of Chinese manufacturing to Africa in order to get closer to the Africa market. Ethiopia, Nigeria, Angola, Ghana and South Africa are beginning to witness this off-shoring in manufacturing and telecommunication sectors.

As Africans purchasing power and demands for manufactured goods increase, the economic imperative to be closer to a growing market more than the institutional approach, will dictate China willingness to transfer technology. But will African countries be ready to seize these opportunities? Sadly, experts conclude that

there is no evidence that any of the host governments have made efforts to develop supplier programs and other close links between the domestic private sector and the zones. Without this, the zones are likely to remain enclaves and the opportunities for technology and skills transfers will be lost.⁴⁷

Given the responsibility of African governments to ensure that their policies and institutions are ready for technology transfer, any future transfer from China to Africa will more likely be successful in those handful of African countries with a high level of human capital and favorable institutions able to market opportunities. China will not be altruistic or driven by aid. It will follow a pragmatic approach based on economic realities and market opportunities.

Third Research Question: Will Chinese engagement in Africa contribute to broad African development or hinder good governance?

⁴⁶ In 2007 MOFCOM approved proposals for the development of seven SEZs in six African countries: one each in Algeria, Egypt, Ethiopia, Mauritius and two in Nigeria. With the exception of Mauritius, the SEZ have yet to take off, raising question marks regarding the potential of the SEZ model in Africa. For a discussion on the reasons for failure, see Thomas Farole (2011), *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experience* (Washington D.C.: The World Bank); Phillip Giannecchini (2011), *Chinese Special Economic Zones in Africa*, (*The China Monitor*, Sept 2011, Centre for Chinese Studies, Stellenbosch University)

⁴⁷ Brautigam, D., Tang Xiaoyang, [African Shenzhen: China's special economic zones in Africa](#). *Journal of Modern African Studies*, 49, 27–54 (2011)

The key issue here is whether China will continue its pragmatic policy of non-interference in African domestic politics, which policy carries with it the risk of derailing small steps of progress made by some African countries towards good governance.

Good governance includes accountability of both elected and administrative officials, transparency in the management of public resources, wider participation in the decision-making process, anti-corruption practices and policies, and the provision and delivery of expected public goods and services.⁴⁸ There is statistical evidence linking democracy, good governance and sustainable development.⁴⁹ The flip side of the correlation is that poor governance is a key driver of fragility that includes systemic disturbances (conflict, economic crisis, systemic corruption and mismanagement of public resources, and socio-political and environmental shocks). These disturbances negatively affect the state's decision-making process and its ability to ensure security and provide expected basic services to its population.

China's engagement in Africa and Good Governance

In the latest *Third Plenum* of the Chinese Communist Party, internal reforms emphasize the importance of governance, particularly the fight against corruption.⁵⁰ One senior party official emphasized “*the top leadership's intention to improve governance and bring more justice to the society to resolve rising social tensions. This is important as political stability is vital for economic growth sustainability, but we still see there is a lack of checks and balances for administrative power.*”⁵¹ Promoting good governance at home does not necessarily make China a fervent advocate of good governance abroad. However, this new orientation does show that China is starting to see the links between good governance, political stability and economic growth.

At the same time, China is unlikely to swing to the opposite pole and adopt a prescriptive and value-laden Western approach of engagement. Chinese policy-makers maintain that the imposition of Western values and institutions on Africa in the name of democratization and good governance has been detrimental to the continent. They see “*democracy bequeathed by Western hegemony; and a manifestation of values clashing when democracy is transplanted onto a disagreeable land.*”⁵² For China, stability comes first in a country's development.

Criticisms leveled against China are aimed at:

⁴⁸ According to the World Bank, “Governance consists of the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them.” The Mo foundation <http://info.worldbank.org/governance/wgi/index.asp>. This definition is the one used throughout this chapter. The provision and delivery of public good and services is particularly emphasized in the Mo Foundation definition of Governance.

⁴⁹ African Development Bank. (2011). *Africa in 50 Years' Time: The Road Towards Inclusive Growth*. African Development Bank Report, Tunis, Tunisia, September 2011. Larry Diamond (2005). “Democracy, Development, and Good Governance: The Inseparable links”, paper presented at the Maiden Annual Democracy and Governance Lecture of the Ghana Centre for Democratic Development, March 2005, Accra, Ghana. The democracy panacea is challenged, however, by the notable successes of two non-democratic countries, Rwanda and Ethiopia, which have achieved development faster than their neighbors under highly authoritarian leaderships and the absence of corruption. The key difference may not be democracy vs. authoritarianism but non-corrupt vs. corrupt government.

⁵⁰ Paul Murphy Nov 18 2013, “Third Plenum Cheat Sheet”. <http://ftalphaville.ft.com/2013/11/18/1696812/third-plenum-cheat-sheet/> (Accessed on February 6, 2014)

⁵¹ Op cit. p.1

⁵² “Stability comes first in a countries development”, People's Daily, January 14, 2008 at (<http://english.people.com.cn/90001/90780/91343/6337848.html>)

1. its policy approach of non-interference in domestic politics of a partnered country;
2. Chinese labor practices and their environmental impact in the continent, and
3. a lack of transparency and disclosure of information and data related to Chinese aid, financial flows and investments in Africa.⁵³

China aid and engagement in general comes without any precondition except for the “The One China principle”. With the rise of China in the African continent, only a few small countries such as Gambia, Burkina Faso, Swaziland, and Sao Tomé et Príncipe have kept diplomatic ties with Taiwan. Except for Swaziland, a staunch supporter of Taiwan, it would not be surprising to see the other holdouts sever relations with Taiwan and join China’s bandwagon.

Non-interference policy under fire. It is on the basis of the principle of non-interference that China maintained its support for Omar El Bashir from Sudan at the height of the 2006 war in Darfur during a period when Bashir regime was accused of genocide against the people of Darfur. Prior to the controversial presidential elections in Zimbabwe in 2005, China supplied President Mugabe regime with telecommunication and anti-riot equipments used to silence and repress the political opposition.⁵⁴ While Sudan and Zimbabwe are important suppliers of oil, gas and minerals, China’s controversial support for these two regimes raises questions on the value China places on good governance and human rights in the continent. People inside Africa are beginning to ask about China’s role in extracting resources in partnership with regimes which do not benefit the whole country.⁵⁵

Lack of data disclosure. Global tools and initiatives have been used to promote transparency and accountability of financial flows and investments. In the mining sector, there is the Extractive Industries Transparency Initiative (EITI), which serves as a global coalition of governments, civil society organizations, and companies working to ensure accountability and transparency in the management of revenues from natural resources.⁵⁶ However, China and its major suppliers of natural resources such as Angola, Sudan, Zimbabwe, Democratic Republic of Congo (DRC), and Chad are not compliant members of the EITI. Thus, Chinese companies are not compelled to report on their transactions, making it difficult to find real data on financial flows of natural resources extractions in order to ensure accountability.

China will likely continue to apply its policy of non-interference, making occasional exceptions when its own interests are threatened by instability. As a general rule, China will let the African countries be responsible for good governance reforms. Will African countries continue business as usual or will they hold *both* China and themselves accountable?

The spectrum between good governance and fragility: Disaggregating African countries

While China’s investments provide benefits to Africans, they also create challenges for governance and in some cases exacerbate state fragility, which in turn affects China’s engagement. The kidnapping by Boko Haram of Chinese workers in the border town between northern Cameroon

⁵³ An example of a US university and US AID collaborative data base shows how much detail on Chinese aid and investment in Africa can be assembled. See “The Known Universe of Chinese Official Finance to Africa”, China AidData: Open Data for International Development at <http://china.aiddata.org/analyze>

⁵⁴ Chang, Andrei. 2007. “Chinese Arms and African Oil.” Space Daily, at http://www.spacedaily.com/reports/Analysis_Chinese_arms_and_African_oil_999.html (accessed February 2014).

⁵⁵ Reynolds, Paul. (2007). China’s peaceful rise running into criticism. BBC website. February 1, 2007. <http://news.bbc.co.uk/2/hi/africa/6312507.stm>

⁵⁶ To learn more on EITI, visit: <http://eiti.org/>

and Nigeria due to instability; or the expulsion of Chinese migrants from Ghana as a result of law enforcement, and the hefty fine imposed by the Chadian government on the Chadian subsidiary of the China petroleum company (CNPIC) for violating environment protection clauses, are illustrations of how China's engagement will be affected either by instability and fragility on one side (northern Nigeria) or practices of good governance on the other (Ghana and Chad).

African countries are more likely able to mitigate the adverse impact of China's interventions with inclusive economic development made possible by good governance. The question is whether a critical mass of African countries is on a good governance trajectory.

The future of African countries is best captured in a spectrum shown in the illustration below with good governance and fragility as the main poles. China's engagement becomes one of the key factors reinforcing each country's position inside the spectrum. According to the Ibrahim Index of Africa Governance (IIAG) developed by the Mo Ibrahim Foundation in 2013, the ten best performing countries are Mauritius, Botswana, Cape Verde, Seychelles, South Africa, Namibia, Ghana, Tunisia, Lesotho, and Senegal;

The worst performing countries comprise Congo Brazzaville, Côte d'Ivoire, Equatorial Guinea, Guinea-Bissau, Zimbabwe, Chad, Central African Republic (CAR), Eritrea, Democratic Republic of Congo and Somalia.⁵⁷ All ten of the least performing countries have been engulfed in conflicts or are led by autocratic regimes. Except for Guinea Bissau and Eritrea, all ten are endowed with natural resources.⁵⁸

One of the poles describes the situation of countries enjoying *good governance*, where public institutions are more accountable, the decision-making on public policies is transparent, and there are noticeable policies that promote inclusive growth, conflict prevention and development. These countries are also part of a well-integrated regional economic community (RECs). Chinese foreign direct investment will be more accountable. Moreover, the transfer of Chinese technology will be more forthcoming due to good policies in that African country which promote human capital, thus creating favorable conditions for adaptation of Chinese technologies, production processes and facilities.

The opposite pole of *fragility* describes poorly governed countries, namely the fragile states. The volatility of revenues from the natural resource sector, government mismanagement of resources, unstable or corrupt institutions, and the absence of the rule of law create a deficit of governance. Some of these countries will be engulfed in conflicts, trapped by poverty in an unstable neighborhood. There is more likely be a collusion of interests between African elites in those countries and Chinese businesses to exploit natural resources without benefiting African populations. The result is skewed economic growth showing an increase in GDP and rising inequality without economic development, causing public resentment toward both their government and China.

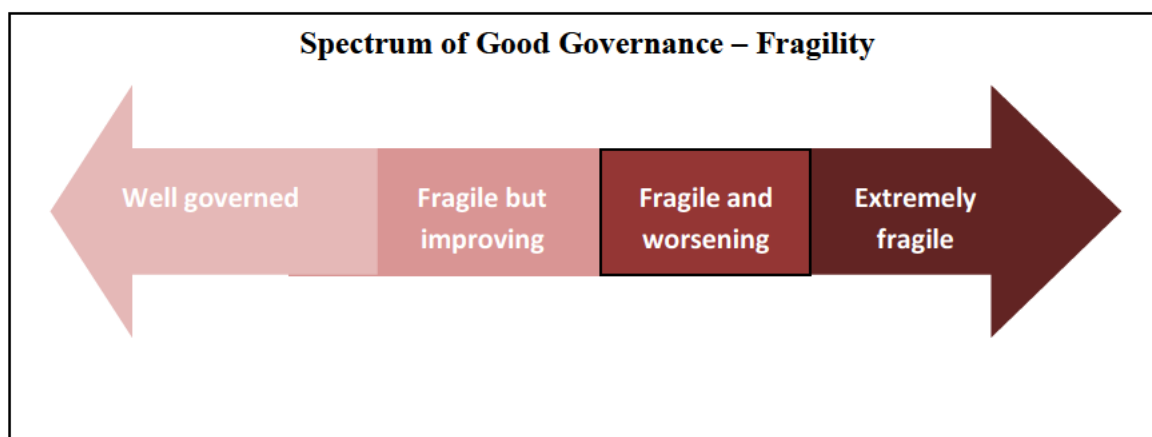
Four broad categories of countries can be identified along the governance/fragility spectrum (see figure 1.1 below):

⁵⁷ Mo Ibrahim Foundation (2103). 2013 Ibrahim Index of African Governance: Summary. Mo Ibrahim Foundation . www.moibrahimfoundation.org

⁵⁸ These same countries are also included in the "more fragile" category of countries in the state fragility projection in the horizon 2060 study conducted by Cilliers and Sisk. They look at low capacity and poor state performance with respect to security and development and define a state as fragile when it is unable to provide for the security and development of its citizens. The majority of citizens in highly fragile countries in Africa (1) are poor, (2) experience high levels of repeated or cyclical violence, (3) experience economic exclusion and inequality, and (4) suffer from poor/weak governance." See Jakkie Cilliers and Timothy D. Sisk (2013). Assessing long-term state fragility in Africa: Prospects for 26 'more fragile' countries. Institute of Security Studies. Monograph #188. P. 9

1. *“Well governed”* countries - Countries that will continue to lead the trend of good governance, such as Mauritius, Botswana, South Africa, Seychelles, Ghana, and to some extent Senegal. These countries will more likely continue to strengthen their institutions, be responsive to their citizens and adopt policies and regulations that ensure that their resources benefit their citizens. China’s engagement will more likely be used as way to further development and growth in these relatively well-governed countries.
2. *“Fragile but improving”*- These countries are trapped in the intersection of both poles. Such countries have recently emerged from conflicts, state fragility, or systemic shocks (economic crisis and major natural disaster). “Fragile but improving” states are rebuilding their institutions, providing essential public goods to their citizens, and adopting policies that promote development and regional integration. Currently, Rwanda, Gabon, Sierra Leone and Cote d’Ivoire might fall in this particular category.
3. *“Fragile and worsening”* - These country will see their fragility worsening. Drivers of fragility will gain in strength as these countries fall into protracted conflict, instability and state failure. They resemble today’s Sudan, Eritrea and Guinea Bissau.
4. *Extremely fragile states* - These countries are experiencing protracted conflict, systemic instability, and extreme poverty and insecurity for the majority of the population. Like most failed states, the authority of the government, when it exists, is not recognized beyond the capital-city. They will look like today’s Central Africa Republic, Somalia and South Sudan.

Figure 1.1 - Spectrum of Good Governance - Fragility



Forecasting China’s African ‘clients’ to 2035.

Using several datasets, table 1.2 below is an attempt to illustrate the situation of the major recipients of China’s engagement in Africa.⁵⁹ The forecast is based on the following assumptions:

⁵⁹ The Heritage Foundation and American Enterprise Institute “China Global Investment Tracker” – for investment data. [The China Global Investment Tracker](http://www.heritage.org/research/projects/china-global-investment-tracker-interactive-map) created by the American Enterprise Institute and The Heritage Foundation is the only publicly available, comprehensive dataset of large Chinese investments and contracts worldwide (excluding bonds). Details are available on over 1100 attempted transactions -- failed and successful – valued at more than \$100 million in all industries, including energy, mining, real estate, and transportation. (<http://www.heritage.org/research/projects/china-global-investment-tracker-interactive-map>)

1. The pace of investment by China will slow down but continue to rise in absolute amounts.
2. Governance (political and economic) will be a key factor in determining the direction each country will take in the spectrum of governance and fragility.
3. The principle of “non-conditionality” of aid provided by China will contribute to the strengthening of autocratic regimes and create a dilemma for China’s principle of “no intervention” when political instability arises in fragile countries where China operates.
4. France, China, Brazil, India and other countries will find ways to compete while collaborating in French-speaking Africa, resulting in a form of “*co-option*” (collaborating to help resolve conflicts through the UN Security Council, regional African organizations and peacekeeping missions, while competing for economic influence and trade).⁶⁰

Table 1.2 - China’s investments in Africa in 2013 and African state governance and fragility to 2035

Recipient countries	Cumulative investment 2013 in \$ Billion	Forecast to 2035
Angola	\$9.7	Fragile but improving
Benin	N/A	
Botswana	1.1	Well governed
Burkina Faso	N/A	
Burundi	N/A	
Cameroon	4.6	Fragile but improving
Cape Verde	N/A	
Central African Rep	N/A	Fragile and worsening
Chad	6.8	Fragile and worsening
Comoros	N/A	
Congo	3.1	Fragile and worsening
Dem. Rep. Congo	6.9	Fragile and worsening
Cote d'Ivoire	N/A	
Djibouti	0.7	Fragile but improving
Equ. Guinea	N/A	
Eritrea	N/A	
Ethiopia	11.7	Fragile but improving
Gabon	1.4	Fragile but improving
Gambia	N/A	
Ghana	4.7	Well governed

Jakkie Cilliers and Timothy D. Sisk (2013). Assessing long-term state fragility in Africa: Prospects for 26 ‘more fragile’ countries. Institute of Security Studies. Monograph #188

Mo Foundation (2103). 2013 Ibrahim Index of African Governance: Summary. Mo Foundation . www.moibrahimfoundation.org

USAID CSO Sustainability Index for sub-Saharan Africa (2011, 2012) : <http://www.usaid.gov/africa-civil-society>

⁶⁰ This assumption may be tempered by my meetings in Paris later in 2014 with French experts and government officials dealing with Francophone Africa.

Guinea (Conakry)	7.8	Fragile but improving
Guinea - Bissau	N/A	
Kenya	6.8	Well governed
Lesotho	N/A	
Liberia	0.11	Fragile but improving
Malawi	0.5	Fragile but improving
Mali	0.16	Fragile but improving
Mauritania	1.1	Fragile but improving
Mozambique	N/A	
Namibia	0.3	Well governed
Niger	5.2	Fragile and worsening
Nigeria	20.5	Fragile but improving
Reunion	N/A	
Rwanda	N/A	
Sao Tome Princ.	N/A	
Senegal	N/A	
Seychelles	N/A	
Sierra Leone	4.7	Fragile but improving
Somalia	N/A	Extremely fragile
South Africa	8.8	Well governed
Sudan	4.2	Fragile and worsening
South Sudan	1.7	Extremely fragile
Swaziland	N/A	
Tanzania	5.2	Well governed
Togo	N/A	Fragile and worsening
Uganda	6.8	Fragile but improving
Zambia	4.3	Fragile but improving
Zimbabwe	3.1	Fragile and worsening
Total	\$126.77	

So far, China's FDI has been higher in natural resource rich countries and/or those with large populations. A country that is likely to receive more FDI from China in the future is Ethiopia. With a population of more than 80 million, Ethiopia's cheap labor presents both a market for Chinese products and an outlet for offshore Chinese manufacturers (such as a Chinese owned shoe factory that exports to Europe and the US).⁶¹

Countries with good governance will more likely use China's investments to increase local productivity for the benefit of their population. For countries with poor governance including those struggling to improve their governance, there is a major risk that China's engagement deepens bad governance, as leaders and elites in these countries find in China a reliable source of

⁶¹ See Koffi Alle, "Africa: Minerals for Manufacturing - Towards a Bolder China Strategy" in IMF's *Al-Africa* magazine, June 2, 2014 at <http://allafrica.com/stories/201406022546.html?viewall=1>

aid and foreign direct investment (FDI) and an underwriter of their political survival strategy, as China has been for Omar Bashir in Sudan and Robert Mugabe in Zimbabwe.⁶²

The most negative effect of China's engagement might be in countries struggling to implement good governance. They are caught in between two poles: "fragile but improving" and "fragile and worsening". The "easy" money from China could discourage those countries from continuing the painstaking task of reforms.

China may find it easier to operate in a poorly governed but stable regime (even for the short term) than to operate with the uncertainty that accompanies transition to a better governed and long-term stable society. In countries gradually sliding towards extreme fragility, Chinese investment, particularly from private entrepreneurs, may paradoxically exacerbate the drivers of fragility, propelling these countries into extreme fragility, instability and conflict.

Future Scenarios: Africa rising vs. Africa lagging

Both the *virtuous circle* scenario and the *vicious circle* scenario are based on two core assumptions:

- A. China will continue to invest in, trade with, and assist African countries; and
- B. African governance (both political and economic) will be an important factor in shaping the impact of China's relations in each country and with Africa as a whole.

**Scenario 1: Africa Rising:
Virtuous circle: the Winners**

In this scenario, countries enjoying good governance will see an increase in Chinese engagement in 2035. Because these emerging countries are more accountable and transparent, Chinese actors (central government, provincial states and private business) will be compelled to follow the rules and regulations of the African country. Predatory Chinese policies will be resisted. For example, South Africa forced China to revise its investment in textiles to avoid choking off domestic industry. Also, China will be pressured to facilitate transfer of technologies, production processes, and skills development as part of China's support for such country's nascent manufacturing sectors.⁶³

The liberalization of foreign investment policies by China, allowing thousands of Chinese private enterprises and those of the Chinese Diaspora to invest in Africa, will mean that Beijing will

⁶² A distinction between non authoritarian corrupt countries (like Equatorial Guinea and maybe one of the other guineas) and authoritarian non corrupt governments like Ethiopia and Rwanda. Is that a separate section or might it be part of this discussion of winners and losers. Either way, it is important to show how China fares more poorly with Rwandas than with Equatorial Guineas, unless of course China changes the way it deals with Rwanda to a more transparent and more equitable partnership.

⁶³ Africa still has to cover gaps in terms of human capital and technology transfer for it to be ready for non-agricultural manufacturing.

have less control on the behavior of Chinese investors. This situation could exacerbate already contentious issues of Chinese migrants and companies, such as constant violations of labor and environmental regulations and immigration policies. However, the strength of the institutional frameworks and rule of law in the African ‘winners’ will help address and resolve some of these issues without major escalation. The current enforcement of immigration laws in Ghana, where Chinese illegal workers and businesses in the gold mining have been deported, is illustrative of how well-governed countries of the region intend to hold Chinese migrants accountable.

Countries such as Ghana, South Africa, Senegal, Ethiopia (if it succeeds in its transition to a “well governed” country) and some countries in the “fragile but improving category” (Uganda, Zambia, , Gabon, etc.) will form the core group of this category. The case of Ghana enforcing its immigration laws and South Africa defending its textile industries are illustrations of collisions with China arising out of African efforts to promote their broader national interests. Foreign countries with interests in these winners will intensify high level bilateral meetings, such as the *Forum on China-Africa Cooperation (FOCAC)*, *France-Africa Summit*, the *India-Africa Conclave*, and the *Africa –Japan Forum (AJF)*, to strengthen commercial and strategic bilateral co-operation.

**Scenario 2: Africa Lagging: Vicious circle:
political survival and proxy wars**

The situation will be different in poorly governed countries, namely the fragile states. The volatility of revenues from the natural resource sector, government mismanagement of resources, unstable or corrupt institutions, and the absence of the rule of law create a deficit of governance. However, these conditions will not discourage Chinese actors from investing. There is more likely to be a collusion of interests between the African elite in those countries and Chinese businesses to exploit natural resources without benefiting African populations. The result is skewed economic growth showing an increase in GDP and rising inequality without economic development, causing resentment from the populations toward both their government and China.

Corrupt leaders will focus on extractive policies, making deals that will allow them to keep their power by increasing their discretionary revenues. Domestic discontent combined with the scramble of competing outsiders for resources may lead to proxy wars. These proxy wars could become sub-regional conflict systems that not only engulf neighboring countries including even well-governed ones, but also escalate tensions between China and other majors powers with interests in the region, like the United States, France (particularly in Central Africa and countries in the Gulf of Guinea), Japan, India and South Africa.

In this scenario China may go from being a free-rider to taking charge of the security of its shipments through military means, precipitating an arms race in the region. This maritime “Cold War” between China and the US/France could trigger a wave of irredentist conflicts in the region, whereby different local proxy rebel groups will fight to control resources rich territories for their sponsors or would be sponsors. Irredentist claims in the *Cabinda* enclave in Angola; the *Katanga* insurgency in the Democratic Republic of Congo and the Movement of the Emancipation of the Niger Delta (*MEND*) rebellion in the Niger Delta of Nigeria are signs of what may be in store in the vicious circle scenario.

Section 2. Demography of Africa 2035

Summary

The recent decade has witnessed remarkable success in various aspects of socioeconomic development in sub-Saharan Africa.⁶⁴ However, contrary to the “development is the best contraceptive” expectations, fertility in many countries remains stalled (meaning that it has stopped declining), frequently at very high levels of 5 and more children per woman.⁶⁵ This stall increases the risks of population explosions, which are particularly sharp, and can have dramatic consequences for the largest countries, such as Nigeria and Ethiopia (due to demographic inertia gained by the momentum), and for small and medium-sized countries with high stalled fertility, including the Sahel countries (Niger, Mali, Chad) and many East African countries (Malawi, Mozambique, Tanzania, Uganda, Zambia).⁶⁶

The situation in most other countries, including West and Central Africa, is nearly as threatening. The only country which has achieved a significant acceleration in fertility decline and thus has good chances to escape the population explosion-related risks is Rwanda. This tiny East African country put in place an effective national family planning campaign that was carried out with particular focus on the availability of contraception in rural areas.

This study forecasts for total population and specific age groups, as well as age-dependency ratios, for a number of countries where the risks of explosive population growth are the highest (and for which the necessary data is accessible), namely Ethiopia, Malawi, Mozambique, Niger, Nigeria, Senegal, Tanzania, and Uganda.

This study’s forecasts are different from those by UN Population Division due to their scenario nature – in other words, this study models the consequences of particular demographic scenarios, such as what the population will be if the current rates of fertility decline (or the current fertility stall) persists vs. the scenario of achieving a fast acceleration of fertility transition up to the Iranian or Rwandan pace. The results clearly reveal the necessity of urgent introduction of effective measures of accelerating the fertility decline, as **otherwise the rocketing population numbers will result in burgeoning youth cohorts, tremendous pressure in rural areas, hyper-urbanization, and greater risks of political violence and humanitarian catastrophes.**

This analysis shows the most effective ways of accelerating the fertility transition in sub-Saharan Africa is the introduction of **universal secondary education (with particular attention to enrollment of women in their 20s and early 30s) accompanied by re-introducing family planning campaigns as a development priority. This is likely to be particularly effective in East African countries, where *desired fertility* is considerably lower than the real TFR, and unmet demand for contraception already exists.**

⁶⁴ Tropical Africa better denotes the scope of the fertility stalled countries. Tropical Africa is a subset of sub-Saharan Africa that excludes South Africa and some of its neighbors.

⁶⁵ The author acknowledges the invaluable assistance of Dr. Julia Zinkina, a specialist in African demography for this section.

⁶⁶ Mozambique and Zambia are geographically part of southern Africa, though contiguous to Tanzania. All three are considered for this demographic description as part of East Africa.

Table 2.1 - 2035 Population estimates (in millions) for countries in Sub-Saharan Africa according to various scenarios, millions of people

	2010 population (for comparison)	Accelerated fertility decline to 1.8 children per woman	Accelerated fertility decline to 2.1 children per woman	Inertial scenario (continuation of the current fertility trends at their current pace)
Ethiopia	87.1	142.9	144.0	160.0
Malawi	15.0	24.7	24.7	30.2
Mozambique	24.0	38.2	38.4	50.4
Niger	15.9	29.8	30.0	43.1
Nigeria	159.7	248.2	249.5	317.9
Senegal	13.0	21.8	21.9	27.4
Tanzania	45.0	76.4	76.8	91.3
Uganda	34.0	61.6	61.9	73.9

This table shows that if fertility rates continue at their current pace, these countries will approximately double in population between 2010 and 2035, with Niger tripling in population.

African laggardness in fertility transition

Sub-Saharan Africa (SSA) currently remains the only major region in the world which has not yet completed its demographic transition. All other regions have gone through their mortality transitions and have completed (or are very close to doing so) their fertility transitions as well, with their TFR values approaching the population replacement level of 2.1 children per woman or even falling below that; some exceptions only remain at the level of a few particular countries, *e.g.* Afghanistan in Asia and Yemen in the MENA region.

In contrast, the whole region of Tropical Africa⁶⁷ (with the notable exception of Rwanda, which we will discuss later) is stuck at the early stages of fertility transition, and is proceeding very slowly. When compared to Asia and Latin America at their early stages of fertility transition, “the recent pace of fertility decline in Africa is slower than the pace observed in Asia and Latin America in the 1970s ... the median pace of change in sub-Saharan Africa (0.03 per year) is less than one-third the pace in the other regions (0.12 and 0.13, respectively).”⁶⁸

⁶⁷ From now on we will be using this term to denote the region of Sub-Saharan Africa minus the Southern African countries (South Africa, Botswana, Lesotho, Namibia, Swaziland, and Zimbabwe). These countries should be treated as forming a very specific sub-region, which is much more modernized in many aspects, including the demographic dynamics, than the typical Tropical African countries.

⁶⁸ Bongaarts, John, and John Casterline. 2012. “Fertility Transition: Is sub-Saharan Africa Different?” *Population and Development Review* 38: p. 155

Factors driving African “pro-natalism”

The persistently high fertility and the slow pace of fertility transition in Africa are quite commonly attributed to African “pro-natalism”. Several factors contribute to this phenomenon:

In contrast to plow agriculture in Asia, hoe agriculture traditionally prevails in Tropical Africa; so it is females, not males who traditionally take on the main part of fieldwork. This stipulated the emergence of a wide range of traditional social practices and relations which helped a woman to combine productive work with childbearing and childrearing (first and foremost, extended families which supplied baby- and child- caretakers for a mother).⁶⁹ Increased female labor participation is likely to have much less fertility-inhibiting impact in Africa than it used to have in other regions, as this indicator was traditionally very high in Africa, and a whole range of deeply embedded social norms exist which allow a woman to combine employment with having many children.

At the same time, in traditional societies the high female contribution to subsistence tends to correlate positively with the presence of polygyny, in which a man has multiple wives. This, in turn, correlates with the emergence of lengthy post-partum sex taboos (1–2 years or sometimes even longer) causing the unusually long intervals between births. It has been suggested that postpartum taboo and the resulting pattern of birth spacing played the same fertility-regulating role of “preventive checks” in SSA as the “nuptiality valve” did in Europe.

In such a context the advances in socioeconomic development in Africa, quite contrary to the experience of other developing regions, can initially lead not to a decrease but to an *increase* in fertility rates, as **modernization weakens many traditional norms, including the postpartum sex taboos, which results in shortening of the birth intervals, and, hence, an increase in total fertility rates**. These patterns are bound to have significant impact on the further course of fertility transition in the nearest future, as some of the best-recognized fertility-inhibiting aspects of development, such as female education and female labor participation, will probably work less efficiently than they did in the rest of the developing world.

African fertility stall and recent fertility dynamics

Due to the factors described above, in many African countries the start of fertility transition was marked not by an immediate fertility decline, but by an initial fertility increase (quite large in certain cases), as **modernization was weakening the traditional fertility-inhibiting practices, while the spread of modern ones (*i.e.* contraception) was lagging behind**. So in many countries of the region the fertility decline only became visible in the late 1980s. However, this dynamics of fertility decline were **badly affected by the downgraded priority and reduced budgets for family planning in the international development agenda after 1994 Cairo Conference, which greatly decelerated (or, in many cases, just stopped) the spread of family planning in Africa**.

The lags in the diffusion of modern family planning resulted in a large-scale fertility stall that started from the mid-1990s and continued at least until the mid-2000s. The phenomenon was quite widespread: There were 16 cases of fertility stalls within a set of 29 sub-Saharan African countries. Moreover, a number of countries, such as Cameroon, Guinea, Kenya, Mali, Rwanda, Mozambique, Zambia, and Tanzania, were experiencing not just a stall, but even a fertility in-

⁶⁹ Caldwell, John, and Pat Caldwell. 1987. “The Cultural Context of High Fertility in sub-Saharan Africa,” *Population and Development Review* 13: 409–437.

crease. Importantly, only Ghana and a few other countries stalled at levels below 5 children per woman; the major part of countries were “caught” at the very early stages of fertility decline, with TFR higher than 5 (or even about 6) children per woman.

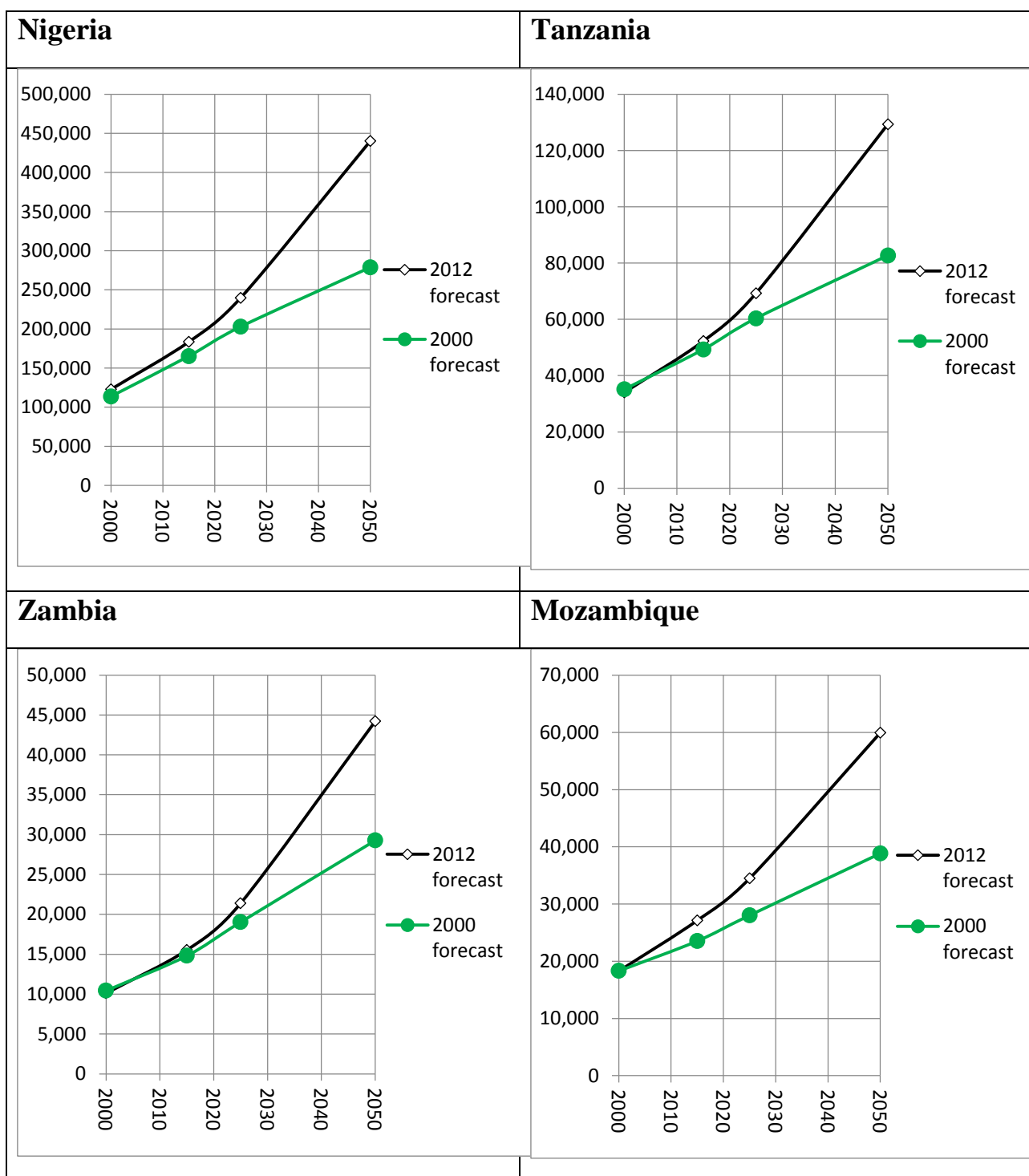
A look at the data from the latest Demography and Health Surveys (DHS) for 18 Tropical African countries⁷⁰ which have experienced a fertility stall proves striking – only three out of the sixteen countries, Rwanda and Madagascar, had resumed their fertility declines at fast rates (strictly speaking, Madagascar should be omitted from our dataset, as it is not a continental Tropical African country, so the only continental “success story” in terms of fertility decline was Rwanda, where the decline should be mostly attributed to a large-scale state family planning program). Five countries, Ghana, Kenya, Malawi, Tanzania, and Uganda, have resumed (or started, in the case of Uganda) fertility decline, but at a very slow pace (less than 0.5 children per woman during 5 years). In at least five countries for which recent data is available, namely Burkina Faso, Burundi, Cameroon, Cote d’Ivoire, and Nigeria, fertility is not falling at all but is still stalled at very high levels (more than 5 children per woman); it is also stalled in Gabon, though at a lower level of 4.1 – 4.2 children per woman. Finally, in at least 6 countries, Angola, Congo Brazzaville, Mozambique, Niger, Senegal, and Zambia, fertility has recently been growing; and this is from levels already higher than 5 children per woman (and higher than 7 children per woman in Niger!).⁷¹ These findings accord with the statement that “the estimated TFR was unchanged or rose between the two most recent surveys in 9 of the 20 African countries where fertility had already fallen by at least 10 percent.”⁷² The decade-long (or even longer) absence of fertility decline with TFR stalled at 5 or more children per woman led the UN Population Division to significantly increase their population projections for many African countries (see Figure 2.1 below).

⁷⁰ 11 countries in the set had their latest DHS conducted in 2009, 2010, or 2011; 2 had the latest DHS in 2008; and 1 country had its latest DHS in 2007.

⁷¹ ICF International. 2012. MEASURE DHS STAT Compiler. URL: <http://www.statcompiler.com/>

⁷² Bongaarts, John, and John Casterline. 2012. “Fertility Transition: Is sub-Saharan Africa Different?” *Population and Development Review* 38, p. 155.

Figure 2.1 - Comparison of the population projections (as calculated by UN Population Division in 2000 and 2012) for some African countries (thousands of people)



Data source: UN Population Division 2000, 2013.

The next section examines in greater detail the regional patterns of population growth and demographic risks, looking at a number of country cases where the effect of stalled fertility on further development prospects is likely to be particularly negative.

Regional Patterns

The general statement on Sub-Saharan demographic laggardness masks some notable intra-regional differences in recent fertility (and, to a less extent, mortality) dynamics and current levels. Below is a brief description of the recent demographic trends and prospects for various groups of Sub-Saharan countries.

Sahel countries – looming demographic catastrophes. The region of Sahel hosts some of the most demographically backward countries (the ones most laggard in terms of both mortality transition and fertility transition) in the world. The leading example is Niger, where fertility started to decline only in the early 2000s from the staggering 7.5 children per woman and, after reaching 7.1 in the mid-2000s, bounced back to 7.5 in 2012, the highest level in the world. Pro-natalist views are extremely strong in the country, and wanted TFR still exceeds the real one, reaching 8.8 children for women and an astonishing 12.6 children among men.⁷³

Female education level is very low (according to the 2006 DHS, about 83.5% of women aged 15-49 do not have any formal education at all). Niger has not ratified the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa, so early marriage has not been outlawed in the country, and the median age at marriage for girls stayed at 15.5 years in 2006. Only about 10% of married women in active reproductive age use some form of contraception. As a result of the combined action of all these factors, UN Population Division projects the population of Niger to more than quadruple in the next 40 years, up to more than 69 mln people by 2050 from the current population of about 17 mln. The situation is nearly as severe in Mali, Chad, and Burkina Faso, with current TFR at 6 children per woman or even higher, and projected population tripling in the next 40 years.

East Africa – high demographic risks. The countries of this sub-region are almost universally prone to the threat of population explosion in the nearest decades due to a very delayed fertility transition and lengthy fertility stalls (or even slight fertility increases) at very high levels of more than 5 children per woman in the mid-1990s – 2000s. The notable exception is Kenya, where fertility declined rather consistently from an extreme 8 children per woman in the early 1970s to 4.6 in 2009. Another remarkable case is Rwanda, which has recently achieved a great success in bringing down its fertility rates. Almost all other countries (Malawi, Mozambique, Tanzania) find themselves in the interval 5.5 – 6 children per woman, or even higher than 6 (Burundi, Uganda and Zambia). This implies a huge demographic momentum and forecasted population doubling in less than 30 years.

Uganda's population rising fast. Most importantly, the risks attributed to rapid population growth are still sometimes refuted even at the highest levels of African governments – the most vivid example is the stance of Ugandan President Yoveri Museveni, who persistently emphasizes that Uganda's rapidly growing population (now projected under the UN medium growth scenario to increase from 40 million in 2015 to over 80 million in 2040 and 160 million in 2070) is not a problem, but rather an asset for development.

Even if (very unrealistically) Uganda implements an immensely effective demographic policy right now and achieves a fertility reduction to 2.1 children per woman in just 10 years (outpacing even Iranian fertility decline, by far the fastest in the world) – even at this *hugely optimistic* scenario - its population is bound to continue growing until the late 2070s and then will stabilize at about 86 mln people (compared to the current value of about 36 mln).

⁷³ Potts, Malcolm, Virginia Gidi, Martha Campbell and Sarah Zureick. 2011. "Niger: Too Little, Too Late." *International Perspectives on Sexual and Reproductive Health* 37(2), p. 95.

All in all, **East Africa as a whole is one of the most demographically laggard (and, therefore, threatened) regions – second only to Sahel** – and thus requires urgent attention of policymakers. However, one important difference of this region from the Sahel countries is the existence of a great unmet need for family planning in East Africa. Indeed, while in Sahel both the real and the wanted fertility rates remain extremely high (and, undoubtedly, bringing down the wanted TFR is an indispensable condition for securing the real TFR decline), in most East African countries the wanted number of children is considerably lower than the real one. In other words, women have more children than their desired number, to a large extent, because of the insufficient availability of family planning options. Supplying the existing demand for family planning alone can produce a quite impressive result in terms of a fast and large fertility decline. This assumption is fully supported by the recent experience of Rwanda below.

Central Africa – stalled early transition. The only country of this sub-region with relatively mild demographic risks is Gabon, with its 4.1 – 4.2 children per woman; however, this country is not a “success story”, as Gabon’s TFR has been stalled at this level for more than a decade and shows no signs of any further decline. Three countries find themselves in early-mid transition: Equatorial Guinea (5.1 in 2011), Congo Brazzaville (however, its fertility trend is quite ominous, as TFR rose from 4.8 in 2005 to 5.1 in 2012), and Cameroon which behaves like a typical West African coastal country with a TFR of around 5 (similar to, say, Cote-d’Ivoire).

As regards Angola and the Democratic Republic of the Congo, the situation resembles that in Nigeria and is particularly threatening.⁷⁴ Indeed, the 2007 DHS put the TFR in Congo Kinshasa at 6.3 children per woman – comparable to Sahel countries, the most laggard ones in the world in terms of fertility transition. Only 6% of women aged 15-49 in marital unions were using any modern contraceptives, while 15% reported using traditional methods, leaving almost 80% not using any form of contraception.⁷⁵ For Angola we have no DHS data, but a number of Malaria Surveys present worrisome fertility estimates: according to these, TFR increased from 5.8 in 2006/07 to 6.3 in 2011.

West Africa – caught in early-middle transition. Several groups of countries can be specified in this sub-region in terms of fertility dynamics and population growth prospects.

The greatest progress in terms of fertility decline has been achieved in Ghana, where TFR consistently decreased from 6.4 in 1988 to 4.0 in 2008 (according to the data of 5 DHS surveys). Ghana experienced a fertility stall, but managed to resume its fertility decline, and is currently nearly the only West African country where the inertial demographic scenario (i.e., the continuation of fertility decline at the current pace without further acceleration) will not lead to a catastrophic population explosion (see the *Projections* section for more details).

Other coastal countries generally find themselves in the early-medium stage of fertility transition with their TFRs at approximately 5 children per woman (though visibly lagging behind their Southern African counterparts). Thus, Benin, Cote-d’Ivoire, Cameroon, Guinea, and Senegal still (according to 2011-2012 DHS data) find themselves at 5 children per woman.

The fertility level in the West African coastal countries is thus somewhat lower than in the Sahel or East Africa; however, it is still very high as compared to other regions of the world and even southern African countries. Moreover, the recent absence of fertility decline (or very slow decline) in most of these countries (except for Ghana, which has been proceeding rather smoothly,

⁷⁴ We have no data for the Central African Republic where the only DHS was conducted in 1994, but it likely gravitates towards this group as well.

⁷⁵ Romaniuk, Anatole. 2011. “Persistence of high fertility in Tropical Africa: The case of the Democratic Republic of the Congo.” *Population and Development Review* 37(1), p. 11.

and Benin, which resumed its fertility decline in the late 2000s) makes the risks of population explosion still relevant for the region (though the situation is somewhat better here than in East Africa and Sahel).

Nigeria. When talking about West Africa, particular attention should be paid to Nigeria, the largest country of the West Africa and the whole Sub-Saharan Africa in general (and 7th in the world with its 152 mln population in 2010). Due to its size and extremely high fertility (TFR still persists at 5.7 children per woman), Nigeria is bound to experience an unprecedented growth of the absolute number of population, up to 440 mln by 2050 (which means the population is bound to nearly triple in less than 40 years) and more than 900 mln by the end of the century. That is, Nigeria's population will pass a billion soon after the end of this century.

The situation is exacerbated by the deeply rooted pro-natalist views at various levels of Nigerian society. Heads of clans, and municipal and district officials are interested in sustaining high fertility as each clan, city or region gets the more resources the greater its population.⁷⁶ The only state attempt at launching a family planning campaign ("Four children is enough") was taken in the late 1980s and proved short-lived due to lack of commitment, as well as opposition from various social leaders.

At the household level (especially in the Muslim regions, where, according to 2008 DHS, TFR was a striking 7.3 children per woman) there exist some other reasons to maintain high fertility. The wanted number of children is generally higher among males than among females, so women tend to have more children than they want (fearing that the husband will divorce them or take one more wife, or, in polygynous families, rivaling the co-wives for the husband's attention and resources).⁷⁷

Muslim fertility rate higher than non-Muslims in Nigeria. The situation is particularly severe in the northern (predominantly Muslim) regions of Nigeria, where only 3% of married women of reproductive ages use some form of contraception (compared with 27% in the southern regions), the median age at marriage is very low, and polygynous households are commonly widespread.

Horn of Africa countries. The Horn of Africa countries, most notably, Ethiopia and Eritrea, seem to be somewhat further advanced in fertility transition than their East African counterparts. Eritrea was below 5 children per woman already in the early 2000s according to its latest DHS.⁷⁸

Good news in Ethiopia. The most noteworthy case is Ethiopia. Its TFR declined from 5.9 in 2000 to 5.4 in 2006 and 4.8 in 2011, which is quite decent progress. If the current rates of fertility decline are preserved (or somewhat accelerate) through the coming decades, Ethiopia will approach the replacement level fertility in the 2030s, achieving approximately the rate of 2.5 children per woman.

A huge role in this recent demographic success was played by the Health Extension Program adopted by the Ethiopian government in 2003. The TFR was already rather low in the urban areas (in the capital city of Addis Ababa the TFR fell below 2 children per woman by the mid-1990s). The main task was to secure a visible fertility decline in the rural areas, where the TFR was above 6 in the early 2000s. The Health Extension Program was mainly aimed at providing the rural population with universal access to preventive and primary health care, as well as to efficient family planning by increasing the availability of both Family Planning supplies and in-

⁷⁶ Robinson R.S. 2012. "Negotiating Development Prescriptions: The Case of Population Policy in Nigeria." *Population Research and Policy Review* 31: 267–296.

⁷⁷ Izugbara, Chimaraoke O. and Alex C. Ezeh. 2010. "Women and High Fertility in Islamic Northern Nigeria." *Studies in Family Planning* 41(3), p. 193.

⁷⁸ Though UN Population Division believes it has achieved this level only very recently.

formation. Within this program, primary health care units were created in each Ethiopian *kebele*,⁷⁹ generally 1 unit per 5000 population. 30,000 health extension workers are employed in these units. They are obliged to spend 75% of their working time visiting the families of their *kebele*, teaching women, among other things, to take care of newborns and to use modern family planning practices. As a result of the program, the contraception prevalence rate among married Ethiopian women increased by an order of magnitude, from 3% in 1997 to 29% in 2010 (52.5% in urban areas and 23.4% in rural areas).

However, there is still a long way to go – especially in terms of rural areas, where TFR was 5.5 children per woman in 2011 (according to the latest DHS). The urban areas represent much less of a problem; indeed, the TFR there almost equals the population replacement level (2.6 in 2011). So, the role of meeting all the existing need for family planning in the rural areas (to bring the real TFR of 5.5 children per woman to the current wanted TFR of 3.4 children per woman), as well as working to further bring down the wanted number of children, will be crucial to control the population increase.

Southern Africa – almost past the threat. South Africa and a number of neighboring countries (namely Botswana, Lesotho, Namibia, Swaziland, and Zimbabwe) are much more advanced in terms of fertility transition than the rest of Sub-Saharan countries. Thus, 1998 DHS puts the TFR for South Africa at 2.9 children per woman (with 2.3 in urban areas and 3.9 in rural areas), while it was 5.9 children per woman in Sub-Saharan Africa as a whole in 1995-2000 (UN Population Division estimate).

South Africa between 2 and 3 TFR. The 2003 DHS states the TFR at 2.1 children per woman (with 2.1 in urban areas and 2.2 in rural areas accordingly), which can hardly be taken as a reliable estimate (especially in terms of rural TFR) and most probably exaggerates the pace of fertility decline in South Africa. However, most expert estimates and various surveys looking at fertility levels in the country give grounds to put the TFR somewhere around 2.5 children per woman (all estimates generally fall in the interval between 3 and 2 children per woman). Thus, there is still some way for the country to go in order to achieve the replacement-level fertility, but the threats of a population explosion are already irrelevant for South Africa (in a marked difference from the majority of other large Sub-Saharan countries).

Zimbabwe TFR up to 4.1. Other countries of the Southern African sub-region have somewhat larger fertility levels (3.3 in Lesotho in 2009; 3.6 in Namibia in 2006; 3.8 in Swaziland in 2008; and 4.1 in Zimbabwe in 2011⁸⁰). The only somewhat alarming case here is Zimbabwe, where fertility actually seems stalled, as no signs of fertility decline were seen throughout the 2000s; on the contrary, there was even a slight fertility increase from 3.8 children per woman in 2006 to 4.1 in 2011. Nevertheless, all these countries in Southern Africa are much closer to completing the fertility transition than the rest of Sub-Saharan countries are; accordingly, the risks of population explosion are largely irrelevant in this sub-region.

This conclusion is coherent with the current series of the UN Population Division population projection series (which put the current TFR for Southern Africa at 2.48 children per woman in 2010-2015 and expect it to fall to the population replacement level by about 2025), as well as with the opinions existing in literature on the subject: “In Botswana, Lesotho, South Africa,

⁷⁹ Kebele is the lowest administrative unit in Ethiopia.

⁸⁰ This is according to the latest available DHS for each country. No data is available for Botswana, as the only DHS was conducted here in 1988, and no alternative national survey or other data source exists so far. Still, the data on other development indicators allows subsuming Botswana into the same group with the countries listed above; so, fertility dynamics in this country should be similar to the countries in this group.

Swaziland, and Zimbabwe, populations are expected to remain static or even fall, because of the combination of well entrenched declines in birth rates and the high number of AIDS-related deaths.”⁸¹

Demographic laggardness in the development agenda

The effect of the delayed demographic transition on African laggardness in many aspects of development has been recognized as critical. The “Challenges of African Growth” by World Bank team reveals that the demographic indicators account for about two-thirds of SSA laggardness in growth from other developing regions, mostly through two consequences: 1) “the uncharacteristically high level of age dependency, with its implications on fiscal and household/parental pressure for taking care of the overwhelming number of the young”, and 2) “the rapid growth of the labor force, potentially a positive driver of growth but also possibly a negative force if employment opportunities do not keep pace”.⁸²

Another concern is that “[t]he growing population density places pressure on the land, on pasturage, and on wood resources in certain areas and thus creates tensions that may degenerate and become a source of conflict, as in Rwanda, Côte d’Ivoire, Kenya, or Darfur”⁸³; further on, “Sub-Saharan Africa faces a specific economic challenge: how to bring about a process of sustainable economic growth, made necessary by the rapid increase in its population, with a somewhat **un-competitive agricultural base**, all within a highly competitive economic environment at the international level”.⁸⁴

Demographic concerns are also raised when talking about the prospects of African food security: “The inexorable growth in the Sub-Saharan African population in the next 40 years will complicate agricultural solutions developed for today’s problems. Even assuming that fertility rates drop steadily, the number of people that need to be fed will more than double by 2050. They will also be older than today’s populations, more urban, and more demanding of their agricultural systems”.⁸⁵

Thus, the impact of demographic dynamics on African development performance has been very significant so far and is likely to become critical in 2035 – taking into account the projected population growth. However, in order to understand the prospects of demographic influence upon (and demographic risks to) growth and development in the region, we first need to evaluate (with a sufficient degree of precision) the future dynamics of the population numbers in general and the various groups within the age structure (dependents, young dependents, school-age children, youths, working-age population, etc.) for each particular country.

⁸¹ Cleland J., Sinding S. 2005. What would Malthus say about AIDS in Africa? *Lancet* 366: 1899-1901.

⁸² Ndulu, Benno J, Lopamudra Chakraborti, Lebohang Lijane, Vijaya Ramachandran, and Jerome Wolgin. 2007. *Challenges of African Growth. Opportunities, Constraints, and Strategic Directions*. Washington, D.C.: The World Bank. P. xviii.

⁸³ Deveze, Jean-Claude (ed.). 2011. *Challenges for African agriculture*. Washington, D.C.: The IBRD/The World Bank. P. 3.

⁸⁴ Gendreau F. The Demographic Challenges. In: Jean-Claude Deveze (ed.). *Challenges for African Agriculture*. The IBRD/ The World Bank, 2011, pp. 9 – 33. P. 8

⁸⁵ Boyle Torrey, Barbara. 2010. *Population Dynamics and Future Food Requirements in Sub-Saharan Africa*. P. 182 – 198. In: Per Pinstруп-Andersen (ed.). *The African Food System and its interaction with Human Health and nutrition*. Ithaca and London: Cornell University Press.

The only coherent series of such population projections is currently calculated by the UN Population Division. However, the specific method of compiling these projections engenders some serious limitations in their practical usage (especially for assessing the future demographic impact upon the development). Most importantly, the universal set of scenarios (“high”, “medium”, and “low”) does not account for the specific demographic features of each particular country, the recent events of its demographic history (such as experiencing a long fertility stall, or having an effective family planning campaign introduced). These projections, therefore, outline the possible spectrum within which the African demographic future will most likely reveal itself, but fail to answer practical questions, which are crucial when trying to account for the demographic trends in development forecasts – e.g.,

- What if the fertility stall ends right now?
- What if it continues for another 15 years?
- How large will the population increase be if a country preserves its current rates of fertility decline unchanged?
- To what extent will the population explosion get curbed if a country manages to reach the Iranian (or Rwandan) pace of fertility decline?

Getting answers to these questions is vital for making policy decisions. Indeed, one can then compare the difference in population numbers and age structure (including the numbers of specific age groups), say, in the inertial scenario (current trends continue at their current pace) versus the fertility decline acceleration scenario (specific policies are introduced, aimed at increasing the availability of family planning, spreading the female education, securing the legal age at marriage, etc.). Once this difference is estimated, it can be easily transferred into all spheres of development. One will be able to calculate the cost of not taking action (inertial scenario) vs. taking action (aimed at accelerating the fertility decline) in terms of population density, population pressure on land, pasturage, water etc., the increase in the absolute numbers of rural-urban migrants, the cost of expanding urban infrastructure and accommodation for these migrants, the increase in the government absolute spending on education and health to sustain their universality (or, at least, the current rate of coverage), the necessary number of new workplaces to be created annually for the increasing numbers of young people entering the labor market, and so on.

It is critically important to understand here that considerable population increase (for most countries ‘considerable’ is defined as the population doubling) is already inevitable due to the colossal demographic inertia gained in the recent decades of very high (stalled) fertility. Taking a closer look at the optimistic scenario (implying an acceleration in fertility decline up to the pace of Iran, which has the fastest fertility transition in the world⁸⁶) helps to understand what population increase will occur in any case, even if the most effective fertility-inhibiting measures are taken immediately. This unavoidable population growth is vital for the policy-makers to be aware of, as it should be taken into account in all development forecasts, as well as in major national social and economic policies.

On the other hand, the inertial scenario – or, more exactly, its difference from the optimistic scenario – helps to assess the preventable demographic burden, *i.e.* how much additional strain upon economy and social infrastructure can be avoided (and to what extent the risks of socio-political instability can be mitigated) through accelerated fertility transition; and, vice versa, how much additional strain the population explosion will put upon all spheres of development if no urgent and effective policies are introduced to bring down the extremely high fertility rates.

⁸⁶ Achieving the Iranian pace of fertility decline is a very challenging task, but is still achievable in sub-Saharan Africa – as the latest experience of Rwanda convincingly proves.

Scenario forecasts of population dynamics possess a high degree of accuracy and reliability. Simply from the current age structure, one can forecast reliably the number of school-age children in the next 7 – 10 years, the number of working age people in the next 20 years, etc. – as all these people are already born. Moreover, the advantage of scenario forecasts is that they do not state ‘it will be like this’. Rather, they imply the following: ‘even if the policy-makers do their best to accelerate the fertility decline in this country, and do it really effectively, the population increase will be no less than this value – and it will have its consequences and implications in all spheres of development. If the policy-makers let things slide just as they are right now, the population will not simply increase, but rather explode – and its consequences and implications in all spheres of development will be much more serious and can, indeed, become catastrophic’.

Population projections and scenario forecasts

Below is a calculation of such basic population dynamics scenarios for some of the largest Tropical African countries which are the most laggard in terms of fertility decline and, therefore, are prone to the highest risks connected with population explosion.

In our scenario forecasts, for each country we used the age-sex population structure as stated by the UN Population Division, and the age-specific mortality rates corresponding to the life expectancy values projected in the UN Population Division “medium” scenario. The values of the current TFR and the age-specific fertility rates were taken from the latest DHS surveys. For each country two basic scenarios were modeled:

a) the inertial scenario – what will the population increase (and its consequences) be should the current trends in both fertility and mortality simply continue at their current pace; for this scenario we simply extrapolated the current fertility trends so that the TFR declines at its current pace of decline until reaching the population replacement level (2.1 children per woman), or going somewhat below it (1.8 children per woman). For the countries where fertility has been stalled the effect of a continuation of the stall was modeled for the next 15 years, with subsequent fertility decline at 0.1 children per woman annually (which is the rate of decline currently observed in a number of African countries). Unfortunately, this scenario cannot be called overly pessimistic and is, in fact, rather probable if policy-makers continue regarding development as “the best contraceptive”, even though the most recent economic achievements hardly seem to demonstrate any pronounced fertility-decline-accelerating effect. On the contrary, fertility has recently been rising both in Zambia with its 5–6% annual economic growth during the 2000s, and in vibrant Mozambique where GDP per capita has nearly doubled since the mid-1990s. Fertility has been stalled or even growing in Nigeria throughout the years it has enjoyed record high oil prices. Finally, in some countries, *e.g.* Tanzania, stable positive economic growth has been observed not only in the mid-2000s, but starting much earlier, since the late 1990s; so sustained economic growth actually coincided (at least partially) with a lengthy period of fertility stall at higher than 5 children per woman.

Thus, the inertial scenario is, unfortunately, far from improbable – indeed, the only way to reliably avoid it is to urgently introduce the most effective fertility-inhibiting policies (see the last section of this chapter).

b) the optimistic scenario – this implied an immediate acceleration in fertility decline up to the fastest pace known in the developing world (such as that of Iran in the 1980s and 1990s, by about 4 children per woman in 20 years). This scenario helps to reveal the al-

ready inevitable population increase – even if fertility decline in African countries accelerates to the Iranian pace, the population increase will be huge, as the current generation of children (who will become parents in 20 years) exceeds the current generation of parents by 2 – 3 times. However, reaching this scenario appears for many countries an indispensable condition for avoiding the catastrophic population explosions.

Ethiopia

Figure 2.2 - Forecasts scenarios of population dynamics in Ethiopia, up to 2100

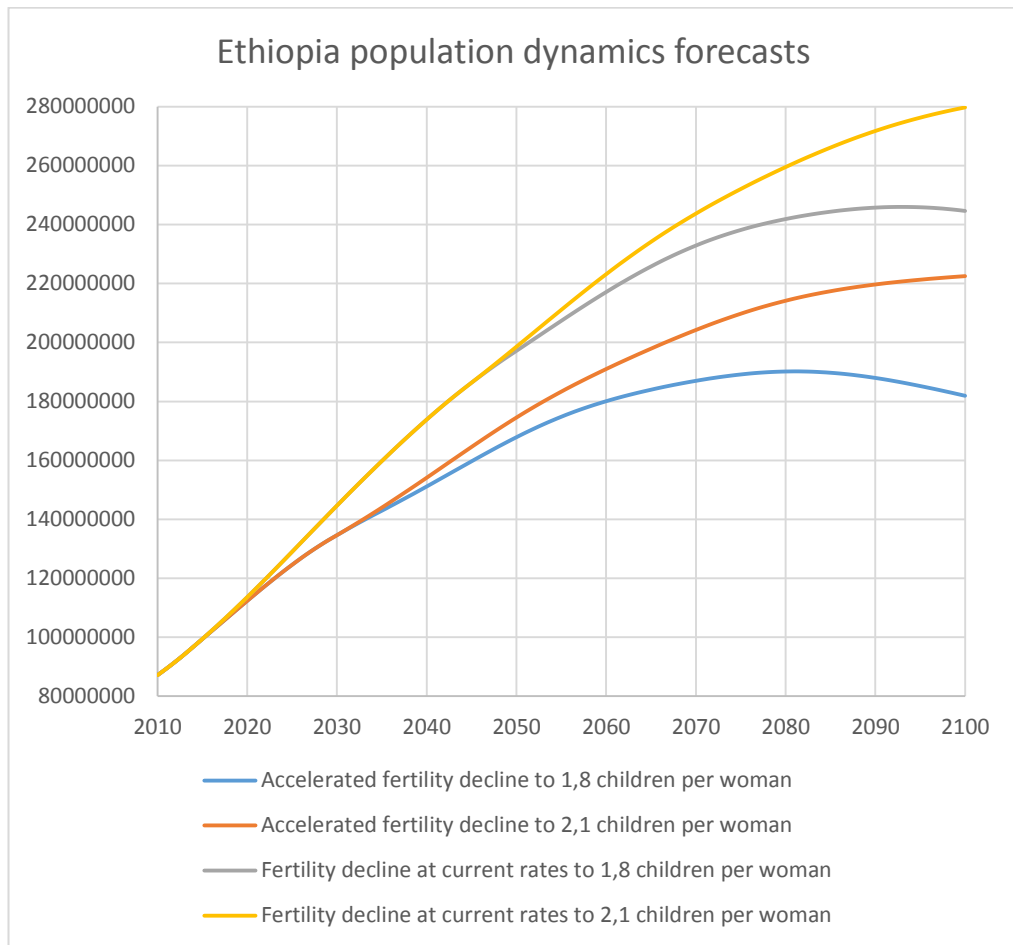


Table 2.2 - Forecasts scenarios of population dynamics in Ethiopia, up to 2100

	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
2050	167,8 mln	174,5 mln	197, 2 mln	198,6 mln
2100	181,9 mln	222,5 mln	244,7 mln	279,8 mln

Figure 2.2 clearly reveals that population doubling from about 87 million in 2010 to about 170 million people in the early 2050s is inevitable even with the fastest possible pace of fertility decline. Ethiopian TFR declined from 5.4 in 2006 to 4.8 in 2011, with the help of Health Extension Program which secured rural outreach for family planning (see above). However, a significant acceleration of fertility decline is still necessary – if it continues at its current pace, Ethiopian population will reach nearly 200 mln by the mid-century, and is projected to more than triple from the current level by the end of the century.⁸⁷

Thus, the difference between the scenarios reaches an “additional” 30 mln people by 2050. Turning to some other indicators closely related to the demographic dynamics, such as the numbers of particular age groups and age-dependency ratios (see Table 2.3).

Table 2.3 - Absolute sizes of certain age groups according to various forecasts scenarios of population dynamics in Ethiopia, by 2050

	Value in 2010, for comparison	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman
School-age children, mln ⁸⁸	30,1	30,4	34,8	45,2
Youth aged 15 – 24, mln	17,6	24,2	25,2	36,5
Youth aged 20 – 29, mln	14,3	27,4	27,4	36,0

Ethiopia managed to doubly increase its net primary enrolment from about 40% in the early 2000s to 80% in 2012 (the absolute number of primary pupils increased by more than 2.5 times, from 5.8 million to 14.5 million, as the cohorts of first-graders were getting more numerous each year). However, Ethiopia has failed to meet the MDG of securing the universal primary education (UPE) so far. Secondary enrolment lacks recent statistics, but visibly lags far behind primary

⁸⁷ Here and in all other country cases 2100 values are presented mostly to understand the difference between the various scenarios; clearly, the projected population values for 2100 are less certain than those for 2050, which are much “firmer”. Still, bearing in mind the possible (and quite probable) long-term consequences of demographic decisions to be taken now, figures are presented for both 2050 and 2100.

⁸⁸ As the starting years and length of primary and secondary schooling differ from country to country and, moreover, not infrequently get changed within countries due to reforms of educational systems, age limits for this cohort are set as 6 – 18 year-olds.

enrolment, with only 12.5% of the relevant age group being enrolled in secondary schools in 2000.

If the current rates of fertility decline persist, the number of school-age children will increase by 1.5 times, from 30 mln to 45 mln. This will obviously create serious strain upon the educational system; securing the universal primary education (without compromising its quality), let alone substantially increasing secondary enrolment (necessary for further economic growth and structural transformation) will become extremely challenging and costly tasks. Meanwhile, an acceleration in fertility transition to the Iranian pace will help keep the number of school-age cohorts at roughly the current level, which will significantly simplify expanding and improving the education of all levels.

Another type of serious demographic risks will be related to swelling youth cohorts. The difference between accelerated and current-pace fertility decline in terms of youth (aged 15–24) cohort will achieve 1.5 times by times – 24 vs. 36 mln (compared to the current 18 mln). Fast growth doubling of youth cohorts is an extremely strong predictor of socio-political destabilization of various types⁸⁹. Especially important is the cohort of 20 – 29 year-olds, which will double even with fastest fertility decline and grow by 2.5 times if the fertility transition continues at the current rate. This is the most active working-age group, and its doubling will require a very significant acceleration in the creation of new workplaces. This presents a serious challenge to the economy, as the low-productive agriculture will be incapable of absorbing the annually surging numbers of new entrants to the labor market. If the economy fails to create employment at an adequate pace, this may undermine the sociopolitical stability in the country (the same age cohorts were the most active participants of the Arab Spring rebellions, for example) and even raise some Malthusian concerns, which were relevant to Ethiopia not long ago (an example here is the collapse of Mengistu Haile Mariam’s regime, which was preceded by some clear patterns of Malthusian character).

The necessity to further curb the population growth rates is supported by the evidence from per capita food consumption dynamics. Indeed, the recent decade of economic growth in Ethiopia led to a rapid improvement in calorie intake (by 500–600 kcal/capita/day). However, with all its successes and double-digit GDP growth bordering an economic miracle, Ethiopia still has barely achieved the WHO minimal energy requirement and has not yet surpassed the Malthusian trap food consumption threshold of 2350 kcal/capita/day⁹⁰, as it started from a level of severe undernourishment bordering on famine (1500 kcal/capita/day in the mid-1990s). Securing further growth in per capita food consumption (or, at least, securely preserving the level achieved by now) will require sustaining not just high GDP growth rates, but high GDP *per capita* growth which, taking into account the population growth in the next thirty years due to continued fertility stall, will be more challenging than ever.

⁸⁹ See, e.g., Goldstone, Jack A. 1991. *Revolution and Rebellion in the Early Modern World*. Berkeley, CA: University of California Press.

⁹⁰ Clark, Gregory. 2007. *A farewell to alms: a brief economic history of the world*. Princeton, NJ: Princeton University Press.

Malawi

Figure 2.3 - Forecasts scenarios of population dynamics in Malawi, up to 2100

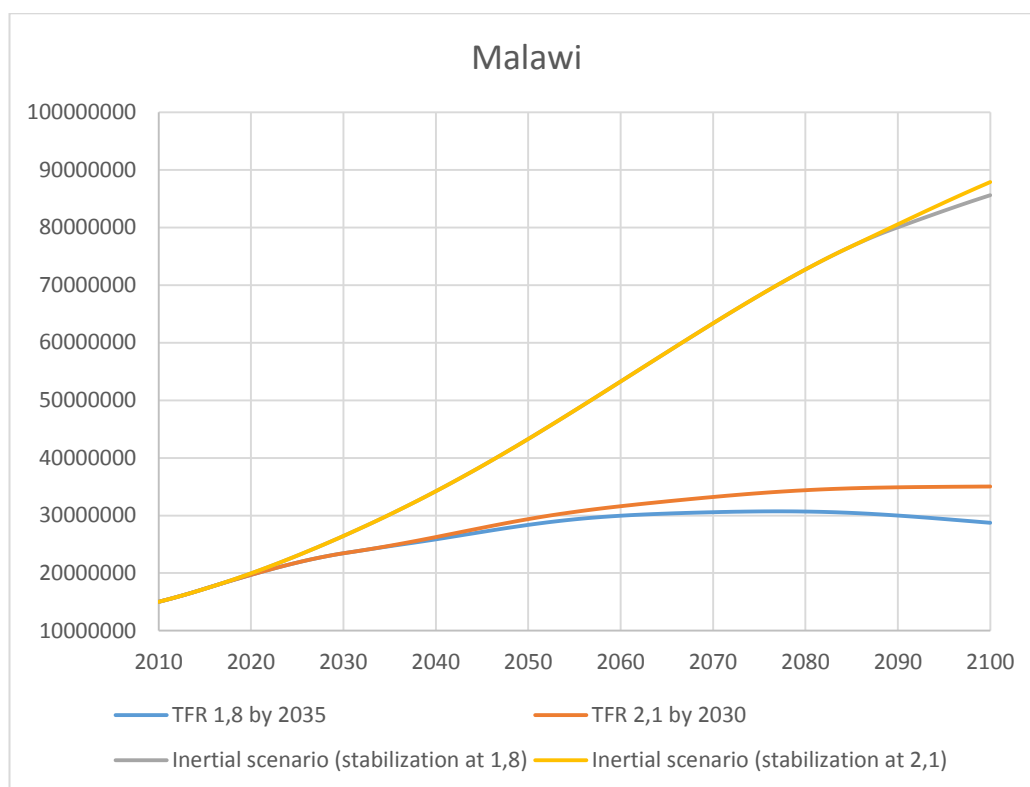


Table 2.4. Absolute population numbers (in millions) according to various forecasts scenarios for Malawi

	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
2050	28,4	29,4	43,3	43,3
2100	28,7	35,0	85,6	87,9

Figure 2.3 clearly reveals that the current pace of fertility decline will lead Malawi to a full-scale demographic catastrophe, with population tripling from 15 million to nearly 45 in the early 2050s. A dramatic acceleration of fertility transition is necessary for this country to avoid the catastrophic scenarios (however, population doubling by 2050 is already inevitable in any case, which should be taken into account in all development plans and forecasts). A closer look at the numbers of particular age groups and age-dependency ratios (see Table 2.5) further emphasizes that leaving the demographic situation in Malawi as it is will have grim consequences.

Table 2.5 - Absolute sizes (in millions) of certain age groups according to various forecasts scenarios of population dynamics in Malawi, by 2050

	2010 rate	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
School-age children	5,1	5,2	5,8	12,6	12,6
Youths aged 15 – 24	3,1	4,2	4,2	8,3	8,3
Youth aged 20 – 29	2,5	4,9	4,9	7,5	7,5
Age-dependency ratio (people aged<15 and >60 per working-age person)	1,02	0,46	0,5	0,75	0,75
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,60	0,62	0,67	1,13	1,13
Youth age-dependency ratio (people aged<15 per working-age person)	0,92	0,32	0,37	0,65	0,65
Youth age-dependency ratio (people aged<20 per working-age person)	1,49	0,47	0,53	1,00	1,00

Thus, if no urgent action is taken to curb the extremely high fertility, the number of school-age children will grow by 2.5 times in less than 40 years; Malawi has nearly achieved universal primary education, but sustaining it in such conditions will become immensely difficult. Youth cohorts (15 – 24) will invariably double by 2050, but the inertial scenario will lead to their tripling – again, in less than 40 years, which enhances the country’s risks for severe sociopolitical destabilization. Finally, the age-dependency ratios will remain unfavorable if no acceleration in fertility decline is achieved – presenting a huge hindrance to economic growth, as has been shown in a number of World Bank works on African economic underperformance.

Another risk is related to urbanization –the extremely low-productive (less than \$200⁹¹ of value added per worker) agriculture of a small landlocked country will be unable to absorb the doubled youth cohorts, who will likely try to migrate to cities. This will dramatically strain the existing urban infrastructure – only 15% of the population currently resides in cities, so the urban areas will experience a hard time creating accommodation and employment for the numerous rural to urban migrants.

⁹¹ In constant 2005 international dollars.

Similarly to Ethiopia, the necessity to further curb the population growth rates is supported by the evidence from per capita food consumption dynamics. Despite a decade of rapid improvement in calorie intake (by 400 kcal/capita/day in 1995 – 2009), Malawi has still barely achieved the WHO minimal energy requirement and has not yet surpassed the Malthusian trap food consumption threshold of 2350 kcal/capita/day.⁹² Securing further growth in per capita food consumption (or, at least, securely preserving the level achieved by now) will require sustaining not just high GDP growth rates, but high GDP per capita growth which, taking into account the inevitable population doubling in the next 35 years, will be very challenging. However, if fertility transition fails to accelerate, the population will triple – and this can very probably lead to dramatic failures in the food supply situation.

⁹² Clark, Gregory. 2007. *A farewell to alms: a brief economic history of the world*. Princeton, NJ: Princeton University Press.

Mozambique

Fig. 2.4 - Forecasts scenarios of population dynamics in Mozambique, up to 2100

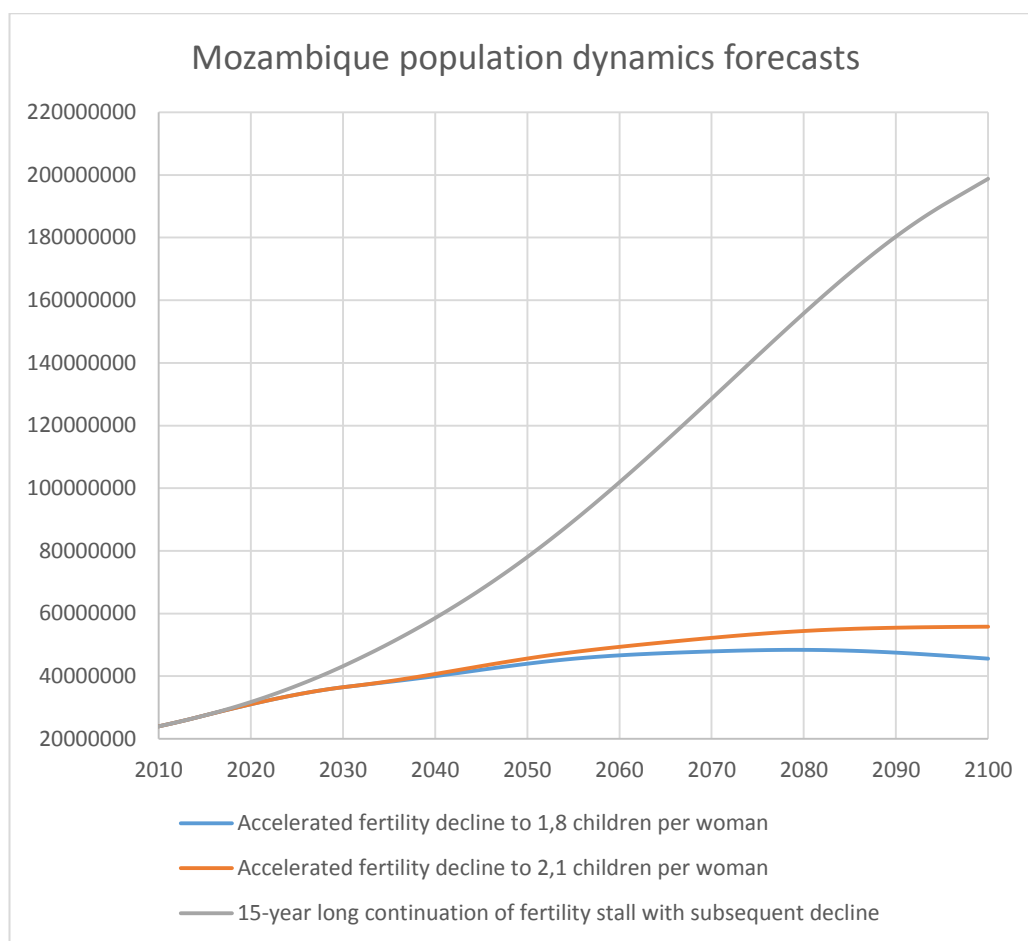


Table 2.6 - Absolute population (in millions) according to various forecast scenarios for Mozambique

	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline at 0.1 children per woman annually
2050	44,0	45,6	78,0
2100	45,6	55,8	198,8

In terms of fertility transition dynamics, Mozambique is among the most threatened countries – for more than a decade it has been experiencing not just a stall, but a growth in fertility – from 5.2 in 1997 to 5.5 in 2003 and 5.9 in 2011. If no urgent action is taken to reverse the trend and

achieve a fast decline of fertility, the country will encounter a full-scale demographic catastrophe, with population more than tripling from 23 million to 78 in 2050 (and overall growth by nearly an order of magnitude during the century). A dramatic acceleration of fertility transition is necessary for this country to avoid the catastrophic scenarios. However, population doubling by 2050 is already inevitable in any case. A closer look at the numbers of particular age groups and age-dependency ratios (see Table 2.7) further illustrates that the absence of urgent acceleration in fertility transition will bear large risks for sociopolitical stability and will seriously undermine Mozambican prospects for development.

Table 2.7 - Absolute sizes (in millions) of certain age groups according to various forecasts scenarios of population dynamics in Mozambique, by 2050

	Value in 2010	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline at 0.1 children per woman annually
School-age children	7,9	8,1	9,1	24,6
Youths aged 15 – 24	4,6	6,4	6,6	15,6
Youth aged 20 – 29	3,9	7,6	7,6	13,2
Age-dependency ratio (people aged <15 and >60 per working-age person)	1,00	0,46	0,51	0,87
Age-dependency ratio (people aged <20 and >60 per working-age person)	1,53	0,62	0,68	1,34
Youth age-dependency ratio (people aged <15 per working-age person)	0,91	0,33	0,38	0,77
Youth age-dependency ratio (people aged <20 per working-age person)	1,41	0,47	0,53	1,22

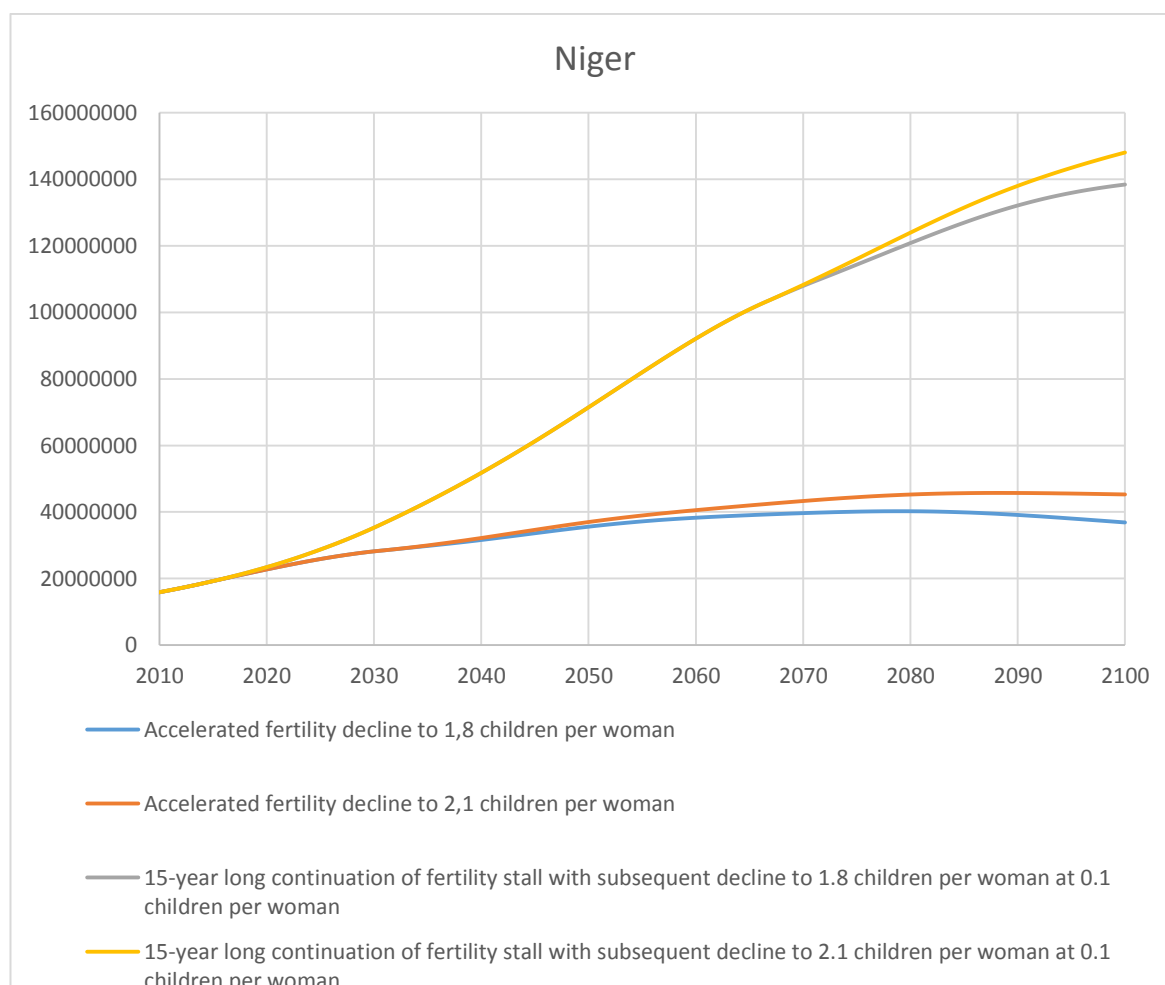
If no urgent action is taken to curb the extremely high fertility, the number of school-age children will more than triple in less than 40 years. Mozambique managed to almost doubly increase its net primary enrolment from 48% in 2000 to 86% in 2012, but still fails to provide the universal primary education (UPE) so far. Secondary enrolment lags far behind, with only 17% of the relevant age group being enrolled in secondary schools in 2012. It looks extremely unlikely that Mozambican educational system will be able to absorb the tripled number of pupils in the next three decades. Meanwhile, faster fertility transition to the Iranian pace will help keep the number of school-age cohorts at roughly the current level with only some increase.

Youth cohorts (15 – 24) will experience a growth by 1.5 times even with the fastest fertility decline – simply due to the demographic inertia; however, the inertial scenario will lead to their quadrupling – again, in less than 40 years, which enhances the country’s risks for severe socio-political destabilization. Finally, the age-dependency ratios will remain very unfavorable if no acceleration in fertility decline is achieved – presenting a huge hindrance to economic growth, as has been shown in a number of World Bank works on African economic underperformance. Indeed, for the inertial vs. accelerated fertility transition the difference in age-dependency ratios will reach 3 times by 2050.

Despite more than a decade of bright economic performance paralleled by a rapid improvement in calorie intake (by 400 kcal/capita/day, from 1700 to 2100 in 1995 – 2009), Mozambique has still failed to achieve both the WHO minimal energy requirement and the Malthusian trap food consumption threshold of 2350 kcal/capita/day⁹³. Securing further growth in per capita food consumption (or, at least, securely preserving the level achieved by now) will require sustaining not just high GDP growth rates, but high GDP per capita growth which, taking into account the inevitable population doubling in the next 35 years, will be very challenging. However, if fertility transition fails to accelerate, the population will triple – and this can collapse the food supply situation.

Niger

Figure 2.5 - Forecasts scenarios of population dynamics in Niger, up to 2100



⁹³ Clark, Gregory. 2007. *A farewell to alms: a brief economic history of the world*. Princeton, NJ: Princeton University Press.

Table 2.8 - Absolute population (in millions) according to various forecasts scenarios for Niger

	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman at 0.1 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman at 0.1 children per woman annually
2050	35,6	37,0	71,5	71,5
2100	36,9	45,3	138,4	148,0

Niger is the country with the highest fertility in the world; its TFR started to decline only in the early 2000s from 7.5 children per woman and, after reaching 7.1 in the mid-2000s, bounced back to 7.5 in 2012. Pro-natalist views are extremely strong in the country, and wanted TFR still exceeds the real one, reaching 8.8 children for women and astonishing 12.6 children among men⁹⁴. The absence of fertility decline will cost the country a population doubling in less than 30 years even at the fastest possible fertility transition. **If the stall persists for another 15 years (which is very probable if no concentrated action is taken), the population of Niger will rocket up by more than 5 times in 30 years.**

A closer look at the age structure and numbers of various age cohorts at accelerated fertility decline vs. continued fertility stall scenarios further reveals the catastrophic consequences of the *laissez-faire* demographic trends, which will likely effectively block the country's opportunities for development and lead to major instability outbreaks (see Table 2.9).

Only 63% of the relevant cohort is enrolled in primary schools, while net enrolment in secondary education is less than 13%. If the fertility stall continues, the number of school-age children may more than quadruple by 2050, which can lead to a collapse of educational system. Also, with the fertility stall scenario, the number of youths aged 15 – 24 will grow more than 5 times in 35 years, which (especially if a considerable proportion of them fails to get even primary education) will represent a powerful destabilization force not just to Niger itself, but to its neighboring countries as well.

⁹⁴ Potts, Malcolm, Virginia Gidi, Martha Campbell and Sarah Zureick. 2011. "Niger: Too Little, Too Late." *International Perspectives on Sexual and Reproductive Health* 37(2): 95

Table 2.9 - Absolute sizes (in millions) of certain age groups according to various forecasts scenarios of population dynamics in Niger, by 2050

	2010 value	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman at 0.1 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman at 0.1 children per woman annually
School-age children	5,4	6,7	7,7	24,6	24,6
Youths aged 15 – 24	2,7	5,3	5,4	15,5	15,5
Youth aged 20 – 29	6,5	6,5	6,5	12,7	12,7
Age-dependency ratio (people aged<15 and >60 per working-age person)	1,16	0,45	0,50	0,91	0,91
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,75	0,60	0,67	1,47	1,47
Youth age-dependency ratio (people aged<15 per working-age person)	1,08	0,35	0,39	0,84	0,84
Youth age-dependency ratio (people aged<20 per working-age person)	1,64	0,49	0,55	1,38	1,38

Nigeria

Figure 2.6 - Forecasts scenarios of population dynamics in Nigeria, up to 2100

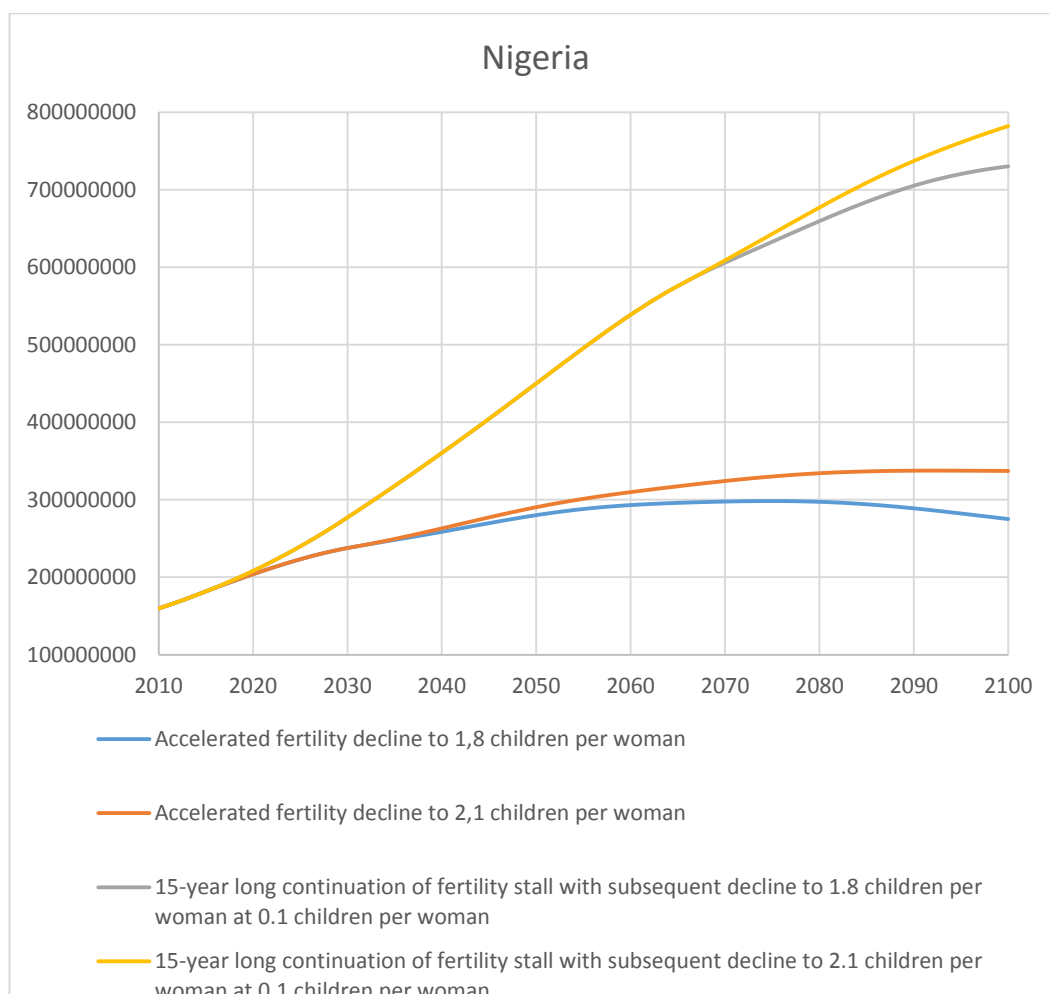


Table 2.10 - Absolute population (in millions) according to various forecasts scenarios for Nigeria

	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman at 0.1 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman at 0.1 children per woman annually
2050	280,2	290,4	450,1	450,1
2100	275,2	337,2	730,3	782,3

The forecasted population growth will be the largest in Nigeria out of all the Tropical African countries – first, due to the absolute size of its population; second, due to its great laggardness in terms of fertility transition. Indeed, the TFR in this country has been stalled at higher than 5.5 children per woman for more than a decade. The only attempt at launching a campaign on reducing fertility and bringing down the population growth rates (under the slogan “Four children is

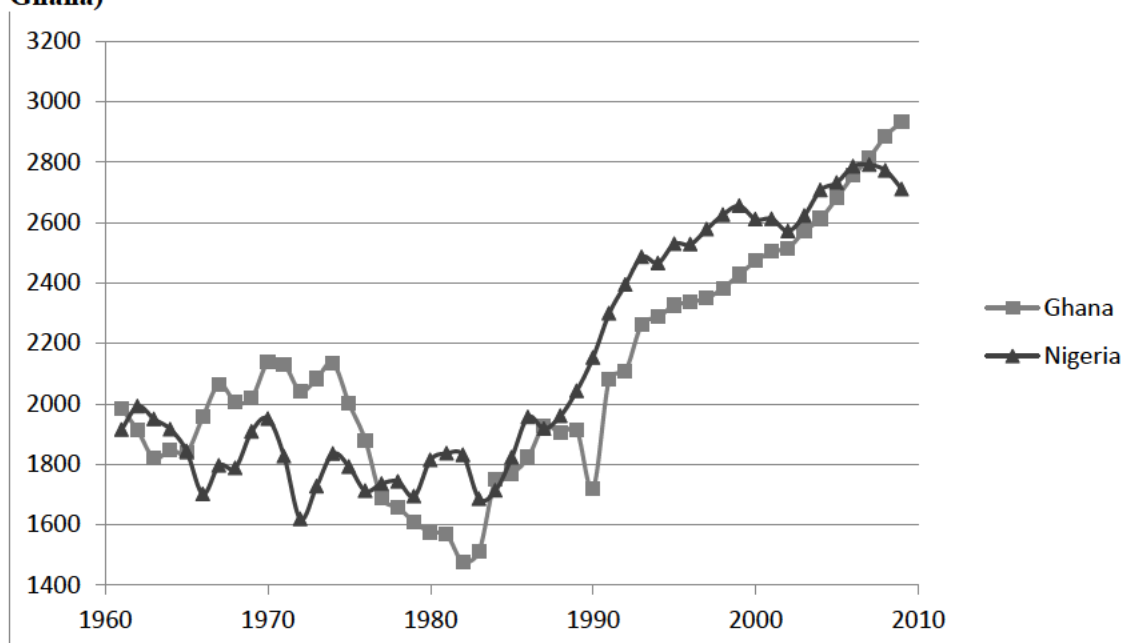
enough”) was taken in the late 1980s under President Babangida – and failed. Currently less than 15% of women in union use some form of modern contraception.

The situation is particularly alarming in the Northern (Muslim) regions of the country, where the TFR still exceeds 7 children per woman; By contrast, it is slightly below 5 (4.5 – 4.8) in the Southern (Christian) regions.

The difference between the inertial and the optimistic scenarios is significant– concentrated effort on bringing down the fertility rates (through female secondary education, effective family planning campaigns, and outlawing under-age marriages) will “spare” the country an “additional” 70 mln people by 2035 as compared to the inertial scenario (in 2035 the scenarios project 250 vs. 320 mln), an extra 160 – 170 mln people by 2050 and more than half a billion new Nigerians by the end of the century.

Malthusian concerns are largely irrelevant for Nigeria, which has secured a safe level of per capita food consumption – nearly the same as in Ghana (see Fig 2.7).

Figure 2.7 - Per capita food consumption in Nigeria, kcal/capita/day, 1960 – 2009 (as compared to Ghana)



However, the data presented in Table 2.11 clearly reveal the huge strain upon the country’s development prospects engendered by the laggardness in fertility transition.

Table 2.11 - Absolute sizes (in millions) of certain age groups according to various forecasts scenarios of population dynamics in Nigeria, by 2050

	2010 value	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman annually
School-age children,	50,8	50,4	57,1	133,7	133,7
Youths aged 15 – 24	30,6	30,4	30,4	91,9	91,9
Youth aged 20 – 29	26,6	47,2	47,2	80,3	80,3
Age-dependency ratio (people aged<15 and >60 per working-age person)	0,93	0,47	0,51	0,75	0,75
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,41	0,63	0,69	1,15	1,15
Youth age-dependency ratio (people aged<15 per working-age person)	0,85	0,32	0,37	0,64	0,64
Youth age-dependency ratio (people aged<20 per working-age person)	1,31	0,46	0,52	1,02	1,02

Securing the fastest possible fertility decline in Nigeria is an indispensable pre-requisite for securing this country's chances for safe development and avoiding major destabilization outbreaks with potentially global consequences (due to their huge scale).

Senegal

Figure 2.8 - Forecasts scenarios of population dynamics in Senegal, up to 2100

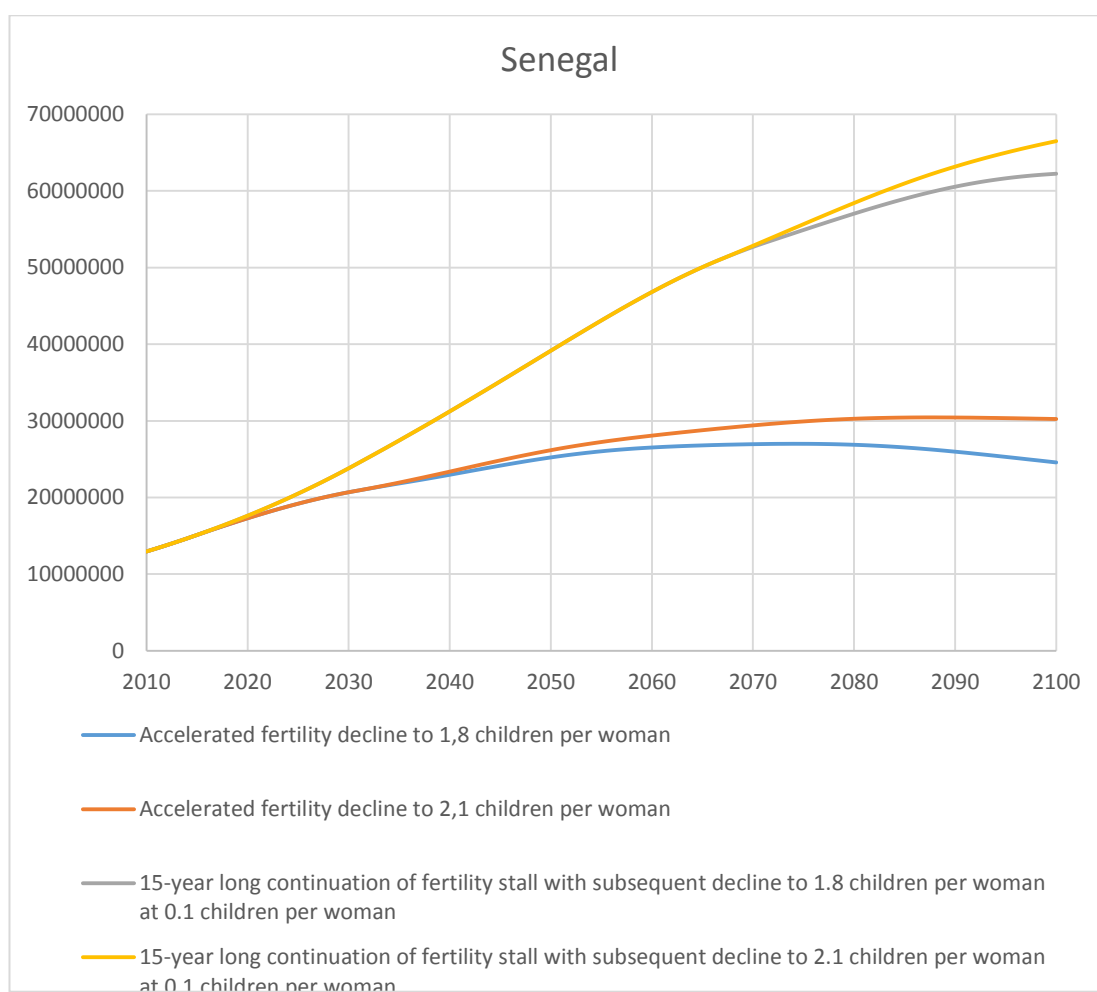


Table 2.12 - Absolute population (in millions) according to various forecasts scenarios for Senegal

	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman at 0.1 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman at 0.1 children per woman annually
2050	25,2	26,2	39,2	39,2
2100	24,6	30,2	62,2	66,5

Thus, even though Senegal had its fertility stall at a somewhat lower level than its East African counterparts, about 5 children per woman, it will still have to pay a high price for that – population doubling is inevitable even at the best possible scenario, while another 15 years of fertility

stall will cost the country a population tripling. Let us now turn to some other indicators closely related to the demographic dynamics, such as the numbers of particular age groups and age-dependency ratios (see Table 2.13).

Table 2.13 - Absolute sizes of certain age groups according to various forecasts scenarios of population dynamics in Senegal, by 2050

	2010 value	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman at 0.1 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman at 0.1 children per woman annually
School-age children	4,2	4,6	5,3	11,5	11,5
Youths aged 15 – 24	2,7	3,7	3,8	7,9	7,9
Youth aged 20 – 29	2,3	4,2	4,2	6,9	6,9
Age-dependency ratio (people aged<15 and >60 per working-age person)	0,92	0,48	0,53	0,74	0,74
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,43	0,65	0,71	1,14	1,14
Youth age-dependency ratio (people aged<15 per working-age person)	0,84	0,33	0,38	0,63	0,63
Youth age-dependency ratio (people aged<20 per working-age person)	1,33	0,48	0,54	1,00	1,00

Tanzania

Figure 2.9 Forecasts scenarios of population dynamics in Tanzania, up to 2100

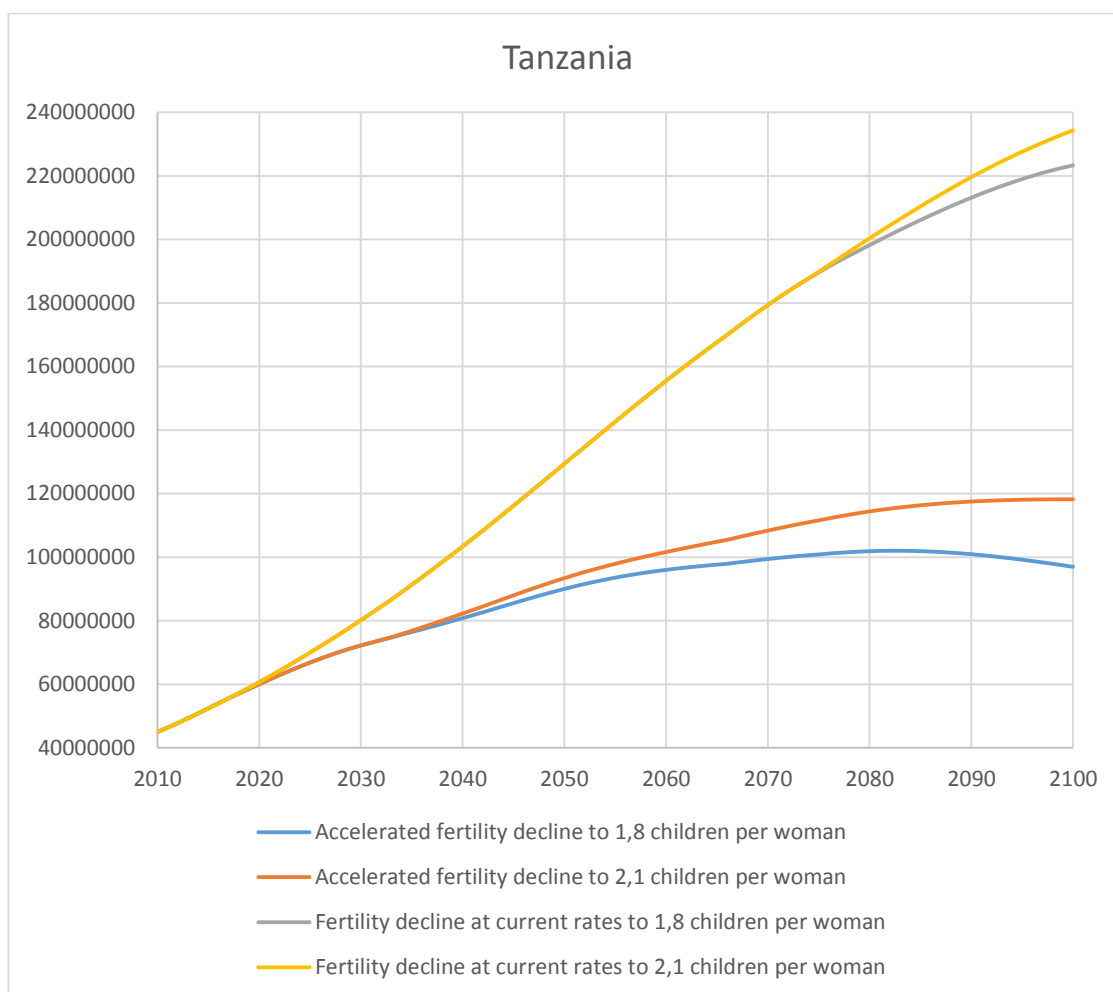


Table 2.14 - Absolute population (in millions) according to various forecasts scenarios for Tanzania

	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
2050	90,0	93,4	129,4	129,4
2100	96,7	118,2	223,3	234,3

Figure 2.9 clearly reveals that the price of stalled fertility is high – the inertial scenario will result in population growing by 3.5 times in the next 35 years. For some other indicators closely related to the demographic dynamics, such as the numbers of particular age groups and age-dependency ratios see Table 2.15.

Table 2.15 - Absolute sizes (in millions) of certain age groups according to various forecasts scenarios of population dynamics in Tanzania, by 2050

	2010 rate	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
School-age children	14,6	16,8	19,0	36,6	36,6
Youths aged 15 – 24	8,9	13,2	13,5	24,7	24,7
Youth aged 20 – 29	7,7	15,2	15,2	22,3	22,3
Age-dependency ratio (people aged <15 and >60 per working-age person)	0,97	0,48	0,53	0,72	0,72
Age-dependency ratio (people aged <20 and >60 per working-age person)	1,49	0,65	0,71	1,08	1,08
Youth age-dependency ratio (people aged <15 per working-age person)	0,89	0,33	0,38	0,60	0,60
Youth age-dependency ratio (people aged <20 per working-age person)	1,38	0,48	0,55	0,93	0,93

Again, the same as in other cases viewed above and below, the inertial scenario is likely to bring the country on the verge of an abyss, undermining its ability to keep up the educational enrolment rates and the health system coverage, exerting huge strain upon the rural infrastructure and land resources in already extremely low-productive agriculture, and “supplying” a flood of rural migrants in the cities which will most probably be incapable of providing them with adequate accommodation or employment and thus hugely exacerbate the risks of sever destabilization.

Malthusian patterns are far from improbable here as well – indeed, the recent period of economic growth failed to bring any significant improvement in per capita calorie intake which remains at about 2150 kcal/capita/day, visibly below both the WHO norm and the Malthusian trap threshold. This phenomenon is largely due to the fact that growth was driven by the highly productive sectors employing only a minority of labor force, **while the predominant part of Tanzanian population is still involved in subsistence agriculture, where the growth of production is outpaced by the growth of population.**

Uganda

Figure 2.10 - Forecasts scenarios of population dynamics in Uganda, up to 2100

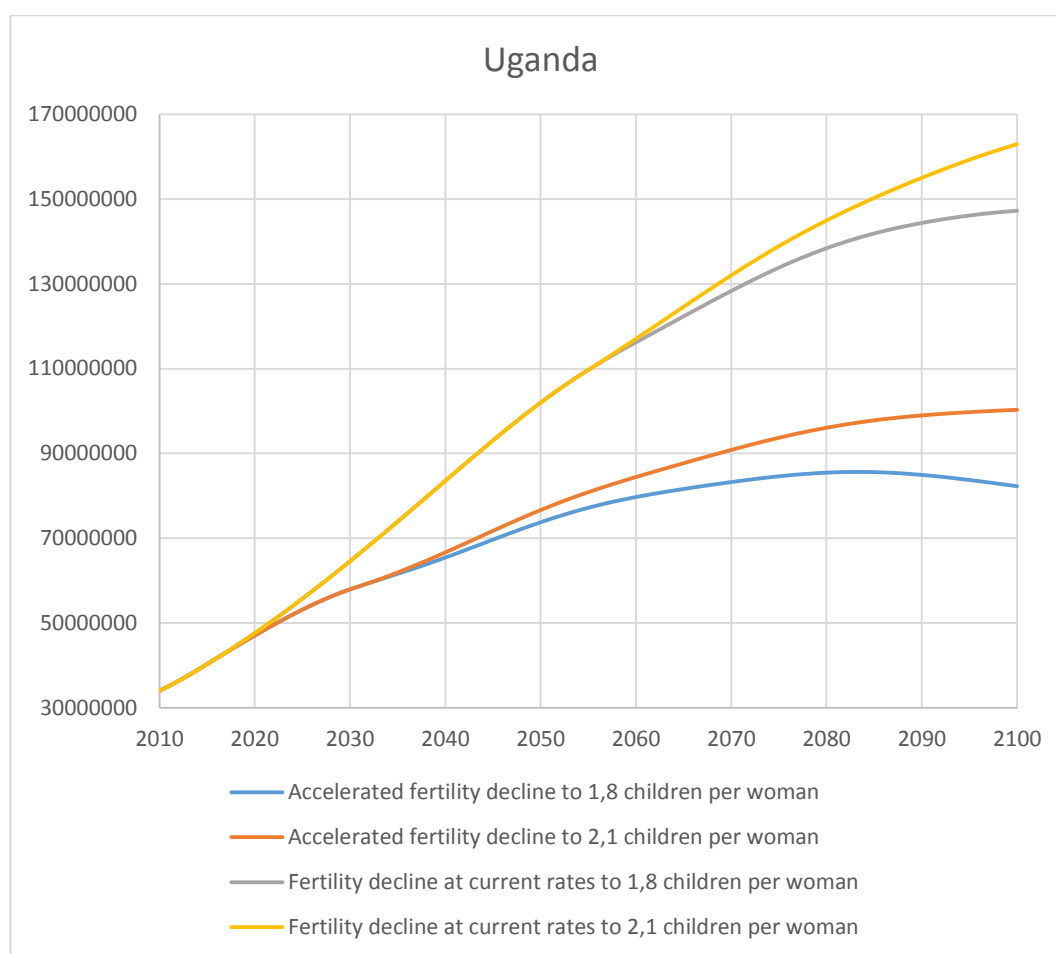


Table 2.16 - Absolute population (in millions) according to various forecasts scenarios for Uganda

	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
2050	73,8	76,6	102,0	102,0
2100	82,3	100,3	147,2	163,0

Uganda has been among the last countries of the region to enter its fertility transition; fertility decline only started here in the early 2000s. Now Uganda's TFR is still about 6.2.

It is worth noting the pro-natalist stance of Ugandan President Yoveri Museveni, who persistently emphasizes that Uganda's rapidly growing population is not a problem, but rather an asset for development, as his country grows from 30 million today to 60 million people in 2035. However, the Ugandan leader seem to hugely underestimate the demographic inertia – even if Ugandan fertility transition immediately accelerates up to the Iranian pace, its population will exceed 70 mln people by 2050. **If the current rates persist, Ugandan population will triple in just 35 years.**

For some other indicators closely related to the demographic dynamics, such as the numbers of particular age groups and age-dependency ratios see Table 2.17

Table 2.17 - Absolute sizes (in millions) of certain age groups according to various forecasts scenarios of population dynamics in Uganda, by 2050

	2010 rate	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
School-age children	11,9	13,9	15,8	28,6	28,6
Youths aged 15 – 24	6,8	11,0	11,3	20,5	20,5
Youth aged 20 – 29	5,5	13,0	13,0	18,9	18,9
Age-dependency ratio (people aged<15 and >60 per working-age person)	1,10	0,46	0,51	0,63	0,63
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,74	0,62	0,69	0,97	0,97
Youth age-dependency ratio (people aged<15 per working-age person)	1,03	0,34	0,39	0,53	0,53
Youth age-dependency ratio (people aged<20 per working-age person)	1,64	0,49	0,55	0,85	0,85

Data presented in Table 2.17 clearly reveal that the inertial fertility trends will lead to a full-scale population explosion and are likely to bring Uganda to the Malthusian abyss. Suffice it to say that Ugandan agriculture, with its stagnant \$200 – 250 value added per worker, employs about 66% of the country’s workers, and a tripling in their numbers will likely lead to a collapse. If, on the other hand, the masses of people move to the **cities (where only 13% of Ugandans currently reside)**, the problems of providing adequate infrastructure, accommodation, and employment – all in tripled amounts and in very short time – will bring severe instability and deterioration of life standards.

Thus, the accelerated fertility decline scenario is hard to achieve (especially with pro-natalist views of the country’s leader), and will still result in population doubling (or even more) – but it appears the only way of avoiding an essentially Malthusian collapse in Uganda in the coming decades.

Population explosion related risks to African development

Surprisingly, even the latest African Development Bank (AFDB) forecast outline of African development in the next 50 years mentioned the lagging in demographic transition as a positive factor, stating that Africa could benefit from the demographic dividend, while the huge sociopolitical destabilizing potential of explosive population growth, increased age-dependency ratio due to numerous cohorts of children, and the youth bulges necessarily preceding the increase in the ratio between the working age population and the non-working age population were left out of the scope of attention. The only population pressure-related threat to African development specified in the AFDB forecast is that “Tensions due to scarcity, population density and soil degradation will affect access to land in all regions of Africa over the next five decades. The slow demographic transition and the decrease in soil fertility will put increasing pressure on tenure systems. Unregulated land markets and the failure of land management and administration policies could result in increasing inequalities in access, and a rising number of land-related conflicts in both rural and urban areas.”⁹⁵ However, the only policy implication inferred from this threat by AFDB is “an urgent need for better governance of land management and improved regulation of land markets.” No measures are mentioned that would allow for urgent and substantial acceleration of fertility decline in order to bring down the population growth rates.

The demographic transition’s threatening, and, in some cases ruinous, implications for African development in the coming decades is much broader than the strained land tenure system. Below are the most relevant population-related risks and why these risks are particularly threatening for SSA in the coming decades.

The first type of risks is the classic Malthusian scenario of state collapse. Malthusian discourse is considered largely irrelevant for the most part of the developing world nowadays; however, SSA is the only major region where the threat of Malthusian scenarios still preserves its relevance. Some examples of large-scale violent conflicts, or even state collapses where Malthusian processes, among other factors, significantly contributed to sociopolitical destabilization, can be found in the recent African past, such as Mengistu Haile Mariam’s regime failure in Ethiopia in 1989⁹⁶, and Rwandan genocide in 1992⁹⁷. Similar examples can be found in Mozambique, Somalia, Democratic Republic of the Congo, etc.⁹⁸

Malthusian scenarios are particularly threatening to African development in the coming decades, as the recent decade (in some cases, decade and a half) of stably high economic growth was only enough for such vibrant African economies as Rwanda, Mozambique, and Ethiopia, to reach the minimal border of WHO recommended per capita food consumption level of about 2100–2200 kcal/capita/day. A more ominous situation is observed in such East African countries as Uganda,

⁹⁵ AfDB, OECD, UNDP, ECA. 2013. African Economic Outlook 2013. African Development Bank, Organization for Economic Co-operation and Development, United Nations Development Program, United Nations Economic Commission for Africa. P. 32

⁹⁶ Korotayev, Andrey, Julia Zinkina, Svetlana Kobzeva, Justislav Bogevoľnov, Daria Khaltourina, Artemy Malkov, Sergey Malkov. 2011. “A Trap at the Escape from the Trap? Demographic-Structural Factors of Political Instability in Modern Africa and West Asia,” *Clodynamics: The Journal of Theoretical and Mathematical History* 2(2): 276–303.

⁹⁷ See, e.g., Andre C., Platteau J.-P. 1998. Land relations under unbearable stress: Rwanda caught in the Malthusian trap // *Journal of Economic Behavior & Organization* Vol. 34 (1998) 1±47. Verpoorten M. 2012. Leave none to claim the land: A Malthusian catastrophe in Rwanda? *Journal of Peace Research* 2012 49(4) 547–563.

⁹⁸ See, e.g., Small M., Singer J. D. 1982. *Resort to Arms: International and Civil Wars 1816–1980*. Beverly Hills, CA: Sage Publications. Crowder M., Fage J. D., Oliver R. 1986. (Eds.). *The Cambridge History of Africa*. Vol. 8. New York, NY: Cambridge University Press.

Tanzania, Kenya and Zambia, where the economic growth of the last decade did not lead to any substantial improvement in per capita food consumption, which remained practically stagnant in Kenya, Tanzania and Uganda, and was even falling in Zambia. Considering the population growth momentum gained by now, it will require tremendous economic effort to sustain this level, let alone achieve further increase (which is necessary to securely lead the countries out of the Malthusian trap). If fertility is not substantially reduced in the nearest future, this goal may well become unachievable and these countries will likely encounter full-scale Malthusian collapses.

The swelling increase in the absolute numbers of children due to persistently high fertility (**the number of newborn infants in Tanzania already equals that in Russia**) implies a tremendous surge in the absolute numbers of youths in the nearest future. This will create critical strain in rural areas (land pressure, increased struggle for land, increased social tension etc., much of what was observed in pre-genocide Rwanda); moreover, large numbers of youths will invariably be forced to migrate to cities in search for employment, which will put serious pressure upon the greatly underdeveloped urban infrastructure.

Indeed, urbanization is an imminent part of the general modernization process. Many Sub-Saharan countries (especially East African ones) still have very low proportions of urban population (for example, only 13% of Ugandans currently reside in urban areas, most of them in the capital city of Kampala). While the urbanization curve is generally a logistic curve (and is bound to stabilize once reaching the saturation level), in many African countries the growth of the urban population proportion slowed down far below the saturation level (comparing with other regions of the developing world). So the forecasted population increase should be looked upon through the prism of two possible trajectories of urbanization dynamics in the nearest decades:

1) if the urbanization growth remains slow, **the consequences of the population growth will be predominantly borne by the rural areas, which will exacerbate the problems with land and water scarcity, rural population density and land productivity, insufficient food consumption, likely resulting in major outbreaks of instability** (probably violent) with recognizable Malthusian patterns. There is a more “pessimistic” scenario, as explosive population growth in traditional predominantly agrarian societies has historically been one of the main generators of major sociopolitical instability. In terms of recent African history, pre-genocide Rwanda and Ethiopia at the times of Mengistu’s rule serve as examples of extremely fast population growth (and its implications for the quality of life) contributing to major sociopolitical instability.

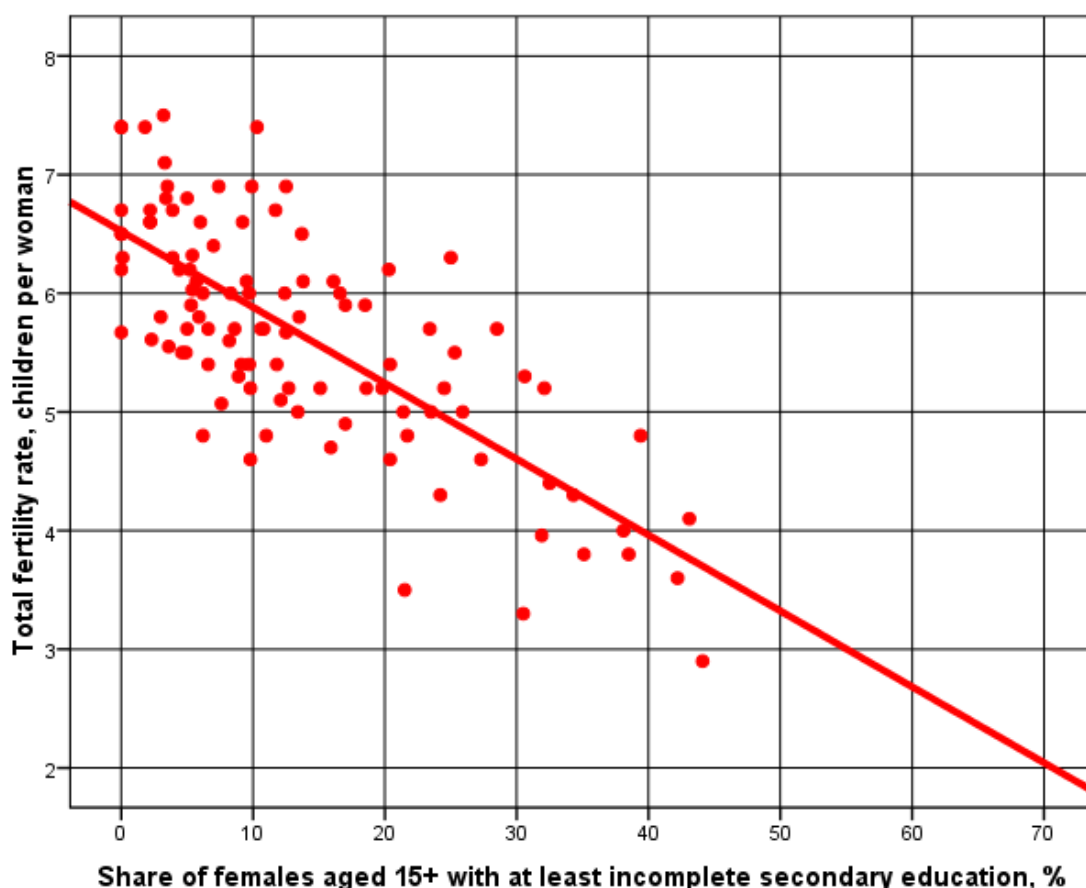
2) If the urbanization dynamic returns to its “natural” logistic path, this means a significant acceleration in the urbanization rate. Combined with the projected increase in the absolute number of population, this will produce a huge surge in the absolute number of rural-urban migrants. This draws our attention to another series of questions, namely the necessary pace of urban infrastructure growth (accommodation, sanitation, transportation etc.), the necessary annual expansion of healthcare and education facilities networks, and, very importantly, the pace of economic growth and creation of new workplaces required to absorb the incoming waves of rural-urban migrants.

Possible remedies

Universal secondary education as the main way of bringing fertility down to replacement level

Our research has revealed that achieving a 100% primary NER (as stated in MDG #2) for girls is insufficient for bringing African fertility rates down to the replacement level. However, this does *not* mean that female education in general has weak fertility-inhibiting impacts in Africa. Indeed, existing studies show that “girls’ education from about the secondary level onwards was found to be the only consistently significant covariate” having a negative impact upon fertility and the age at first birth⁹⁹. This demographic analysis supports the proposition that **secondary education has a very powerful fertility-inhibiting impact in Sub-Saharan Africa**. Most importantly the regression analysis indicates that with 70% of adult females having at least some secondary education, the TFR in sub-Saharan countries is likely to reach the replacement level. Thus, sub-Saharan countries should *introduce universal compulsory secondary education, with an emphasis on equal enrollments for girls, as soon as possible*.

Figure 2.11 - Correlation between proportion of females aged 15+ with at least incomplete secondary education and TFR in Sub-Saharan countries. Scatterplot with a fitted regression line.



However, one problem is that achieving a 70% *overall* level of women having at least incomplete secondary education is in no way equal to achieving a 70% secondary enrollment rate among the current school age population. For the next decade, the majority of sub-Saharan

⁹⁹ Gupta, Neeru and Mary Mahy. 2003. “Adolescent childbearing in sub-Saharan Africa: Can increased schooling alone raise ages at first birth?” *Demographic Research* 8(4): 93–106.

women in fertile ages who have not had any secondary education will be those beyond the normal secondary school age; providing these women in their 20s and early 30s with adult secondary education opportunities will be an important element for accelerating fertility decline. This may seem like an expensive measure, but if it also increases the productivity of the adult female workforce, it will pay economic as well as demographic dividends. Thus, sub-Saharan countries should *explore ways to provide adult secondary education, especially for women, throughout the country*.

Still, even these measures will not increase the proportion of females with secondary education fast enough – even if compulsory secondary education is introduced immediately.¹⁰⁰ A significant increase in the secondary education rate among females aged 15+ will only be observed after a considerable lag of 8–12 years (depending on the length of primary and secondary education).¹⁰¹ Nonetheless, this is still timely enough to have some effect on population growth to 2035, a major effect on population growth to 2035 and 2050, and even more so on growth to 2100.

The introduction of universal compulsory secondary education in sub-Saharan Africa is, naturally, a tremendously expensive measure, and most sub-Saharan countries will be unable to manage it on their own. It is unusually labor intensive (although this is a good thing in one respect, as it will increase employment). It is fortunate that at this very moment the technology for producing and disseminating world class educational materials via the internet is maturing and becoming far less costly. Nonetheless, it is necessary for the international community to provide increased support to sub-Saharan countries for the specific goal of increasing secondary school education throughout their populations, which implies a substantial increase in financial aid destined for these goals. If this support is not provided in the immediate future, much greater expenses will be invariably required later on to deal with the political and humanitarian catastrophes that will result from runaway population growth in sub-Saharan countries.

The successes of private foundations and government efforts in tackling such issues as HIV-AIDS and childhood malaria show what can be done with careful attention to tracking progress and service delivery. If the same mechanisms can now be applied to the provision of elementary *and secondary* education, the quality of the lives that medical attention has saved, and the prospects for future economic and political development, will be enhanced. Without such measures, the future potential for economic growth and political stability for the populations where the international community has been so effective in saving lives will likely not be fulfilled.

Reinstatement of family planning campaigns as a further means of accelerating of fertility decline

Generally, increasing the proportion of females aged 15+ with secondary education up to 70% should become the main way of bringing the sub-Saharan fertility rates down to replacement levels. However, it is a medium-to-long-term measure, and the lag of 8 to 10 years (at best, if the governments immediately allocate large resources to introducing the universal compulsory secondary education) already primes another generation for rapid growth and continues existing demographic momentum. So, simultaneously with developing systems of secondary education, other measures should be taken which could have their impact far sooner.

¹⁰⁰ The introduction of compulsory secondary education invariably implies the presence of universal compulsory primary education, so the majority of sub-Saharan countries, especially the laggards, will have to solve these tasks simultaneously.

¹⁰¹ This lag will be somewhat less, 6–8 years, for the countries which have already effectively introduced universal compulsory primary education.

The experience of numerous developing countries has shown that government-supported reproductive health and family planning programs can greatly increase the survival rates for women in childbirth while reducing the number of unwanted pregnancies and rapidly decreasing overall fertility.

Tropical Africa has been badly lagging in diffusing the availability of modern family planning. The downgraded priority and reduced budgets for family planning in the international development agenda after 1994 Cairo Conference greatly diminished the spread of family planning in Tropical Africa. DHS data shows that the proportion of women aged 15–49 currently in union using some modern method of family planning stopped growing in many Tropical African countries. For example, in Uganda, as of 2011, 70% of married women of reproductive age were not using any form of contraception; in the Democratic Republic of the Congo in 2007 only 6% of women aged 15–49 in marital unions were using any modern contraceptives, while 15% reported using traditional methods, leaving almost 80% not using any form of contraception.

Both demographers and policymakers currently seem to be arriving at the conclusion that decreasing the priority of family planning programs in the developing world was premature. As Stan Bernstein noted: “The race against population growth was, in effect, declared over before everyone crossed the finish line”¹⁰². Later on, two other experts¹⁰³ convincingly revealed that the arguments for discarding family planning programs from the developmental agenda proved inconsistent, as rapid population growth actually continued in many countries (especially Tropical African ones), where demographic momentum was very substantial and increasing. This clearly stipulates the necessity of restoring large-scale family planning campaigns as first-level development priority in countries with continuing rapid population growth, most of them in Tropical Africa.

A number of works have presented calculations of the negative impact of continuing population growth and, in particular, unwanted fertility and unmet needs for family planning, for achieving development goals in Africa. Some experts¹⁰⁴ compared the cost of satisfying the already existing unmet need for family planning in sub-Saharan Africa with the budgets necessary for expanding primary health services or secondary education so as to keep up with the growing population numbers. Others¹⁰⁵ proceeded to compare the costs of meeting unmet needs for family planning to the savings represented by the thus-averted births in meeting the Millennium Development Goals by 2015. The average estimated benefit/cost ratio for the 16 countries was 3.7 with impressive savings for almost all MDGs, the largest being observed for primary schooling, which was particularly important in the light of the projected inevitable increase in the number of school-age children. The main conclusion is that for every dollar spent in family planning, between two to six dollars can be saved in interventions aimed at achieving other development goals.

These programs can be particularly efficient in East African countries, where there already exists a very substantial unmet need for modern contraception usage; the latest DHS for East African

¹⁰² Bernstein, Stan. 2005. “The changing discourse on population and development: Toward a new political demography,” *Studies in Family Planning* 36(2): 127–132. P. 129.

¹⁰³ Bongaarts, John, and Steven W. Sinding. 2009. “A Response to Critics of Family Planning Programs,” *International Perspectives on Sexual and Reproductive Health* 35(1): 39–44. Bongaarts, John, and Steven W. Sinding. 2011. “Family Planning as an Economic Investment,” *SAIS Review* 31(2): 35–44.

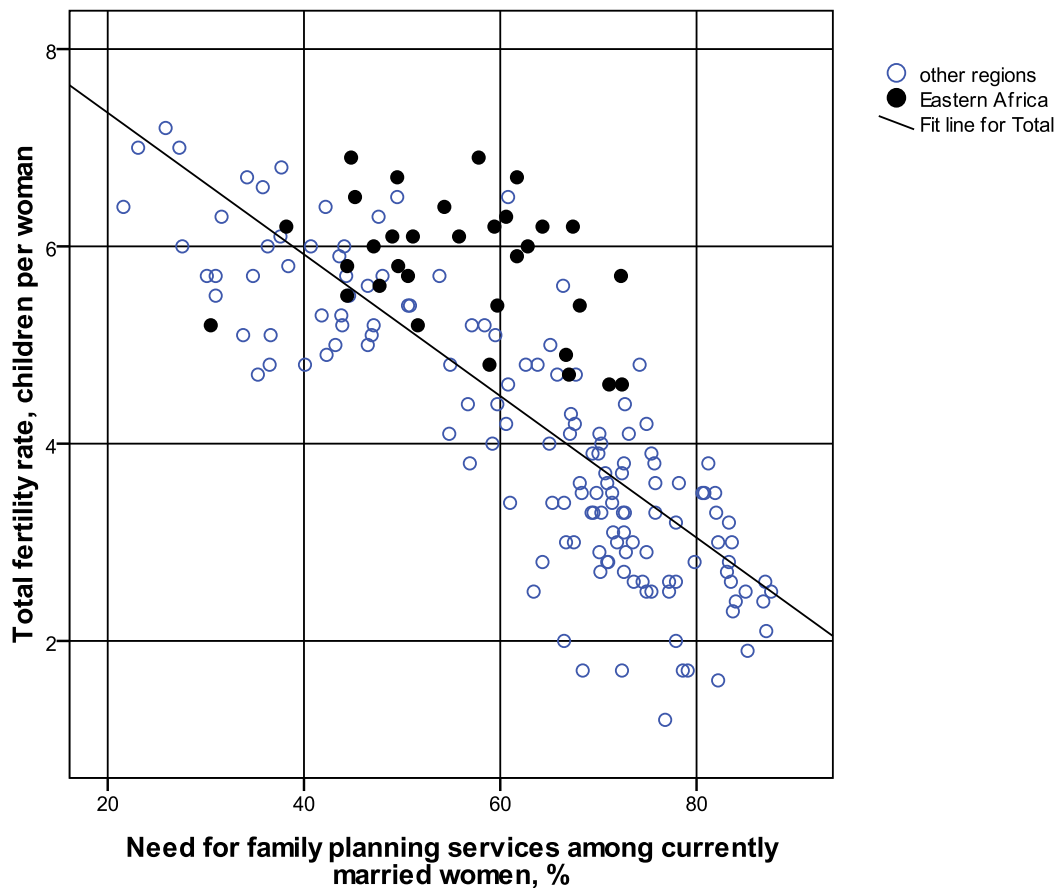
¹⁰⁴ Fraser, Ashley, Russell Green, and Megan Dunbar. 2002. “Costing Cairo: An Annotated Bibliography of the Cost Literature on ICPD Programme of Action Components in Sub-Saharan Africa.” Bay Area International Group, University of California, Berkeley, CA.

¹⁰⁵ Moreland, Scott and Sandra Talbird, 2006. *Achieving the Millennium Development Goals: The contribution of fulfilling the unmet need for family planning*. Washington, D.C.: USAID.

countries show 25–40% of married women wanting to have no births in the nearest couple of years, but not being able to use any modern means of family planning.

Thus, we can infer that the spread of family planning programs in East Africa is likely to have a huge effect in bringing down fertility and population growth rates. This is further supported by the recent experience of Rwanda, a country with a comparatively low share of females with secondary education (less than 10%), which still managed to achieve notable success in fertility decline due to its recent successful family planning campaign.

Figure 2.12 - Correlation between the total need for Family Planning services (both met and unmet) among currently married women and TFR in the developing world. Scatterplot with a fitted regression line

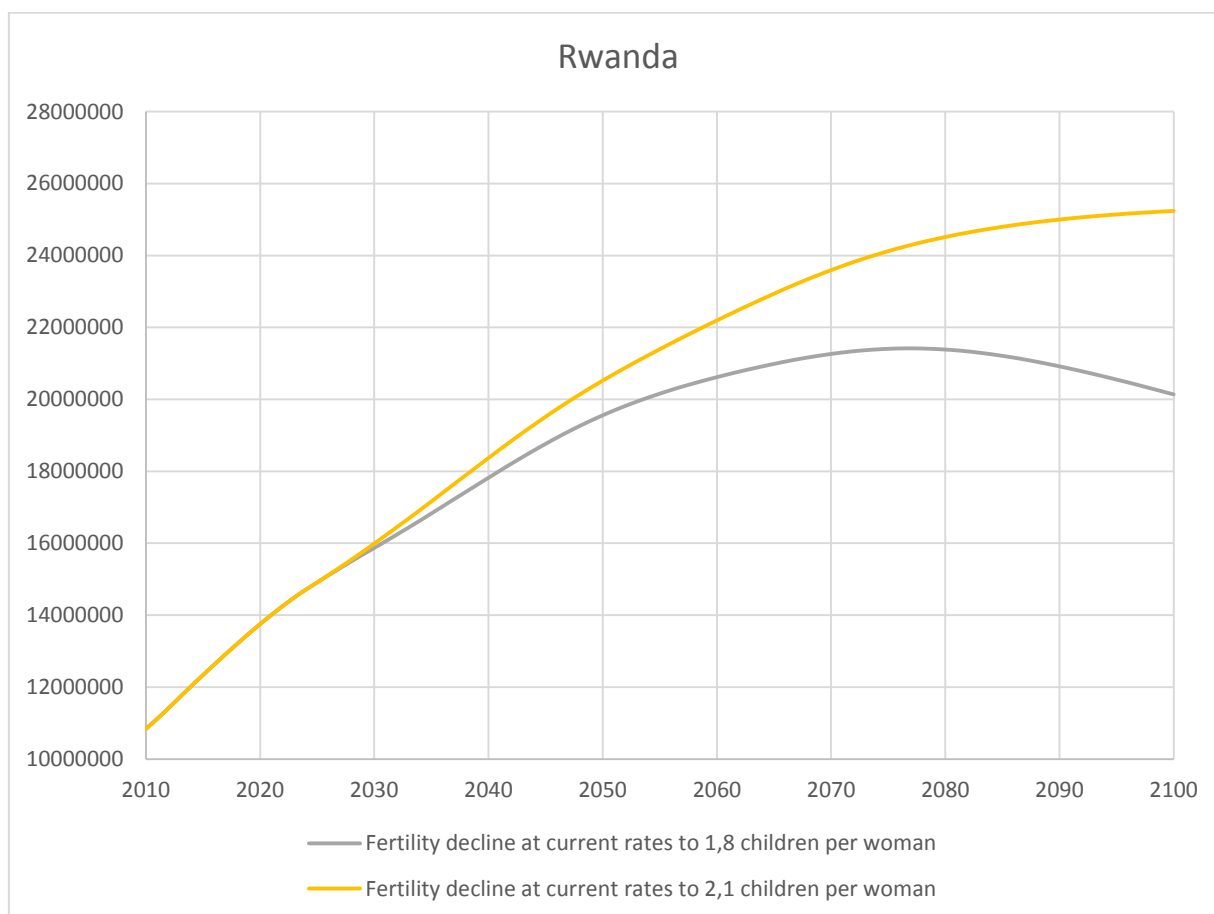


Rwanda – a success story in family planning

The demographic successes of Rwanda are remarkable. During five years, from 2005 to 2010, Rwanda achieved a record fertility decline in the sub-Saharan region and one of the fastest fertility decline rates in the world (comparable with that of Iran). Rwandan TFR declined by 25% during these five years, from 6.1 to 4.6 children per woman. Importantly, fertility went down very fast among all groups of women, both urban (from 4.9 to 3.4) and rural (from 6.3 to 4.8) residents, women with no education (from 6.9 to 5.4), with primary education (from 6.1 to 4.8), and with secondary education (from 4.3 to 3.0).¹⁰⁶

Thanks to this rapid fertility decline, Rwanda is currently nearly the only one among Tropical African countries where the inertial scenario is far from catastrophic, but, on the contrary, close to the optimistic one. However, even in this country the population will invariably double by the early 2050s, simply due to the demographic inertia gained in the previous years before the fertility decline accelerated (see Figure 2.13).

Figure 2.13 - Forecast scenarios for population dynamics in Rwanda (millions)



Progress was achieved thanks to the realization of a whole-country government program on provision of free family planning services at all health care units throughout the country. In 2007 Rwandan President Paul Kagame stated that Rwanda had lagged far behind in spreading the usage of contraception and set a goal of increasing the contraception prevalence rate among married women aged 15–49 to 70% by 2012 as one of the priority goals in Rwanda's National Strat-

¹⁰⁶ ICF International. 2012. MEASURE DHS STAT Compiler. URL: <http://www.statcompiler.com/>

egy for Economic Development and Poverty Reduction. Rwanda seems to be on track to achieve this goal – the contraception prevalence rate increased from 17.4% in 2005 to 51.6% in 2010, growing simultaneously among urban (from 31.6% to 53.1%) and rural women (from 15.2% to 51.4%).¹⁰⁷ Can this success be sustained? ‘Rwandan-wanted’ TFR was 4.7 children per woman in 2000 and 4.6 in 2006. The real TFR had struck this level by 2011 – which means that the decline occurred almost exclusively through supplying the existing unmet demand for family planning. Has Rwanda exhausted the potential of this resource or will it lead to further fertility decline? The answer is dubious. On the one hand, the wanted TFR experienced a large decline in 2006 – 2011 as well, going down from 4.6 to 3.1 children per woman. Thus, bringing the real TFR to this new level will mean another significant success in going through the fertility transition. However, family planning alone will probably be not enough to meet this challenge. In order to secure safe and fast fertility transition, it is important to use all the most powerful drivers of fertility decline – most importantly, female secondary education, which has received insufficient attention not only in Rwanda, but in the whole region of Tropical Africa.

¹⁰⁷ Westoff, Charles F. 2012. “The Recent Fertility Transition in Rwanda,” *Population and Development Review* 38 (Supplement): 169–178. See also, Kinzer, Stephen. 2007. “After So Many Deaths, Too Many Births,” *New York Times* 11.02.2007 at http://www.nytimes.com/2007/02/11/weekinreview/11kinzer.html?_r=0

Population estimates (expanded) for sub-Saharan African countries in 2035

Ethiopia

Table 3.1 - Absolute sizes (in millions) of total population and certain age groups according to various forecasts scenarios of population dynamics in Ethiopia, by 2035

	2010 rate	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
Total population	87,1	142,9	144,0	160,0	160,0
School-age children	30,1	37,8	37,8	46,2	46,2
Youths aged 15 – 24	17,6	29,6	29,6	30,8	30,8
Youth aged 20 – 29	14,3	27,2	27,2	27,3	27,3
Age-dependency ratio (people aged<15 and >60 per working-age person)	0,97	0,52	0,54	0,68	0,68
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,53	0,82	0,84	1,04	1,04
Youth age-dependency ratio (people aged<15 per working-age person)	0,87	0,42	0,43	0,58	0,58
Youth age-dependency ratio (people aged<20 per working-age person)	1,41	0,70	0,71	0,91	0,91

Malawi

Table 3.2 - Absolute sizes (in millions) of total population and certain age groups according to various forecasts scenarios of population dynamics in Malawi, by 2035

	2010 rate	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
Total population	15,0	24,7	24,7	30,2	30,2
School-age children	5,1	7,0	7,0	9,5	9,5
Youths aged 15 – 24	3,1	5,6	5,6	5,9	5,9
Youth aged 20 – 29	2,5	5,1	5,1	5,1	5,1
Age-dependency ratio (people aged<15 and >60 per working-age person)	1,02	0,52	0,52	0,83	0,83
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,60	0,85	0,85	1,26	1,26
Youth age-dependency ratio (people aged<15 per working-age person)	0,92	0,44	0,44	0,75	0,75
Youth age-dependency ratio (people aged<20 per working-age person)	1,49	0,75	0,76	1,16	1,16

Mozambique

Table 3.3 - Absolute sizes (in millions) of total population and certain age groups according to various forecasts scenarios of population dynamics in Mozambique, by 2035

	Value in 2010, for comparison	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline at 0.1 children per woman annually
Total population	24,0	38,2	38,4	50,4
School-age children	7,9	10,8	10,8	16,3
Youths aged 15 – 24	4,6	8,8	8,8	9,4
Youth aged 20 – 29	3,9	7,8	7,8	7,8
Age-dependency ratio (people aged<15 and >60 per working-age person)	1,00	0,52	0,53	0,96
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,53	0,86	0,87	1,45
Youth age-dependency ratio (people aged<15 per working-age person)	0,91	0,44	0,44	0,88
Youth age-dependency ratio (people aged<20 per working-age person)	1,41	0,75	0,76	1,35

Niger

Table 3.4 - Absolute sizes (in millions) of total population and certain age groups according to various forecasts scenarios of population dynamics in Niger, by 2035

	2010 value	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman at 0.1 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman at 0.1 children per woman annually
Total population	15,9	29,8	30,0	43,1	43,1
School-age children	5,4	9,3	9,3	15,2	15,2
Youths aged 15 – 24	2,7	7,6	7,6	8,3	8,3
Youth aged 20 – 29	6,5	6,6	6,6	6,6	6,6
Age-dependency ratio (people aged<15 and >60 per working-age person)	1,16	0,56	0,57	1,19	1,19
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,75	0,97	0,99	1,85	1,85
Youth age-dependency ratio (people aged<15 per working-age person)	1,08	0,48	0,49	1,10	1,10
Youth age-dependency ratio (people aged<20 per working-age person)	1,64	0,87	0,88	1,75	1,75

Nigeria

Table 3.5 - Absolute sizes (in millions) of total population and certain age groups according to various forecasts scenarios of population dynamics in Nigeria, by 2035

	2010 value	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman at 0.1 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman at 0.1 children per woman annually
Total population	159,7	248,2	249,5	317,9	317,9
School-age children	50,8	67,4	67,4	99,6	99,6
Youths aged 15 – 24	30,6	306010,00 55,00	306010,00 55,00	306010,00 58,8	58,8
Youth aged 20 – 29	26,6	50,6	50,6	50,6	50,6
Age-dependency ratio (people aged<15 and >60 per working-age person)	0,93	0,52	0,52	0,90	0,90
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,41	0,83	0,84	1,35	1,35
Youth age-dependency ratio (people aged<15 per working-age person)	0,85	0,42	0,43	0,80	0,80
Youth age-dependency ratio (people aged<20 per working-age person)	1,31	0,72	0,72	1,23	1,23

Senegal

Table 3.6 - Absolute sizes (in millions) of total population and certain age groups according to various forecasts scenarios of population dynamics in Senegal, by 2035

	2010 value	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	15-year long continuation of fertility stall with subsequent decline to 1.8 children per woman at 0.1 children per woman annually	15-year long continuation of fertility stall with subsequent decline to 2.1 children per woman at 0.1 children per woman annually
Total population	13,0	21,8	21,9	27,4	27,4
School-age children	4,2	6,0	6,0	8,6	8,6
Youths aged 15–24	2,7	306010,4,900	306010,4,900	306010,5,200	5,2
Youth aged 20–29	2,3	4,4	4,4	4,4	4,4
Age-dependency ratio (people aged<15 and >60 per working-age person)	0,92	0,52	0,53	0,87	0,87
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,43	0,84	0,85	1,32	1,32
Youth age-dependency ratio (people aged<15 per working-age person)	0,84	0,42	0,43	0,78	0,78
Youth age-dependency ratio (people aged<20 per working-age person)	1,33	0,73	0,74	1,20	1,20

Tanzania

Table 3.7 - Absolute sizes (in millions) of total population and certain age groups according to various forecasts scenarios of population dynamics in Tanzania, by 2035

	2010 rate	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
Total population	45,0	76,4	76,8	91,3	91,3
School-age children	14,6	21,3	21,3	27,9	27,9
Youths aged 15 – 24	8,9	17,3	17,3	17,9	17,9
Youth aged 20 – 29	7,7	15,8	15,8	15,8	15,8
Age-dependency ratio (people aged<15 and >60 per working-age person)	0,97	0,53	0,53	0,80	0,80
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,49	0,86	0,87	1,22	1,22
Youth age-dependency ratio (people aged<15 per working-age person)	0,89	0,43	0,44	0,71	0,71
Youth age-dependency ratio (people aged<20 per working-age person)	1,38	0,74	0,75	1,11	1,11

Uganda

Table 3.8 - Absolute sizes (in millions) of total population and certain age groups according to various forecasts scenarios of population dynamics in Uganda, by 2035

	2010 rate	Accelerated fertility decline to 1,8 children per woman	Accelerated fertility decline to 2,1 children per woman	Fertility decline at current rates to 1,8 children per woman	Fertility decline at current rates to 2,1 children per woman
Total population	34,0	61,6	61,9	73,9	73,9
School-age children	11,9	18,3	18,3	23,9	23,9
Youths aged 15 – 24	6,8	14,6	14,6	15,1	15,1
Youth aged 20 – 29	5,5	12,9	12,9	12,9	12,9
Age-dependency ratio (people aged<15 and >60 per working-age person)	1,10	0,53	0,54	0,82	0,82
Age-dependency ratio (people aged<20 and >60 per working-age person)	1,74	0,89	0,90	1,27	1,27
Youth age-dependency ratio (people aged<15 per working-age person)	1,03	0,46	0,47	0,74	0,74
Youth age-dependency ratio (people aged<20 per working-age person)	1,64	0,80	0,81	1,18	1,18

There is no great difference in the numbers of youth cohorts according to all of the above various scenarios by 2035, but the difference in the number of schoolchildren and in age-dependency ratios (especially those concerning young dependents) will be large.

Conclusion

China's engagement in Africa is expanding rapidly on all levels from migrants settling throughout Africa to state-owned enterprises and private companies. Since 1996, at the start of the institutionalization of China's investment in Africa through FOCAC (Forum on China-Africa Cooperation), China has been gaining resources in long term deals at bargain prices in exchange mainly for infrastructure development and trophy buildings that meet the needs of African governing elites, but not the people. African governments have generally been outmaneuvered and corrupted by the 'easy' money and a short-term outlook. China's longer-term geo-economic strategy has been very successful since China ramped up its investments in Africa after the millennium.

But looking ahead, this author sees a more educated Africa, a more assertive Africa and a more populous Africa. The current trade of 'resources for infrastructure' have resulted too often in shoddy infrastructure that collapses in three years or bridges to nowhere or roads and trains that primarily help Chinese companies get their resources from the interior to the coast so that Chinese-built ports can ship them to China.¹⁰⁸ They are not assisting in the overall development of Africa, except for those who live along these new roads, and, of course, the ministers and their cronies who pocket Chinese bribes. Will an assertive civil society, free press and democratic process change the bargain with China?

With rapid urbanization and a looming 'child-youth' bulge throughout West, East and Central Africa, a better formula for Africa is 'Resources for Manufacturing', including development of agri-business/food-related manufacturing. The upside for Africa is it provides employment for their surging population. China gains cheap labor and products close to emerging African markets with large populations, as well as nearby markets in Europe.

This new 'resources for manufacturing' bargain presupposes a higher level of local education and a minimum level of political and economic stability and services provided by African states. China will not engage in technical transfer to people who are not equipped in skills and to governments not attuned to the processes that make offshore manufacturing a promising venture. Shoe factories in Ethiopia may be replicated, but not yet the more sophisticated manufacturing that Africa may aspire to. Agribusiness/food related manufacturing, in particular, is a collaboration that makes sense for China and Africa for several reasons:

1. It increases jobs in rural areas where the demographic explosion is most intense;
2. It stems rural to urban migration;
3. It increases food productivity, which is currently highly inefficient;
4. To the extent that it helps Africa feed itself, it lessens the intensity of conflict and instability on the continent, which is a plus for Chinese investment; and
5. If there is excess food, Chinese companies can sell it abroad commercially.

The wrong way for China to tackle their food security challenges is to view Africa as a breadbasket for China. The demographic story suggests Africa will have great difficulty feeding its own child-youth bulge and rapidly growing cities. Nothing would be more politically clumsy than for Chinese companies to engage in land grabbing for export. Instances of land grabbing by Chinese are scarce today, but that could change tomorrow and needs to be monitored closely.

The other issue raised in this interim report is the relation of Chinese migration settling all across Africa, mainly but not only as shopkeepers, on the one hand, and the SOE's and large private companies doing business in resource extraction and infrastructure construction, etc. These groups are hardly monolithic. The author's experience living in Singapore as an international

¹⁰⁸ See Koffi Alle, "Africa: Minerals for Manufacturing - Towards a Bolder China Strategy" in IMF's AllAfrica magazine, June 2, 2014 at <http://allafrica.com/stories/201406022546.html?viewall=1>

lawyer and working with Indonesian clients in the early 1980s demonstrated just how de-linked the Chinese Diaspora is from China. Indonesian Chinese tycoons were proud Indonesians, especially during the long anti-Communist Suharto rule from 1966 to 1998. Yet many Chinese see a rising China as a hedge. They did business with the local authorities, paying off generals under Suharto,¹⁰⁹ and subsidizing political parties and their candidates in today's democratic Indonesia. In the unlikely but possible event that China ever came south and succeeded in 'taking over' Indonesia, one local Indonesian Chinese tycoon, Joko Soegiarto, explained to the author back in the late 1980s how he would seamlessly switch allegiance to the new political set-up controlled by China. 'Tida-apa' (which is Indonesian for 'no problem'), the industrious Chinese Diaspora will adapt and succeed.

This brings us to the main feature of Chinese in Africa: their infinite pragmatism and adaptability. In well-governed African states or fragile ones, the Chinese will do business with both. As described in Appendix 3, migrants will attract their cousins from China to emigrate to Africa because business opportunities for hard working immigrants abound and will continue to attract, especially if unemployment rises and the economy stagnates back home. From time to time, tensions will mount between Africans and Chinese migrants, but the Chinese state through its embassies and enterprises will find a way to tamp down those tensions.¹¹⁰

Chinese migrants are not agents of the Chinese state, but they can and are doing damage to the China brand when they flout local laws and engage in rapacious and monopolistic business practices. Yet the core issues of China's future ability to extract resources from Africa will depend more on the bigger players – SOE's and large private companies – than on petty traders and entrepreneurs. Can these larger companies adapt to a more assertive African public opinion and to a stronger regulatory regime with higher labor and environmental standards? CSR (Corporate Social Responsibility) is the new mantra when senior officials from Beijing make state visits to African capitals.

The question of Chinese military bases in Africa in 2035 remains unanswered in this interim report. Some of the answers require more research into Chinese strategy elsewhere, including the ASEAN countries. Much will depend on the evolution of US-China relations. It would be fair to assume that the more hostile and adversarial the relationship becomes, the more likely China will resort to unilateral measures to protect its growing investment in Africa. But military bases in far-away Africa is a major strategic leap forward in Chinese strategic thinking. It might happen incrementally, as Ed Lindblom would say, not as a carefully planned decision made at, for example, the CISS military think tank in Beijing. Start with free-riding and outsourcing security to the US and French and other powers already in the region, move to active participation in multi-lateral peace keeping missions, and perhaps down the road, strengthen security at Chinese owned mines and factories using Chinese engineers with a double security function, and only then, in exigent circumstances, consider sending in the military. Still, the requisites are there for

¹⁰⁹ The author wrote an article in 1998 for The New Republic called 'the Golden Handshake' that described the Chinese Indonesian tycoons favors to Indonesian generals in exchange for physical and economic security. Interestingly, these same Chinese tycoons were able to adapt to the post-Suharto transition to democracy, substituting local and national politicians for Suharto's generals.

¹¹⁰ Africa has yet to erupt in the kind of anti-Chinese riots seen in Malaysia in the late 1960s, which led to affirmative action laws to assist the local Malays. In the end, the Chinese in Malaysia continued to prosper and even engage in political parties. This is in contrast to the Indonesian Chinese, a relatively small minority in an ocean of indigenous 'pribumi' Indonesian. These Chinese have largely kept a low-profile in politics, focusing strictly on business and political patronage behind the scenes.

China gaining military bases at African ports as a by-product of their extensive relations with African governments.¹¹¹

¹¹¹ Relations between China and other Western powers and BRICs will affect China's approaches to some African countries, particularly the 'extremely fragile' countries and those 'in between.'

Appendix 1: History and Drivers of China-African Relations

Changing motivations in China-African relations: Three phases in the last 60 years

Political engagement (1950s – late 1970s). This initial phase was not driven by economic considerations or a desire for natural resource security. Rather, it was driven by an anti-colonialism and anti-imperialism agenda, the needs of African states and liberation movements for technical, political and military support, and China's desire to position itself as the standard bearer of the Third World and a key player in the international relations. Premier Zhou En Lai visited 10 African countries from the end of 1963 to the beginning of 1964. This strategy bore fruit when, in 1971, China won the vote for a permanent seat in the United Nations Security Council, largely due to African support.¹¹²

The transition period from late 1970s through the 1980s. The turbulent transition that followed the death of Mao in September 1976 triggered an important shift in relations throughout the 1980s. China shifted its focus toward domestic issues, notably economic development and modernization, resulting in a scaling back of engagement and China's pivot toward the West. China required Western technical knowledge and capital for its ambitious modernization program. Premier Deng Xiaoping embarked on a strategy of "market-driven socialism", a movement that would speed up the development of State Owned Enterprises (SOE), the establishment of Special Economic Zones and economic reforms that would constitute the bedrock of China's economic growth and its "Going out" strategy.

The knowledge China gained from its domestic experiments in reform and development helped shape its approach to Africa. Unlike China, which went through endogenous reforms, African countries were struggling with drastic economic reforms imposed by the international financing institutions like the IRDB and World Bank. Africa was also affected by a democratic wave triggered by the fall of the Berlin Wall.

Some degree of privatization and market liberalization in Africa provided opportunities for foreign investors, including those from this new quasi-market-driven China. Initially, Chinese small businesses relied on Chinese government support and assistance programs in Africa to gain entrance into African markets. China-African relations focused more on the development needs of both China and Africa and the diversification of resources and means of funding, such as interest-free loans, interest subsidy loans, technical assistance, project construction, expertise guidance personnel training and technical training.¹¹³

The third period (early 1990s to the present). The crackdown in Tiananmen Square in 1989 triggered an international outcry that led to the isolation of China by the international community. Partly to break out of its post-Tiananmen international isolation, China expanded and integrated its assistance, trade and investment programs in Africa.¹¹⁴

There are now several Chinese actors operating in Africa, including SOEs, central, provincial, and local governments, development banks (EXIM bank and China Development Bank), chambers of commerce, business associations, commercial banks such as China Industrial and Commercial Bank, and small and medium size enterprises (SMEs). In 2009, Chinese authorities estimated that there were about 2,000 active Chinese companies active in Africa, operating in a vari-

¹¹² Op cit.

¹¹³ Zhang Haibing, 2012 . <http://www.focac.org/eng/xsjl/xzxs/t907005.htm#>

¹¹⁴ This integration makes it difficult for researchers to accurately disaggregate the amount of Chinese official Foreign aid and Investment in Africa.

ety of sectors, including construction, agriculture, mining, infrastructure development, electronic, garments, real estate, finance and banking, telecommunications and transport.¹¹⁵ Africa has become the third largest destination of Chinese Outward Foreign Direct Investment after Europe and Asia. Although Africa's share of this investment is still relatively small (less than 5% in 2011), it is growing rapidly.¹¹⁶

The current period has also seen a process of institutionalization of Chinese-African relations. FOCAC, which began in 2000 and convenes at the heads of state level every three years, has become an effective mechanism to advance their relationship.¹¹⁷

Four drivers of China-African relations summarized:

1. **Chinese internal political dynamics and economic orientations**
 - a. Possible strengthening of national security issues in Chinese leadership decision-making
 - b. The increasing role of the markets in the Chinese economy
 - c. In order to avoid the “middle income trap”, China strives to shift its position from the world's low-cost factory to a more value-added manufacturer and technological innovator, and from an investment-driven to a consumption-driven economy. How will shifts in the Chinese economy affect its strategy in Africa?
 - d. China's continued search for new markets and natural resources

2. **Africa's political choices and economic imperatives:** African efforts to attain democracy, inclusive growth, infrastructure development, and expanded agricultural and manufacturing capabilities.

3. **Security concerns and increased fragility in Africa**
 - a. Chinese security vulnerabilities: The drive to guarantee the security of Chinese citizens, investments, and critical trade routes from Africa (Indian Ocean, Gulf of Aden, Gulf of Guinea)
 - b. Dilemmas of China's “no intervention policy”
 - c. Conflict-driven fragility in significant parts of Africa.

4. **Interactions between China, BRICS and other countries in Africa:** The growing engagement in Africa of non-Western players like Brazil, India,¹¹⁸ Japan, Turkey and South Africa.

Four Drivers of China-Africa Relations

¹¹⁵ CAITAC 2010.

¹¹⁶ China MOFCOM

¹¹⁷ Zhang Haibing <http://www.focac.org/eng/xsjl/xzxs/t907005.htm#>

¹¹⁸ It would be interesting to investigate in Phase Two of the Study how India might push back against China, given their long term involvement, at least with Indian migrants and traders, especially in eastern and southern Africa.

1. The Chinese internal political dynamics and economic orientations

- a. Possible strengthening of national security issues in Chinese leadership decision-making.
- b. The increasingly decisive role of the markets in the economy or marketization of the Chinese economy.
- c. In order to avoid the “middle income trap”, China strives to shift its position from the world’s factory to a more technological innovator, and from an investment-driven to a consumption-driven economy.
- d. China’s continued search for new markets and natural resources.

The latest *Third Plenum* of the Communist Party of China held in November 2013 was determined to give a “decisive” role to the market, and **signaled a shift of China’s investment-based economy to one driven by consumption and innovation.**¹¹⁹

Two key highlights from the Third Plenum were particularly noteworthy: a) the strengthening of central control over national security issues and b) the decisive role that markets should play in allocating resources, “free flow of products and factors” and “fairness of resource allocation.” This orientation **if** applied will not necessarily mean a complete liberalization of the Chinese economy, but maybe a gradual *marketization* of the State Owned Enterprises (SOE) system, a key player in Chinese investment in Africa.

2. Africa’s political choices and economic imperatives

- *African efforts for inclusive growth and infrastructure development including enhanced agricultural and manufacturing capabilities*

In this context, inclusive growth is defined “as economic growth that results in a wider access to sustainable socioeconomic opportunities for the majority, while protecting the vulnerable, all being done in an environment of fairness, equality and political plurality.”¹²⁰ Africa’s recent growth has been unevenly distributed in the region, with some countries performing well while others are still trapped in cycles of conflict and instability. To cope with the huge jump in the population of Africa that is forecast in the first chapter of this Study, the more enlightened African leaders will go for inclusive growth that translates into social progress, some poverty relief and much more employment opportunities for young Africans. Ethiopia, Nigeria, and South Africa are already starting to build their industrial base in order to move from a largely resource-based economy to one with integrated manufacturing. Some of these countries and others are also refocusing investments toward infrastructure and workforce-skills development in an effort to expand the private sector, attract foreign investment and develop new value chains in agriculture and agri-businesses.

¹¹⁹ Road to the Chinese Dream? Xi Jinping’s Third Plenum Reform Plan. Published by K@W in Law and Public Policy China, December 10, 2013

¹²⁰ Benedict S. Kanu, Adeleke Oluwule Salam and Kazuhiro Numawasa. “Inclusive Growth: An Imperative for African Agriculture”. African Development Bank Group, Tunis, p.iii.

3. Security concerns and increased fragility in sub-Saharan-Africa

- a. *Chinese security vulnerabilities: Citizens – investments – supply routes from Africa (Indian Ocean, Gulf of Aden, Gulf of Guinea)*
- b. *Dilemmas of “No intervention policy”*
- c. *Conflict driven fragility in Africa*

According to the African Development Bank (AFDB), 20 of the 36 ‘fragile’ states in the world are in Africa. Over 200 million Africans live in countries or communities experiencing systemic disturbances (conflict, economic crisis, socio-political and environmental shocks) that negatively affect their state’s ability to ensure security and provide basic services to their populations. Chinese investments in countries such as Guinea, Chad, Democratic Republic of Congo, South Sudan and other fragile countries of the region amount to billions of dollars.

Some of these countries are engulfed in protracted conflicts that threaten both Chinese interests and citizens. So far, China has adopted “non-conditionality” and non-intervention principles, despite pressing calls and increased expectations from African countries to see China play at least a mediation role in some of these conflicts. **The way China decides to act to help resolve these conflicts, and to protect its interests and citizens, will impact its relations with different international¹²¹ and local state and non-actors in Africa.**

4. Interactions between China, BRICS and other western powers in Africa

- a. *The growing engagement in Africa of non-Western players like Brazil, India, Turkey, Japan and South Africa.*
- b. *Possible French resistance to Chinese encroachment in Francophone Africa*

Africa has increasingly become attractive to new players from emerging economies looking for raw materials and a potential market for their manufactured goods (electronics, cars, machines, etc.). Non-Western players like Brazil, India, Turkey and South Africa potentially threaten China’s privileged economic relationship with some African countries. At the same time, Chinese penetration provides African countries with leverage for negotiating with the West, particularly traditional partners such as France, the European Union and the United States, who have long benefited from quasi-exclusive economic and military engagement in the region.

One potential barrier to China’s influence in French-speaking Africa is France. **[this section will be revised following my visits to Paris in the spring 2014]**. French policy towards Africa is under review; according to the summary of a July 2013 French inter-agency meeting on international cooperation (CICD), there appears to be a preference for disengagement (as far as aid is concerned) from middle income French-speaking countries. As the Chinese deepen their ties with former French colonies, how, if at all, will the French resist Chinese encroachment?

Figure 4.1 - Schematic of the four drivers of China-African relations

¹²¹ Other BRICS countries, Western powers and African countries



Appendix 2: Preliminary Observations on China in Africa With Breakdown of Sub-Saharan Africa into Five Regions

This report appeared as part of the First Draft in February 2014 and is based in part on the author's meetings in Johannesburg, South Africa and Nairobi, Kenya in January 2014

Which China in Africa? When one looks at China in Africa, one usually thinks of the massive infrastructure project funded and constructed by Chinese corporations, usually affiliated with large state owned enterprises (SOE's). Some projects are also carried about by private Chinese companies. But there is also a different category of Chinese in Africa, namely over one million Chinese migrants who came on their own or stayed after their companies completed the infrastructure project where they were employed. Many of these migrants are shopkeepers in Chinese cities and towns, offering cheap Chinese merchandise. Others are entrepreneurs, still others prospect for gold and other minerals on their own.

It is important to distinguish between the two faces of Chinese in Africa when looking at their future prospects in the African continent. Who will have the greater impact on Africa, the major SOE's carrying out transformative infrastructure ports, roads, trains and telecoms projects or the migrants, whose number is likely to increase as Chinese individuals and families look abroad for economic opportunities?

Win-Win relationship? On the surface, it is hard to criticize the Chinese for undertaking so many and such large infrastructure projects. Africa desperately needs such projects to open up its undeveloped areas and get its commodities out of the ground and to ports on the east and west African coasts. Many see the Africa-China relationship as a win-win, and give credit to China for helping Africa reach its take-off or transformative stage. Frequently, the Chinese are praised for being business-like and not insisting on transparency and accountability on the part of the African governments or on reforms in the host country's civil society and human rights.

Growing tensions. Yet more African voices are now criticizing China for behaving like another colonial power. The China-Africa honeymoon from Chinese construction of stadiums, roads and oil pipelines is ending as people ask how all this Chinese investment has benefitted them. Where are the jobs for the indigenous Africans and who is benefitting from the extraction of energy and mining resources from the continent? Tensions are easy enough to detect. Below are some negative African perceptions of China:

- **Invisible neo-colonialists?** The Chinese working on the big infrastructure projects are 'invisible' to the natives, and live in separate work compounds with separate services and little interaction with Africans. In some countries where the Chinese are significant players, like Angola, there is GDP growth but not enough development. Few jobs are created in China's investments related to the extraction of mineral resources and energy. Chinese construction is often shoddy as contractors take short cuts to save money. Chinese frequently resort to corrupt bidding practices, bribery of officials and fraudulent contracts.
- **Encouraging non-transparency?** Non-transparent contracts perpetuate corrupt relations between African rulers and Chinese investors in African countries with a history of unaccountable leaders. Some critics believe that the Chinese are extracting resources at a frac-

tion of their market value. Chinese development of African farmlands for export may lead to future tension with Africans in regions experiencing rapid population growth, which consists of pretty much all of sub Saharan Africa except for South Africa and a few neighboring countries. Chinese factories and mines in Africa are increasingly criticized by African NGO's for the damage they are causing to the environment and for violating international labor practices.

- **Undercutting local-owned retailers and entrepreneurs.** Perhaps the biggest problem for Chinese in Africa comes from the one million plus Chinese migrants working as shopkeepers and traders throughout Africa. In cities and towns in Nigeria, Chinese traders are undermining local retailers with cheaper Chinese goods. Some countries are deporting Chinese migrants, like the illegal gold diggers in Ghana while other countries like Botswana are requiring licenses from Chinese shopkeepers in an effort to regulate them.

In order to understand Chinese long-term prospects in Africa, it is useful to articulate possible scenarios for the future of Africa.

Africa Rising. An optimistic scenario sees Africa rising with some exceptions. The ten or more emerging African countries that have seen steady increases in growth and improvements in governance over the last 15 years will continue to develop middle class societies, leading to added domestic consumption. The fragile countries will struggle but their demographically and economically induced violence and civil wars are contained and insulated from their relatively more prosperous neighbors. One anecdote was told to me by a Ugandan journalist in Nairobi. Traders from Uganda had used South Sudan to get their goods out in Friday trading areas along the South Sudan border. After signs of civil war in South Sudan in the autumn of 2013, the markets simply shifted to the Ugandan border with north-western Tanzania, which provided an alternative gateway for Ugandan food exporters.

Positive African scenario and its impact on China. In an optimistic Africa rising scenario, China is able to broaden its investment and gains manufacturing footholds in growing African markets. A possible negative for China is crowding by other foreign investors who see the coming transformation and want to join the party. New foreign investors might dilute Chinese influence and profit margins as African governments are able to drive a harder bargain with Chinese investors. But the African market is so big that new investors can probably be accommodated without adversely impacting on China's established position.

A middle scenario which might be called a 'mixed-bag' scenario, is one where some of Africa prospers and the rest of Africa stagnates or even declines. The spillover from fragile African countries cannot be contained and regions like East Africa will be adversely impacted by violence and civil wars in their neighbours in the CAR, South Sudan and DRC.

A more negative 'Africa lagging' scenario envisions stagnation and in some instances, a reversal in the economic fortunes of emerging African countries caused by out of control demographic growth combined with failures in governance that leave large numbers of angry young men unemployed. How does China fare in these negative scenarios?

Negative African scenarios and their impact on China. In a mixed-bag or African lagging scenario, with African winners being overshadowed by the losers, China will stay focused on the winners and avoid fragile states unless there are compelling resource reasons to invest, such as in highly unstable countries like the DRC (Congo), South Sudan, etc. China could benefit in this 'Africa lagging' scenario because other frightened foreign investors will leave or stay out of Africa, leaving China alone to tighten its grip on African resources on favourable terms. The negative for China is the increased insecurity of its investments particularly in the fragile, war-torn states. This could lead to scenarios similar to the forced evacuation of thousands of Chinese workers from Libya during the civil war at the end of Gaddafi's rule.

How does China fare on a region by region basis?

Southern Africa

The most developed part of Africa is South Africa, and its neighbors gain from South Africa's developed-world standard banking and corporate system. Zimbabwe under Mugabe is run like an extractive oligarchy with Mugabe the chairman of the board. But in the long term, Zimbabwe's superior educational and legal systems imparted by the British when it was Southern Rhodesia, suggest a rosy future for this well-endowed country. Zambia, which has substantial Chinese investment, is not quite as well endowed as Zimbabwe but in the same class. Malawi is a tiny landlocked country that is suffering from a huge demographic surge, making it one of the weakest countries in southern Africa. Namibia is another underdeveloped state. It is interesting that the Chinese are building a road from its uranium mine in the middle of Namibia to the western coast at Walvis Bay rather than toward the capital, Windhoek, in the center of the country. This means less development for Namibia but better access to its uranium for China, providing an example of China putting its interests ahead of its African host.

The biggest question-marks are the two former Portuguese colonies, Angola and Mozambique. If one thinks that countries with a history of instability and civil war will continue to be unstable, than a pessimistic long term prognosis would be valid. On the other hand, if one takes into account the huge energy resources that Angola has been able to exploit, and that Mozambique is just starting to exploit, and a more encouraging economic future is likely. The question comes down to governance.

Angola has a historical problem in that its rulers come from the Sao Tome & Principe (Portuguese) areas in the Gulf of Guinea, against whom many indigenous Angolans led by Jonas Savimbi fought a long civil war in which Savimbi's Unita rebels lost. Angola has a Dutch disease problem in that its oil exports (largely to China) dwarf all other industry. Above all, Angola is an example of growth without development, as all the socio-economic indicators are negative. On the positive side, Angola's oil company has become a major multilateral company with significant transnational continental presence. It could become a second South Africa.

Mozambique has had many of Angola's negatives without a productive resource base until recently, when oil was discovered. The Chinese are active in fishing, sometimes illegally, right up to the long Mozambican coastline. If Mozambique could convert its soon-to-be oil resources into development and infrastructure, it could take-off. But weak governance with a history of socialism may squander the opportunities. China is developing a port in northern Mozambique at Beira, which is a gateway to resources in the three landlocked countries of Malawi, Zimbabwe and even Zambia. China would benefit enormously from a prosperous and stable Mozambique.

China has had a long history in South Africa, having developed good relations with the Mandela ANC government. More recently, it has brought a large minority share in the Standard Bank, a South African based bank with branches in 18 African countries. This indirectly provides China with inroads into all of those countries in a politically safe way.

East Africa

While South Africa is the most developed, East Africa has the most potential:

- It does not have one country that far exceeds the other in population or GDP.
- Nairobi, the capital of Kenya, has become a major hub for international companies that want a presence in the middle of the continent.
- It has good geographic access to Asia via its long east coastline
- It has a merchant and seafaring background due to its Swahili heritage as part of the Omani sultanate.

- It has the best chance of regional integration within the EAC, comprising the five countries that comprise East Africa: Kenya, Uganda, Tanzania, Rwanda and Burundi.
- It has the only country that has introduced family planning on a national level through the forceful leadership of Paul Kagame, President of Rwanda.

The problems are differential paths towards development taken by the market-oriented Kenya and the socialist-oriented Tanzania, led for decades by Julius Nyerere. As a consequence, Tanzania is growing more slowly with a more robust fertility rate due to its culture of the extended family. Kagame has become increasingly authoritarian, raising question marks as to Rwanda's long term prospects. Kenya suffers from competing tribes for political spoils, which leads to periodic political violence. Above all, Kenya faces security challenges from neighboring Somalia, the closest thing to a failed state in the continent.¹²²

China has its most significant East African inroads with Tanzania for historical reasons. Mao supported Nyerere's socialism, and China built the long Tazara railway from Dar es Salaam to

Zambia in the 1970s (and is now in the process of refurbishing the dilapidated railway). China is sitting on the fence in Kenya, which has oil discoveries in its underdeveloped northwest areas, and in Uganda, with similar oil discoveries. Kagame of Rwanda has pushed back recently on the Chinese over the terms of some recent Chinese projects.

More positive for China is Kenya's decision to work with the Chinese in the development of a major port at Lamu Island, which is part of a larger northern corridor project involving Kenya, Ethiopia and South Sudan. China already has a warehouse on Lamu Island to service its anti-piracy fleet. Analysts are watching to see whether its development of the Lamu Island port could lead to a presence there of the PLA Navy.¹²³

Horn of Africa

Ethiopia, the largest country in the Horn of Africa and the only country in the region that was able to remain uncolonized, has developed into a reasonably stable and mature political and economic system. Following horrific rule by the pro-Marxist Mengistu, Ethiopia has come a long way under the stern leadership of the recently deceased leader, Meles Zenawi. Ethiopia has emerged from frequent famines to a culture that accepts a much lower fertility rate. The federal system works fairly well in allowing some degree of self-rule among the tribes in the various provinces. Ethiopia's political challenge is one of inclusiveness in the central government, where one dominant tribe rules in Addis. Another handicap is the resistance of this and previous governments to the market system, financial banks and de-regulated commerce.

The Chinese have been partly responsible for the turnaround of Ethiopia in terms of a number of large infrastructure projects. The latest gift from China is a gigantic group of structures to house the African Union. Completed in 2012, these buildings will help make Addis Ababa the capital of the African continent, like Brussels in Europe. Addis will be the workplace for many bureaucrats, but not necessarily the seat of a dynamic capital market.

The example of the AU forum shows that China understands the importance of symbolic projects that give Africans pride, even if they do little to dent African poverty. While the West favors schemes to increase polio vaccinations, the Chinese build stadiums and other monuments of modernity where African leaders can proudly strut. It is unlikely that these symbolic gestures will become any less important in the future.

¹²² Ironically, the entrepreneurial Kenyans of Somalian descent are squeezing out the Kikuyu tribesmen-businessmen from their long-time dominance of the Nairobi property market.

¹²³ Discussion with Amb. David Shinn, co-author of *China and Africa* (2013) in a meeting in Washington, Oct. 3, 2013.

One area where China has been very active in Ethiopia is in agriculture, including farm acquisitions in the largely undeveloped lowlands. Ethiopia may be the country where Chinese efforts to export food from Ethiopia may clash with Ethiopia's efforts to feed its rapidly growing population.

Other than the tiny western enclave of Djibouti and Ethiopia, the rest of HOA is in sad shape. Eritrea has had huge emigration and an insular autocratic leadership for years. Somalia has been ungovernable for over two decades with little sign of an emergence of long term stability.¹²⁴

West Africa

West Africa is comprised of two worlds. Over a dozen sparsely populated countries, many of them part of the francophone alliance, versus Nigeria, a 160 million plus behemoth.

Nigeria. Nigeria will have the largest population and economy of any of the 54 countries that make up the continent (including North Africa). Lagos is the largest city in sub-Saharan Africa, and the commercial hub of West and Central Africa. Nigerian entrepreneurship is legendary. Its tribal system works fairly well in sharing power, and its military is professional and, in recent decades, apolitical.

So what is there to worry about in Nigeria? Plenty. It has an endemic system of corruption, with institutionalized bribery from the parliamentarians (who are the highest paid in the continent) to low level civil servants. Everyone seems to be paid off. Nigeria's immense oil fields in the southeastern delta region are infamous for its inefficiency with much of the oil siphoned off. While it had good leadership under the competent and relatively clean Obusanjo, the current leader lacks the vision to move the country, and the continent forward. If there is any country where the quality of leadership can have a huge impact on its fortunes, it is Nigeria.

Nigeria competes with South Africa in international fora. South Africa is now a member of the Brics (which added the s) whereas Nigeria is part of a new acronym of rising countries called the Mint (Mexico, Indonesia, Nigeria and Turkey). Nigeria plays a leading role in AU peacekeeping forces that have been stepping up with increasing numbers of civil wars in the region, and a palpable reluctance of France and other western powers to intervene without substantial AU or ECOWAS participation.

Internally, Nigeria faces political and security challenges from sectarian divisions between the Muslim-dominated north and the Christian dominated-south. In recent years, the Boko Haram, a radical Islamist group in northern Nigeria, has wrought havoc in the region precipitating an over-reaction by the government in Abuja that is destabilizing much of northern Nigeria. If Boko Haram is able to extend its reach across its borders to northern Cameroon and elsewhere, it could lead Africa into a downward security spiral towards the most pessimistic scenario of African laggardness.

Chinese traders in Nigeria have been pushed back by local retailers who felt that the Chinese were undercutting them with cheaper Chinese manufactured goods. The recently deposed governor of the Central Bank of Nigeria, Sanussi, remonstrated with the Chinese for not setting up value-added businesses in Nigeria to take advantage of an educated low-waged workforce. Only recently, a Nigerian tycoon, Dankote, announced plans to build a refinery in Nigeria. It is a matter of time before China will respond and establish factories in Nigeria to serve the country's huge and rapidly growing domestic market. The economic opportunity from investing in Nigeria outweighs the political risks for China.

¹²⁴ The one possible good news is that the US has decided to return an ambassador to Mogadishu. Conversation with Robin Quinville, US Embassy, Berlin, February 13, 2014.

The rest of West Africa is showing signs of integration under ECOWAS, and has established a passport system where one can enter other ECOWAS countries with ease. The francophone countries already have a single franc currency and has plentiful French civil servants assisting in the financial operations of these countries. More recently, the French have sent troops to Mali in West Africa as well as C.A.R. in Central Africa to quell instability there.

On the negative side, the countries west of the Gulf of Guinea are likely to remain fragile. From Liberia to Sierra Leone, to Guinea to Guinea-Bissau, there has been one extractive government after another.

The two Francophone stars among mostly fragile countries are the democratic Senegal, which has never had a coup d'état, and Cote-D'Ivoire, which is a cocoa giant with many other resources starting to be tapped.

Central Africa

Central Africa is probably the least governable of the continent. Its strongest state is Gabon, a long time oil producer with timber, both of which are being exploited by China. Cameroon to the north has been quietly stable for decades but that is likely to change when its aged dictator passes and sectarian tensions between Muslims to the north, aided by Boko Haram next door in northern Nigeria, and Christians in the southwest coastal areas. The most problematic country in Central Africa, and perhaps the continent, is the Democratic Republic of Congo (DRC), which was misfigured from its infancy as it emerged violently from its Belgian overlords to a megalomaniac ruler, Joseph Mobutu, who outmaneuvered Patrice Lumumba in a power struggle with cold war implications.

The DRC has rarely had a government in Kinshasa that could exercise sovereign authority over the eastern parts of the Congo next to Uganda and Rwanda in the Lakes area, as well as in the mineral rich Katanga region in the south towards Zambia. A truly federated DRC might work as it would provide the distant regional areas with incentives to work together with a government in Kinshasa. The likelihood of that happening is very slim.

China has extensive mining interests in the DRC, Gabon and elsewhere in Central Africa. This is one region where it can do reasonably well with non-transparent local leaders despite the regions endemic civil wars and political violence.

Summary. It is difficult to generalize about Africa or even the regions within Africa. In so many cases, one country has fairly good governance and long term prospects, and the neighboring country is and will likely remain fragile. China will likely stay invested in the 'winners' and in those fragile states that have natural resources that China can exploit.

The chapter on demographic trends paints a fairly dismal future for many of the countries in East and Central Africa, the Sahel, the Horn of Africa and to a somewhat lesser extent, the West African countries. The population explosion over the coming two decades arises from a fertility stall in most of these countries. In other words, the fertility rate has stopped coming down despite continuing trends toward modernization. Part of the reason is that the rate of urbanization is slower in Africa than in comparable developmental regions in Asia or South America. Much of the reason is weak governance, the inability to provide national family planning services that extend into the villages, pro-natalist sentiments among some African leaders, polygamy among mostly Muslim communities, the lack of secondary education of girls, whose average marriage age in many African countries is 15, and who are viewed as essentially baby-making machines.

All of these factors contribute to a demographic catastrophe if African countries cannot remedy the demographic bubble and provide an ambience for sustainable economic development. Afri-

ca's continuing inefficiencies in agricultural production and related governance deficits will make feeding its own burgeoning population a critical future challenge.

QUESTIONNAIRE ON THE FUTURE OF CHINA IN AFRICA

1. **Positive African scenario and impact on China.** In an optimistic Africa rising scenario, do you see China broadening its investment or do you see crowding by other foreign investors who see the coming transformation and want to join, thereby diluting Chinese influence and enabling African governments to drive a harder bargain with Chinese investors.

2. **Negative African scenario and impact on China.** In a mixed-bag or slightly pessimistic scenario, with African winners and losers, do you see China focusing on the winners and avoiding fragile states unless there are compelling resource reasons to stay invested in fragile states like the DRC, South Sudan, etc? In this 'Africa lagging' scenario, does China benefit by being left alone among large foreign investors to tighten its grip on African resources?

3. **Chinese adaptability.** There are several negative perceptions among Africans towards China. But what most people overlook is China's ability to adapt and address African tensions. Are you sanguine that China can adopt and smooth out most of these tensions?

4. **State owned enterprises (SOE's) vs. Chinese migrants.** There are at least two distinct Chinese groups in Africa: The large SOE's (and perhaps also non-state owned corporations) and migrant traders. Do you see the latter as more troublesome than the large investors in terms of creating tensions with the Africans? (i.e. undercutting local retailers by flooding Africa with cheap Chinese goods).

5. Aside from minerals and energy, China has a long term interest in food and manufacturing.

a) **Food.** Do you see large scale land acquisition for food production for export (partly back to China) by Chinese agri-businesses? Would exporting food out of Africa create tensions with several African countries that have rapidly growing populations to feed?

b) **Manufacturing.** Do you see Africa emerging as a low-wage manufacturing hub for Chinese owned and managed companies?

6. **Regions.** Out of the five regions in sub-Saharan Africa (Horn of Africa, East A, West A, Central A and southern A) what do you see as the regions offering China the most sustainable long term opportunities?

7. **Securitizing.** Over the long term, how do you see China securitizing its growing investments in Africa? Through participating in multinational peace keeping operations that can deal with any instability in any given country, or through its own military navy (in ports that it has constructed in countries where it has significant political and economic leverage to gain bases) or possibly through its army to be stationed near Chinese owned mines, etc.?

8. **Transparency.** One can assume China will continue to work with countries like Angola¹²⁵ or Democratic Republic of Congo, whether or not they become better governed. Do you think China prefers authoritarian non-transparent governments with whom it can do deals secretly, or can the Chinese also flourish in countries that have active civil societies and more transparency? One example of a more open society is Kenya, where the Mombassa train proposal in which the Chinese have been alleged to submit a fraudulent bid, according to Kenyan media reports.

¹²⁵ The author is struggling over the future of countries like Angola which have huge growth without much development. Will Mozambique likely follow the same path? How stable will these countries be in the long term if they fail to create more development, education, better governance, etc.

Appendix 3: Interview Excerpts

Excerpts from interviews by Howard French, a former New York Times journalist, with Chinese migrants and Africans in several countries in Africa in his recently published book, China's Second Continent: How a Million Migrants Are Building a New Empire in Africa (2014)

“Each of the companies that comes here acts like a private intelligence operation and they inform their embassy about all of the resource and business opportunities that might interest China.”Chinese business has captured our elites. p. 217

China has rolled out a special vocabulary of friendly partnership, of marching together fraternally along the path of development, and, above all, of “win-win,” the anesthetizing catchphrase that is attached to nearly everything it does. In Liu’s remarks, echoed in a thousand other similar conversations I’d been a part of, though, one glimpsed a darker truth. China had not so much broken with the paternalism of the West that it so often decried, as replaced it with a new one of its own. Africans were not really brothers. Not at all. Behind the fraternal masks, Chinese officials thought of them as children.... P. 221

Almost everywhere I’d been during my travels, Africans had questioned the quality of Chinese construction. On my most recent visit to Mozambique, the first of Maputo’s Chinese-built international airport terminals had already suffered serious flooding in the earliest days of its use. P. 222

“We have two aims, to show Mozambicans that they can have big goals—not just to feed themselves, but also to sell what they produce overseas.” P. 223

“The Chinese are not big landowners yet, but their presence on the land is growing rapidly,” he said. “Five years ago you couldn’t find them at all here, but now they are farming in almost every district.” European companies were so far responsible for the major land takeovers, or “land grabs.” Lurio Green Resources, of Norway, for example, had paid \$ 2.2 billion to gain control of more than 100,000 hectares (220,000 acres) in northern Mozambique to farm eucalyptus trees. P. 225

As a percentage of the indigenous population, ten thousand Chinese residents, which many Namibians say errs on the low side (common estimates ran as high as forty thousand), arguably represents China’s largest footprint in Africa. For that reason, Namibia may in some sense be a bellwether of China’s ongoing migratory push into Africa. P. 234

“I’m Chinese,” he answered, “and we have an expression that says you leap forward if there’s an empty space. Empty spaces are there to be filled.” P. 235

“These vegetables are really good quality, and that’s why he’s doing such a good business in them,” he said. “Even the whites have started buying them. Vegetables protect your body against harmful substances. They’re good for your health and they help keep you going. I don’t know why the blacks don’t eat them. They just don’t get it. All they are interested in is meat.” P. 237

Their talk was full of complaints about workers— about *hei ren*, a phrase they used incessantly, meaning black people. P. 239

“We can’t build infrastructure for ourselves, because if we bid 200 million, they will offer to build for 100 million. Yes, the state saves money, but the negative consequence is that the private sector here is killed off.” A solution, he said, would be to require Chinese companies to form joint ventures with local partners. “They should bring Namibians aboard, so that we can build up our society and benefit from its wealth. Otherwise in ten years we will see that only the Chinese have benefited and Africans remain poor. P. 243

“I don’t blame the Chinese for taking over the sale of our traditional goods in the countryside if this is true,” he said. “It is the government that is responsible for destroying our small and medium-sized enterprise sector and preventing the growth of a middle class here.” Beyond the WikiLeaks affair, he said, the Chinese had routinely won contracts through bribery and by flouting the country’s labor laws. They showered gifts on members of the political elite, almost all of them members of SWAPO, the ruling party that had fought and won the country’s independence. P. 252

I knew the main unions in question in Namibia to be virtual extensions of SWAPO. Arrangements like these were not uncommon in Africa, particularly in countries governed by parties that had won power as victorious liberation movements. P. 253.

China’s competitiveness and search for national influence can also be seen in the way it is investing massively in African media. The state broadcaster, CCTV, is building what it hopes will become a continent-wide television powerhouse in Nairobi. The official Xinhua news agency has teamed with African mobile phone companies to supply news via cell phone. And China Daily has launched a supplement, Africa Weekly, for wide distribution on the continent. At the same time, Beijing is funding Confucius Institutes, a very rough equivalent to the Alliance Française or Germany’s Goethe-Instituts, all over the continent. P. 262

No one knows how many Chinese have set themselves up on African soil in recent years, but if anything, the widely used figure of one million, which I myself have adopted here, seems quite conservative. It is even more reasonable to expect these numbers to continue growing, perhaps even dramatically. The arrival of these newcomers on this scale is arguably the latest chapter in a very long narrative of empire construction through emigration. p. 263

From the book’s **introduction**

One of the most important and unpredictable factors in China’s relationship with Africa, however, has been oddly omitted from most of these discussions: China’s export, in effect, of large numbers of its own people who are settling in as migrants and long-term residents in far-flung and hitherto unfamiliar parts of the continent. By common estimate, Africa has received a million or so of these Chinese newcomers in the space of a mere decade, during which time they have rapidly penetrated every conceivable walk of life: farmers, entrepreneurs building small and medium-sized factories, and practitioners of the full range of trades, doctors, teachers, smugglers, prostitutes. P. 5

As the population of countries like these soars, their cities will become nightmarishly crowded and instability and even state failure will become chronic among many of them, while their underground wealth is being thoroughly depleted and their environments destroyed. Mid-century will stand out as a sort of twin horizon for Africa, when population growth peaks and when known oil and mineral reserves are exhausted in many countries. Thus, for some of Africa, the continent’s “rediscovery” by China will mirror the lucky timing of China itself a generation ago, when it began its historic opening. Strong new demand and plentiful investment from this big and hungry new partner will fuel growth and dramatically expand opportunities. For the less fortunate, though, China and its voracious appetites will merely hasten an already foreseeable demise. P. 7

How, after all, could anyone compete against construction companies using prison labor? The rumor has no basis in truth, but it nonetheless impeded a more serious discussion of Chinese hiring practices in Africa, whether involving big state companies or smaller private ones, like Yang's. Most African countries have long suffered levels of unemployment that are orders of magnitude higher than what people in most developed countries are accustomed to. Beyond questions of hiring, there is the problem of transfer of skills that will never take place so long as foreign workers fill even the most rudimentary of jobs. P. 53

Yang believes it will take between fifty and a hundred years before Zambia becomes developed. "You will need to see good education for three generations." I objected that the local copper, the source of 70 percent of the country's foreign exchange, will not last that long. "The copper will be gone, but they have land. They are rich in land, and Zambians have good bodies. The problem is they cannot work hard." It was the commonest of prejudices, and its delivery, as a simple fact, seemed to answer my earlier question about why he brought semiskilled workers all the way from China. P. 55

The phenomenon of laborers staying on at the end of their contracts with big public works companies is likely the biggest single source of Chinese migration to Africa. Workers would arrive from a given locality in China and discover there was good money to be made in some corner of an Africa they had never before imagined viable. Soon, they were sending word back home about the fortunes to be made there, or the hospitality of the locals, or the wonders of the environment, or the joys of a free and relatively pressureless life. In short order, others would follow. P. 72

An unskilled class of petty traders from a fast developing and much more powerful country like China steadily filtering into a society like Senegal, which had its own deep commercial culture and was suffering through a phase of stalled economic development, was bound to cause problems. This is not to excuse any individual act of crime or violence, but rather to suggest a useful pause for reflection among both the Chinese and the many African governments that have adopted a laissez-faire approach to this kind of migration, with neither side having bothered to think much about possibly combustible outcomes. P. 74-5

[interaction] with locals rarely went beyond influence trafficking by well-connected local elites. Under circumstances like these, it was difficult to imagine how any robust transfer of knowledge or expertise could arise that might directly benefit Africans now, or even at any point in the near future. Zhang and others like him inhabited a new Chinese world under construction. Africa was just one backdrop among many, where new opportunities lay and where lots of money could be made. As little space as Zhang's way of operating offered to Senegalese, he said there was scarcely more hope for other Chinese who might be tempted to follow the route he had taken either. Thousands more would continue coming, but the path from petty commerce to big wealth was already closing for Chinese here. P. 84

The Senegalese, he insisted, were already moving up in commerce, already trading for themselves in places like Dubai and buying directly from China, notably in Guangzhou, where more than 100,000 Africans now lived. The processes of empire are almost always bi-directional, and in this sense the recently formed Guangzhou community is classic. As had happened with other rising world powers, China was not only depositing people in a region where it sought influence, but people from that region were simultaneously depositing themselves in China. P. 84

Places endowed with stable governments, with elites that are accountable and responsive to the needs of their fellow citizens, and with relatively healthy institutions, will put themselves in a position to thrive on the strength of robust Chinese demand for their exports and fast-growing investment from China and from a range of other emerging economic powers, including Brazil, Turkey, India, and Vietnam. Inevitably, most of these African countries will be democracies.

Other nations, whether venal dictatorships, states rendered dysfunctional by war, and even some fragile democracies— places where institutions remain too weak or corrupted— will sell off their mineral resources to China and other bidders, and squander what is in effect a one-time chance to convert underground riches into aboveground wealth. P. 93

At current rates, in the next forty years, most African states will have twice the number of people they count now. By that same time, their presently known reserves of minerals like iron, bauxite, copper, cobalt, uranium, gold, and more, will be largely depleted. Those who have diversified their economies and invested in their citizens, particularly in education and health, will have a shot at prosperity. Those that haven't, stand to become hellish places, barely viable, if viable at all. P. 93

Li said that Chinese merchants had certain advantages (over Lebanese and Indian merchants) in sourcing the manufactured goods they sold in China. "We don't need to buy a ticket to go to China to do business. We have our people there. We know the scene best. We will get the best prices." P. 104

On the '**China brand**' damaged by migrants.

"Chinese here have made a bad reputation for themselves by selling crappy goods," he said, clearly associating Li with the trade in junk. "You can get away with that once or twice, but afterward, people understand what is going on and then your reputation is finished. Our reputation is finished." P. 106

In Congo, one of Africa's richest mineral states, China had recently and controversially negotiated a mammoth resources-for-infrastructure deal valued at \$ 6 billion. In exchange for building new roads and railway lines, along with many other things, including hospitals, housing, and a new university, China would be guaranteed a supply of copper and cobalt over a period of twenty years. P. 122

Ever since then, practically every African leader, whatever his ideological orientation, has gotten a palace of some sort from the Chinese. The problem is, they never taught us how to maintain it. Even now, when the lightbulbs are burned out, we have to call the Chinese to change them." P. 124

The optics surrounding its presence are changing, leaving a common set of adverse images in the minds of people all across Africa. There was mounting resentment over the way China was seen to be exporting its labor, dumping cheap goods, despoiling the environment, dispossessing powerless landholders or flouting local laws, fueling corruption, and most of all, empowering awful governments. P. 125

[Mali chapter] Many critics had sounded alarms about a Chinese takeover of African land, often failing to note that China thus far cannot be said to place in the first rank of foreign investors in this sector, including in Mali. This doesn't mean, of course, that China doesn't need African farmland, or indeed that it doesn't aim to eventually obtain control of as much of it as it can. China has 20 percent of the world's population, and only 9 percent of its farmland. There were only two large developing countries with less arable land per capita: Egypt and Bangladesh, and massive construction, pollution, and erosion were whittling away at China's farmlands all the time. Vaclav Smil, a prominent environmental scientist who studies China's land use and food security, has said that as the country's living standards rise, by 2025 its food needs will far surpass what is available on today's open market. Africa alone has 60 percent of the world's uncultivated arable land, and whatever Beijing declares, it stands to reason that China will come to see its food security as increasingly bound up in bringing that land into intensive production. P. 146

Chinese have ...an unbeatable triple play: cheaper financing from Chinese state banks, cheaper Chinese materials, and cheaper Chinese labor..... The French complained that the Chinese were winning all the business in Africa because of their big price advantage, and asked their guests what could be done about it... The response is described in *China's Superbank: Debt, Oil and Influence— How China Development Bank Is Rewriting the Rules of Finance*, by Henry Sanderson and Michael Forsythe: “You can never beat China; you can only turn yourselves into the IBM of construction,” a Chinese executive lectured his French hosts. By that he meant that the French couldn't compete against Chinese companies in building railways and power grids . IBM doesn't make hardware anymore . The French have 80 years of experience in West Africa, but the Chinese have just arrived. He admitted that the Chinese don't understand the local society, the politics and the environment. “Why don't you provide a consulting report about the political, social, and environmental impact project?” he suggested. The Chinese side would pay the French a consulting fee. P. 169

In 2011, tens of thousands of Chinese were evacuated from Libya by their government amid the conflict that overthrew Muammar Gaddafi. One day, perhaps soon, China would no longer be content to send ships to mount emergency evacuations like this. In places where its interests had taken root deeply, it would impose its demands on the local government for the respect of its citizens, and of their property and investments . And perhaps not too much further down the road, it would find itself in the position of wanting or needing to actually intervene. P. 170

For all of its insistence that its actions are driven by fraternal solidarity with Africans, its fellow victims of colonization, its fellow travelers on the path to development, what I was witnessing in Africa is the higgledy-piggledy cobbling together of a new Chinese realm of interest. Here were the beginnings of a new empire, a haphazard empire perhaps, but an empire nonetheless. P. 170

When you start from a lower starting point, there is more room to move up. In Latin America, per capita GDP has reached \$6,000 to \$7,000. It's even higher in Southeast Asia. This is a lot different than the room for growth in per capita GDP in Africa, which is between \$ 300 and \$ 3,000. This is the significance of Africa. Pp. 170-71

China's parliament debated a proposal to seek employment for as many as 100 million Chinese on the African continent. One champion of this idea, Zhao Zhihai, a delegate and researcher at the Zhangjiakou Academy of Agricultural Sciences in Hebei province, said: “In the current economic climate, with so many of our people unemployed, China can benefit from finding jobs for them and Africa can benefit from our expertise in developing any type of land and crop.” China saw an urgent need to secure its food supply into the future. It had a nearly endless supply of people, eager for a better life. Before long, it will have the world's largest economy. And it has a deep civilizational patience, a belief in planning and in engineering on the largest of scales. What else would it take? P. 172

The Chinese were quietly building a position in the Delta and biding their time for the right moment to begin exploiting it, he claimed. This would be determined by world food supply and pricing. “I have a hard time imagining a Chinese leader deciding to invest in grain production here in Mali for sale in China,” Boly said. “We are a thousand kilometers from the nearest port, and with the transportation costs to get rice to China, it wouldn't make sense. But I can easily imagine them producing rice to sell to us here in this region, which frees up grain from elsewhere for their consumption . And if they become really big players here, that gives China a lot of influence over our [African] governments. P. 176-77

If any place could compete with textiles produced in China, I imagined it would be here. “No way,” said Jia. “Here the cost of electricity is more than twice as high as it is in China. The labor costs are about the same. The cost of cotton is determined internationally, so they don't have an advantage with the raw materials. So, as you can see, it is the power that makes them uncompeti-

tive. They don't have coal in Mali, and they must draw their electricity from Côte d'Ivoire and from Ghana." What remained for the factory in terms of a market, he said, was time-sensitive work. This meant specialty orders that couldn't be shipped from China by sea in time to fulfill the buyers' needs. This was a small niche, such as the inauguration cloth... p. 178

There is little chance of creating a new, native Malian industrial culture. What one was left with instead, critics feared, was a culture of dependency. A dead end like this did not require organized evil conspiracies or even ill will. It represented opportunities seized. Nonetheless, it was a problem as old as colonialism itself, and one in which China, convinced of its own "win-win" rhetoric, had demonstrated little new thinking. P. 179

It's common for grand assumptions to be made about Beijing's hand in anything Chinese one finds in Africa. Beijing is generally thought to be actively supporting the entire gamut of Chinese companies as they set up overseas. Many believe that Beijing is minutely organizing the migration of its citizens to the continent. Liu had a revealingly different view of the role of his government. For him and his company, it was an impediment. P. 180

Civil society pressure on china to be more transparent

Here in Ghana, as in much of Africa, China had conducted its big business with an utter lack of transparency, providing scant public information and keeping the media at arm's length. To the extent the fine print of the huge deals it was concluding was known at all it was a by-product of African democracy: of parliaments, of opposition parties, and of civic groups that had demanded their governments disclose details the Chinese typically would not. P. 193

Pooling resources: regional integration. To get the best deals for themselves, Albert said, African countries had to stop dealing with China single-handedly. "With fifty-four countries in Africa, there's not much leverage that any single one of us can have. But if we work to cut deals together we can get much better terms. We can also enlist China to help us build an infrastructure that lets us trade much more with each other. P. 210

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