Note for the High-level Panel Discussion on “Africa in 2050 – The making of a global pole”

1 This paper was prepared by Shahid Yusuf for the Emerging Markets Forum and the United Nations Economic Commission for Africa.
I. Introduction

1. For the past decade, the African continent has been on a roll, breaking out of its past doldrums and striding more purposefully towards a brighter economic future. With growth averaging over 5 per cent per annum during 2000 and 2009, hopes are running high. However, sustaining and even improving on this performance will depend upon how effectively African countries, both individually and collectively, manage a number of challenges. The crisis of 2008-2009 and its persisting reverberations in the trade and financial spheres have only made the challenges more daunting – and not just for African countries. Moreover, development economics, which has hitherto provided policymakers with a compass, is in a state of flux. The sources (and the future) of growth are being heatedly debated, many divisions are emerging on the application of macroeconomic policies, there are doubts as to the utility of aid, difficulties are being encountered in translating the concept of governance into practical policies and there is proliferation of poorly conceptualized and articulated ideas on such matters as inclusive growth and innovation. With so much uncertainty in the air, African countries urgently need to begin refining and elaborating strategies to capitalize on the recent growth momentum and ensure that all parts of the continent maintain economic headway and skirt the pitfalls lying ahead so that by 2050, if not earlier, the continent takes its place as a major pole in what for the foreseeable future is likely to remain a multipolar world economy. The purpose of the Africa 2050 report will be to chart a pathway to this goal.

2. This note offers a preview of the report, starting with a brief historical backdrop on recent and future development in Africa. It sketches the continent’s economic trajectory over the past two decades, highlighting the trend acceleration between 1990-2000 and the preceding decade – a doubling of GDP growth per annum; presents the megatrends which will be critical to Africa’s economic health and global presence; takes stock of Africa’s growth potential; and explores the issues that will shape long-term strategies for African countries.

II. Development dynamics since 1950

3. In the two decades following the ending of the Second World War, the immediate objective for most developing countries – many newly independent - was industrialization, starting with basic manufacturing activities. Some, such as Brazil, China and India, even attempted at an early stage to build industries producing capital goods. Countries took their cue from the achievements of the United States, the United Kingdom, Germany, France and Japan in the latter third of the nineteenth century and from Russia in the first half of the twentieth century.

4. Industrializing countries embraced one of two principal models. Those aligned with the United States and the leading Western democracies adopted a "mixed" approach: States used policy

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4See, for instance, the report by Oxfam Left Behind by the G20? How Inequality and Environmental Degradation Threaten to Exclude poor people from the Benefits of Economic Growth (London, 2012).

5For example, the several initiatives guiding African development include the New Partnership for Africa’s Development (NEPAD), which defines a strategic framework covering six thematic areas and the Programme for Infrastructure Development.
incentives, trade barriers and investment in public enterprises to push (import-substituting) industrialization in key areas, while also assigning a large and expanding developmental role to the private sector. In contrast, countries falling within the Soviet sphere of influence adopted State-centric, top-down, planned and relatively insular approaches to the development of both manufacturing and the agricultural sector, with minimal reliance on market forces or private initiative. The 1960s were a golden age for growth, not least for a number of African countries moving quickly to exploit the opportunities for technological catching up. With countries such as Côte d’Ivoire and Kenya leading the field, growth in per capita gross domestic product (GDP) in African countries averaged 2.6 per cent per annum during the 1960s, continuing to rise by 0.76 per cent per annum in the following decade. Memories of the Great Depression, policies introduced during the Second World War and the halcyon 1960s created the political and social environment that resulted in the emergence of the “welfare state” in the advanced economies and the piecemeal adoption of welfare and safety-net programmes by developing countries.

5. The waning political and economic clout of the Soviet Union and of other communist countries led to a shift in thinking on approaches to industrial development through the 1970s and 1980s. Political support for activist government industrial policies was also weakened by the spell of slow growth in the United States and Europe in the 1970s, which spilled over onto developing countries. This was partly the result of the two oil shocks of 1973 and 1979, increasing the indebtedness of developing countries and unsustainable imbalances in trade and payments. By the early 1980s, the idea (not a new one) that the invisible hand of competitive markets - and not the guiding hand of the State - was the answer to sluggish economic performance and joblessness began acquiring increasing traction in the West and, because of the influence of the United States on the international plane, to permeate thinking more widely. It contributed to the reforms that resulted in the progressive dismantling of barriers to trade and facilitated capital mobility, financial deepening and numerous financial innovations. As negotiating rounds did away with trade barriers, export-led growth within a market framework became the fashion, and by the early 1990s the “Washington consensus” was firmly entrenched, with its fundamental tenets being pursued by many African countries through structural adjustment programmes (sponsored by the World Bank) and an increasing policy focus on poverty reduction. The fall of the Berlin Wall strengthened the belief that market forces could be far more efficacious than State direction, and this was reinforced by the developmental energies unleashed by China's march towards a market economy with a socialist hue. With markets in the ascendant, globalization was resurrected and the idea that the end of history was at hand and that advanced countries - and possibly others - were heading towards a limited, libertarian "night watchman" State acquired currency. The information and communication technologies (ICT)/Internet/dotcom boom further embellished the credentials of the market mechanism, enhanced the political influence of the corporate sector and induced irrational

6 The Republic of Korea and Taiwan Province of China were among the successful economies that adopted a mixed approach, with the guiding hand of the State grooming private industry – and creating “national champions”.

7 This process was described with reference to the European experience by Alexander Gerschenkron (Economic Backwardness in Historical Perspective, Cambridge, Harvard University Press, 1962) and by Justin Yifu Lin (2010) to explain China’s rapid growth siteresources.worldbank.org/.../ChinaMiracleDemystified-Shanghai.p. For a brief account of African development between 1945 and 2000, see Frederick Cooper (2002), Africa Since 1940. Cambridge, Cambridge University Press.

8 www1.worldbank.org/prem/…/chaps/Ctrynote8_AfricasGrowth.pdf


exuberance that continued into the middle of the next decade in spite of the East Asian crisis (1997-1998) and the dotcom bust (2000-2001) - largely because the Western economies, and most notably the United States, weathered these crises with their global political salience, economic heft and soft power largely undiminished. This was a period when the idea that growth could be “weightless”\(^{11}\) and that services could largely displace manufacturing as the engine of growth also began to take hold. More recently, attempts have been made to popularize a services-led model based on a decade’s rapid growth in India.

6. Fiscally debilitating wars in Iraq and Afghanistan, leading up to the financial crisis that erupted in the sole super-power, followed by the aftershocks that are destabilizing the European Union, shaking up the Middle East, sowing uncertainty in Africa and forcing East Asian economies to revisit their medium-term growth projections, are suspending questions over the received wisdom on growth and the desirability of the State adopting a low profile and eschewing industrial policies. The fiscal travails of the United States and European countries have also starkly highlighted the spiralling costs of health care programmes and welfare entitlements even as countries worry about worsening income inequalities. East Asian economies such as China, which were riding the wave of exports to the United States and the European Union, are being forced to engineer a massive switching of expenditure from savings and exports to domestic spending. Investment in manufacturing, long the premier source of growth, is out of favour in East Asia; policymakers have begun to acknowledge the overhang of excess capacity in many industries and are embracing consumption by a rising middle class as the source of future growth. Instead of manufactures, industrializing economies are attempting to maintain growth with the help of construction, housing and the building of infrastructure (as are advanced countries). The rising exports of minerals such as bauxite, cobalt, copper, diamonds and gold\(^{12}\) that were buoying African economies seem less assured, and the desirability of finding multiple sources of growth is more urgent.


7. Crisis-induced worries notwithstanding, those in the community of African nations, international agencies, investors and researchers are broadly optimistic, in large part because of the gains registered during the past decade compared with the 1990s.\(^{13}\) Growth between 2000 and 2009 averaged 5 per cent per annum, as against 2.5 per cent per annum in the 1990s and even lower rates in the 1980s. In fact, 6 African countries were among the 10 fastest-growing economies in the world. This was buttressed by a rise in investment rates from an average of 18 per cent in 1990 to 22 per cent in 2009 – not comparable to East Asian levels, but respectable nonetheless – and growth in exports from just over 26 per cent of GDP in 1990 to almost 30 per cent in 2009. Several countries also improved their social and Doing Business indicators,\(^{14}\) and foreign investment in Africa rose from $9 billion in 2000 to $50 billion in 2010 (after peaking in 2008 at $88 billion). Remittances also climbed to $40 billion in 2010.

8. Progress towards the key Millennium Development Goals has also been satisfactory. The share of the African population living on less than $1.25 a day fell from 58 per cent in 1990 to 51 per cent in 2005, while the percentages of underweight and malnourished children were down to 25

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\(^{11}\) The implication being that more economic activity, whether in production or consumption, would be mediated by Information and Communication technology and would be conducted in cyberspace.

\(^{12}\) Minerals and petroleum accounted for well over half of Africa’s exports and have been key to the prosperity of countries such as Botswana and South Africa and to sustaining the economies of others such as Ghana, Nigeria, the United Republic of Tanzania and Zambia.

\(^{13}\) See, for example, Steven Radelet, Emerging Africa: How 17 countries are Leading the Way (Washington, Center for Global Development, 2010).

\(^{14}\) Time required to enforce contracts and obtain construction permits were among the areas showing improvement.
per cent by 2009. Primary school completion rates rose to 79 per cent in 2009, with countries such as Burundi, Madagascar and Rwanda achieving near-universal primary enrolment; child mortality dropped from 181 to 130 over the same period; and there was a significant slowing in the growth of new HIV infections. These positive trends, including increased gender representation, will need to be reinforced while efforts continue to reduce maternal mortality by replicating the strategy used to tackle HIV/AIDS, which relied on heightening awareness and increasing financing and research.

9. On the downside, gross savings fell from an average of 17 per cent in 1990 to 15.5 per cent in 2009; private fixed investment remained constant at 13.4 per cent of GDP from 2006 to 2009. The share of manufacturing in GDP for Africa as a whole declined from 16 per cent in 1995 to 13 per cent in 2009 (according to UNIDO it was 10.5 per cent in 2008). It was 9.7 per cent in East Africa, 5 per cent in West Africa and 18.2 per cent in Southern Africa. Moreover, most manufactures are resource-based, and domestic value added is low; they register limited productivity gains and spawn few linkages with the rest of the economy. Diversification of manufactured exports was correspondingly limited. The share of manufactured exports rose 3 percentage points from 28 per cent in 1995 to 31 per cent in 2009, and Africa was responsible for just 1.3 per cent of global manufactured exports in 2008, as against 1 per cent in 2000. The top exports of even the more industrialized African countries were resource-based. For example, South Africa’s top two exports were platinum and gold; Kenya’s were tea and cut flowers; Ethiopia’s were coffee and sesame seeds; the United Republic of Tanzania’s were coffee and tobacco; and Ghana’s were cocoa beans and manganese ores.

IV. Challenges and headwinds

10. The drift towards global multipolarity has prompted rethinking in six areas, with entwined long-term economic and political ramifications. The response of African countries will decide how well they fare in the coming decades.

- A changing world economic and political order provides Africa with opportunities to reshape its development agenda. Pax Americana came with some unwanted baggage, but it also helped to create and sustain a rule-bound environment in which globalization could flourish. Now that it is entering a twilight stage and a number of regional hegemons are likely to displace a single super-Power, the long (relative) peace of the past half-century may give way to an extended period of turbulence and uncertainty in which “black swans” could be frequent (and unwelcome) visitors. The efforts to forge a successor to the Kyoto Protocol and the endless Doha Round negotiations provide a foretaste of what a bipolar or multipolar world may be like, with global public goods becoming scarcer at a time when the need for them is on the rise. A less stable world would also be ripe for costly and potentially dangerous arms races which, in the absence of goodwill, wise statesmanship and give and take among nations, could spill over into sanguinary wars resembling those of earlier times.

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16 Gross savings in East Asia reached 47 per cent in 2009 – a figure which is somewhat biased because of China’s weight in the total and very high savings.
17 Manufacturing accounted for 32 per cent of GDP in East Asia in 2009.
18 See UNIDO (2011).
19 World Bank, Africa Development Indicators 2011.
20 This refers to the period of relative peace since the end of the Second World War which is linked with United States military and economic power.
• With leading Western economies and some developing countries struggling to correct major trade imbalances, and a few attempting to cope with waves of capital seeking low-risk assets, globalization is on hold and could go into reverse. Were a serious double-dip recession to engulf the industrialized countries, the belief in the gains from trade – tenuously held in many low-income countries and crumbling in the West - might quickly erode and barriers of all kinds spring back up again. The term “murky protectionism” has been coined to describe the revival of trade impediments.  

21 This situation, including the euro zone crisis, could presage economic difficulties for Africa because of its close trade and financial ties to Europe.

• Political and economic stability are critical to development. Africa has had its share of local conflicts and experienced their destructiveness.  

22 How to minimize economic instability, political tensions and violent conflict will be a continuing test for many African countries.

• The State and the development agenda: will it be different this time round? After observing how the weak regulation of financial markets spreads mayhem through mature economies, few (except in the United States) believe that the State has a minimalist regulatory role to play. The retreat of the State is over, for the time being at least. In fact, industrial policy of the kind practised by China (and earlier by the Republic of Korea, Taiwan Province of China and other Asian “tigers”) is receiving serious consideration in Africa, with industrializing countries attempting to craft policies compatible with World Trade Organization rules to stimulate industrialization. Widening income inequality compounded by structural unemployment might also force the State to take a more active role in creating jobs (as is currently the case in the Middle East, China and a number of African countries) and assuring a more equitable distribution of income, which will be favoured by groups standing to benefit from State largesse and strenuously resisted by those who are politically well entrenched and possess market power and power also over the levers of the State. A more intrusive State role would be less unacceptable if experience suggested that States were becoming more adept at making and implementing policies to promote rapid development, that corruption was being checked in most countries and that civil liberties and democratic institutions could coexist with powerful governments. But the recent history of Africa, Asia, Eastern Europe and Latin America is not reassuring on any of these scores – and the first half of the twentieth century offers troubling reminders of how much could go wrong.

• Leveraging innovation to cope with dwindling resources and global warming. The likelihood that investment rates will remain low in African countries (unless there is a substantial transfer of light manufacturing from middle-income East Asian countries) and could decline in East Asia (as the share of consumption rises and populations age) is stoking the belief that Schumpeterian innovation will pull growth through gains in total factor productivity. The fascination with innovation has generated huge interest in


22 Some of these conflicts were the result of interventions by the super-Powers and in effect were proxy wars fought in Africa. See Ann Hironaka. Neverending Wars. Cambridge, Harvard University Press, 2005.

23 Paul Collier sees the “conflict trap” as one of the causes of stalled development in many African countries, others being reliance on natural resources, being landlocked and bad governance.
the quality of education, in the cultivation of science and engineering skills, in the returns from spending on research and development, in the role of universities, and in indicators for tracking innovation capabilities. Capital is being relegated to the nether regions of growth economics (because no one knows how to increase capital investment or private savings), and its place has been taken by human capital.\textsuperscript{24} Remembering how electricity and the internal combustion engine stimulated investment, innovation and employment, some are hoping that “green” technologies, in the context of rapid urbanization, will revive growth momentum (partly through increased investment) and help conserve energy, water and other non-renewable resources while moderating climate change.

- The potential of urban development and industrialization may be diminishing. It is not inconceivable that with manufacturing and services creating few well-paid jobs, low-income countries may need to adopt a balanced growth strategy that devotes more attention and resources to the rural economy and reconsiders the inevitability of steeply rising rates of urbanization that are putting great pressure on urban infrastructure and increasing energy consumption.

- Global warming is creating additional hurdles for late developers. Concerns regarding food and water security, which had temporarily faded, are looming large, with global warming and continuing population growth adding urgency in Africa, the Middle East and China. The anticipated surge in extreme weather events and rising sea levels,\textsuperscript{25} means that low-lying coastal cities, many in Africa, will have to prepare for the worst and build resilient infrastructure (including sea walls and passive defences) and institutions. Cities at risk in Africa include Abidjan, Accra, Dakar, Dar es-Salaam, Durban, Maputo, Mombasa and Port Elizabeth.\textsuperscript{26}

V. Taking stock of economic potential

11. In tackling the challenges lying ahead, African countries must look to their resources, weed out inefficiencies and develop their potential capabilities to the fullest. The potential differs significantly among countries which range in size from Nigeria, with a population of 150 million, to the Comoros, with a population of just half a million, and will evolve at differing rates. Hence strategies and policy options will vary, and any kind of road map for the future may need to divide countries on the basis of salient characteristics. Countries can be classified by region and with reference to income level and population density, natural resource abundance, coastal or landlocked location, trade orientation, political structure and colonial affiliation. These characteristics will affect how countries respond to trends and harness their factor endowments. Other factors will also have a bearing. Ethnic fragmentation is one such, and it is linked with social unrest and civil wars


\textsuperscript{25} On some options for countries affected by climate change see Christain de Perthuis, Economic Choices in a Warming World. Cambridge, Cambridge University Press, 2011.

that have caused prolonged disruption and enormous losses in several countries.°° Given these framework conditions, development is likely to be governed by the following factors.

- The measured exploitation of natural resources, including land and water, will be vital with an eye to maximizing long-term revenue streams. Furthermore, augmenting resources through discovery and with the help of technological advances will be a priority.

- Demographics will have a large hand in the fortunes of African countries, all of which have growing populations. There is scope for reaping a demographic dividend because there will be a high percentage of young people, but whether the dividend is realized will depend upon the quality of education provided, measures to secure the health of the population and investment that generates jobs.

- The development of productive activities, mainly by the private sector, and their composition, will decisively affect growth and employment. How these evolve is a function of entrepreneurship (including from the large African diaspora), investment and technological change. Few African countries have a significant manufacturing base or export-oriented services – other than tourism. Perhaps more damagingly for export performance, with the exception of South Africa, African countries host very small numbers of companies employing more than 100 people,°°°° the sort of companies likely to venture into overseas markets. Moreover, as evident from the Boston Consulting Group’s report on Africa’s new challengers, the vast majority of the larger firms are in services (e.g. banking, telecommunications, transport and construction).°°°°° Strengthening of the productive base, not only in urban areas but also in the agricultural sector, will ultimately determine whether Africa becomes a global pole or not.

- A growing and increasingly affluent middle class that increases demand for urban transport, power, water, ICT, housing and other public services.

- Foreign direct investment and participation by African exporters in international value chains will remain important, while the benefits from plugging into the global innovation system will increase as innovation becomes a bigger source of growth. Looking a few decades ahead, the depth of the knowledge economy in African countries will determine the scale of the middle class and economic prosperity.

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°° The growth implications of ethnic fragmentation, of being landlocked, of size and of natural resource endowment have received serious empirical scrutiny, but questions regarding the estimation procedures have made it difficult to establish conclusively whether any of these really mattered in the past or will in the future.

°°°° Gelb and others (2011) show that new discoveries have substantially replenished mineral resources and contributed to national wealth.


VI. Towards the global pole: Objectives, strategies and policies

12. In harnessing these trends and resources, African countries will necessarily adopt different approaches in the light of their characteristics and potentialities. A long-term perspective that establishes a few “stretch” targets—relating to GDP, employment and life expectancy—can serve as a basis for defining strategies and focusing policy efforts so as to arrive at structural and institutional transformations that can take decades to complete. Hence looking out to the middle of the century is strategically realistic: Africa could become a significant global economic force in two decades, but it is very likely to take twice as long before the majority of countries are comfortably in the middle-income category, which is what becoming a global pole entails.

13. Few people are now completely satisfied with GDP growth alone as the goal of strategy. However, it is difficult to draw up an economic strategy without including growth. In the African context, GDP growth needs to be complemented by an employment target and a target capturing social well-being, which could be human longevity. A growth rate averaging 7-8 per cent per annum over a 35-year period would bring Africa to the level reached by Taiwan Province of China and the Republic of Korea at the end of the twentieth century. This rate is substantially higher than most African countries have registered during the past decade, but it is the appropriate rate for a number of reasons. Africa’s current low per capita income and technological gaps make it highly desirable to accelerate growth, and also present well-charted opportunities for catching up technologically. The current overhang of unemployment, which exceeds 20 per cent of the workforce in many countries, and the anticipated increase in the labour force, both argue for ambitious growth targets. Technological change that is capital-intensive and labour-augmenting is also reducing labour demand elasticities in manufacturing and in services (and is leading to growth that generates relatively few jobs), so that absorbing Africa’s growing pool of workers will call for faster growth than in the past, and, as China is discovering, a 7-8 per cent rate is needed to create a sufficient number of jobs. Life expectancy at birth is a good proxy for welfare and life chances. In Africa it was 53 years in 2009; in East Asia it was 72. Were Africa to add 20 years to the life expectancy of the average child born in 2050, it will have made enormous progress in providing services, conquering infectious diseases, enhancing capabilities and improving the quality of life.

14. These three targets could suffice in articulating strategies for African countries, each of which would undoubtedly adopt a different mix of policies guided by the overarching framework, which this report could provide. Thus the value of the report can be to present a compelling and persuasively argued long-term vision indicating a pathway to the objectives based upon policies that are informed by recent development experience and a reading of durable trends that will circumscribe options. Below we elaborate some of the measures that African countries might need to consider in order to realize their strategic objectives, and the issues to be resolved. The report would discuss these as well as other measures and their feasibility.

15. Stability. The history of development teaches us that economic progress is entwined with political and social stability. Countries with a track record of sustained development, arrived at through trial and error under a relatively robust political consensus on key economic and social objectives (underpinned by an increasingly robust civil society), excelled in creating efficient public organizations to devise and implement policies and enjoyed a measure of success in equitably

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31 Africa’s population is expected to grow at 2.4 per cent per annum during 2009-2015, and although the rate is likely to slow further down the road, reaching replacement-level fertility by 2050, the United Nations projects that the African population will exceed 1.8 billion by mid-century. See [www.un.org/esa/population/publications/.../WorldPop2300final.pdf](http://www.un.org/esa/population/publications/.../WorldPop2300final.pdf).

sharing economic benefits while accommodating “good inequalities”. This is a difficult circle to square, but without these ingredients, development does not unfold smoothly. Countries lacking some of these ingredients have experienced “growth accelerations”, but these do not last. Hence, arguably the biggest policy challenge for African countries will be to achieve all of these to some degree in tandem. Research suggests that the crafting of democratic institutions is a surer way of arriving at a minimax solution: well-functioning democracies may not achieve the highest growth rates, but they have a better chance of achieving stable long-term outcomes and are generally more resilient when it comes to absorbing and recovering from shocks. Socio-political stability strongly affects business expectations, the investment climate and technological advances, which, as we propose below, are the ultimate drivers of economic performance. African countries vary with regard to the business climate, and some do better than South Asian countries, for example. However, political uncertainties, violence, crime, contract enforcement and protection of investors are problems in many countries, affecting both the volume of investment and the preference for projects and activities promising quick returns that offer few fixed-asset hostages to fortune. It is notable that a recent analysis of growth in Africa ascribes about a third to the exploitation of natural resources and the balance to the development of wholesale and retail activities (13 per cent), transport and telecommunications (10 per cent), real estate and construction (10 per cent), financial intermediation (6 per cent) and public administration (6 per cent). The contribution of the real sectors – manufacturing and agriculture – were 9 per cent and 12 per cent respectively. These were the sources of growth and employment in East Asia, and may continue to play a vital role in the future. If so, can their contribution to growth – which appears to be shrinking in Africa - be raised?

16. **Sources of growth.** The consensus (if such a term is valid) among economists is that growth is largely determined by capital inputs and total factor productivity (TFP). Between 1989 and 1995, Jorgenson and Vu estimate that for 110 countries, capital accounted for 41 per cent of growth and TFP 22 per cent. By 2000–2004, the share of capital had declined to 34 per cent, while that of TFP had risen to 37 per cent. In developing Asia the share of TFP was 39 per cent, while that of capital was 35 per cent. In other words, between 70 per cent and 74 per cent, of growth is from these interlinked sources. For African countries, during 2000-2004, capital contributed 21 per cent of growth and TFP 23 per cent. Much of the growth in Africa came from labour inputs, with quantity prevailing over quality gains. This reinforces the point made by Ndulu and others as to the low or negative contribution of physical capital and TFP to growth in Africa between 1990 and 2003. However, they also observe that recovery in the late 1990s was substantially aided by improved TFP. Capital investment, in infrastructure, housing and productive assets is critical in the earlier stages of industrialization, which is borne out by the literature on growth accounting, but as countries develop, more of the growth is derived from TFP, which reflects embodied and disembodied technological change, innovation, tacit knowledge and gains in efficiency from myriad sources. Several researchers associate income gaps and the slow speed of income convergence among countries with slowness in assimilating technologies and persisting technology gaps. When technology gaps are wide, as in most African countries at an early stage of industrialization, more of...
the TFP accrues from investment in fixed assets embodying the latest technologies. Later on, innovation, incremental and other that is less bound to capital investment, takes the lead. Thus it would appear that over the next couple of decades, Africa may need to invest heavily to make up for an infrastructure deficit in the agriculture and urban sectors and to both widen and deepen the industrial base. As with Asian high flyers, more than half of the growth would accrue from capital investment, including ICT capital (an important contributor), with TFP taking over possibly 15 years from now. If these two factors are key, then for purposes of growth and to a lesser extent welfare/longevity, measures to raise investment in specific areas and absorb technology will deserve the highest priority. This points to issues pertaining to the structure of industry and to the acquisition of technology.

17. **Domestic resource mobilization for industrialization and exports.** Limited investment in manufacturing and its small share in African economies highlight weaknesses in product composition and the export mix. The former affects the future course of industrial change and the latter influences export prospects. Abdon and Felipe, using the product space methodology devised by Hidalgo and Hausmann, show that the export structure of resource-rich African countries barely changed between 1962 and 2007. They remained exporters of few products, almost all lying on the edges of the product space (although it should be noted that exports from Ghana, Kenya and South Africa are dominated by manufactures). Landlocked countries did a little better, adding exports to their portfolio that were closer to the networked interior of the product space. Coastal countries did best of all, demonstrating a revealed comparative advantage in more networked products, particularly garments. But the results for African coastal economies were dominated by South Africa, which has the most products in the core of the product space. Abdon and Felipe observe that Africa’s poorly diversified productive structure and the high proportion of standardized ubiquitous (peripheral) products exported by many countries seriously compromise their export prospects. Especially for the smaller countries that need external markets to generate sufficient demand for rapid growth, export diversification and upgrading is a must. In the Hidalgo-Hausmann terminology, they need to jump into the interior of the product space, following the example of East Asian countries, so as to improve their export potential. Whether such moves deliver the sought-after results depends, as Easterly and Reshef, demonstrate, on success at achieving “big hits”, that is, large exports of a few products to a single market or a limited number of markets. Apparently the lion’s share of export earnings derives from big hits that are difficult to anticipate, and in addition the composition of the big hits is itself subject to churning. The winning recipe to be discerned from the experience of leading export nations consists of conditions facilitating the entry and maturing of companies that can begin penetrating the core of the product space and opportunistically become exporters of diverse products. This brings us back to the issue of industrial investment and the composition of tradable manufactures and services. Can African countries stimulate (domestic and foreign) investment (supported by domestic saving), and what will it take by way of improvements in the business climate and in access to financing at reasonable cost, by means of public-sector initiatives as in China, and through incentives for entrepreneurs?

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40 The product space refers to a network that brings out the interrelationships between products traded in the global marketplace. [http://www.chidalgo.com/productspace/](http://www.chidalgo.com/productspace/).  


Surely investment in infrastructure can ease constraints for businesses, but infrastructure-building by itself cannot bring about a deepening and diversification of the industrial sector.

18. **Human capital and its quality.** The increasing focus on human capital and on innovation brings us to the issue of whether technology development and innovation can, by promoting TFP, substitute for relatively low levels of investment. In other words, can African countries defy the odds and manage both industrial diversification and higher growth rates through “inspiration” rather than the hard slog of capital accumulation? Is technological catch-up and innovation feasible without a complementary increase in capital investment?

19. This is not apparent from the experience of East Asian countries and India, which has raised investment to over 35 per cent of GDP in order to grow at the 7-8 per cent average rate of recent years. The possibility cannot be ruled out for some countries, and it jives with the belief in “weightless” growth and also with the faith in tradable services that are innovative as the principal drivers of growth and employment in emerging economies. However, the research of Hanushek, Pritchett Autor, Brynjolfsson and others suggests that such a growth path will call for the deepening of high-quality human capital with the help of far-reaching education and health policies. If selected African economies can substantially raise the quality of their workers, and if this in turn makes it possible for businesses to step up the pace of technology absorption, research and development and innovation, then it is possible to envisage a shift to a higher growth path with a modest accompanying increase in capital accumulation. In fact, raising the quality of the labour force could affect economic performance through multiple channels including the quality of governance, with market institutions impinging upon the mobilization and allocation of resources and the management of private as well as public enterprises. Human capital will affect the building of research infrastructure, the production of ideas and their commercialization. And human capital, suitably motivated, will influence the vigour of entrepreneurship. The tough part is actually identifying and implementing the policies that will produce results within the space of 5 or 10 years – through effective education and health policies - and then translating the gains in human capital quality into growth performance. In the sphere of education no country has found the precise recipe, although small countries such as Finland and Singapore can claim a measure of success. But of these two, only Singapore has attained the growth rates African countries are seeking – Finnish growth rates in the 1990s and in the first decade of the twenty-first century averaged less than 4 per cent – and did so by combining investment in human capital with very high levels of fixed investment, in particular in manufacturing.

20. With respect to health policies, Africa’s disease burden and epidemiological profile raise the challenge for policymakers by an order of magnitude. The widespread prevalence of debilitating infectious diseases erodes efforts at building human capital, but these have been joined by the spread of chronic diseases arising from changing lifestyles and eating habits associated with urbanization. Is the human capital/low fixed investment route a viable one for African countries? The answer is not obvious, but what is clear is that whatever strategy is adopted, it cannot afford to neglect or short-change efforts to invest in and improve the continent’s stock of human capital.

21. **Urban development.** Industrial and innovation policies (which have a bearing on the business climate) go hand in hand with urbanization policies. Together these affect what sort of

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44 Ama de-Graft Aikins and others, “Tackling Africa’s chronic disease burden: from the local to the global”, 19 April 2010. Available at [www.globalizationandhealth.com/content/6/1/5](http://www.globalizationandhealth.com/content/6/1/5).

productive activities flourish, their competitiveness, how much employment they generate, their growth potential and the revenue they produce for cities. Managing urbanization in order to extract the productivity gains from agglomeration from urbanization economies and a variety of spillover and demonstration effects will be a test for policymakers. This must be accomplished while containing the higher per capita resource and energy costs, and also containing the negative externalities that undermine the quality of urban life and contribute to environmental degradation. Policymakers will have to battle the inertial patterns of sprawling urban development prevalent in almost all countries, the problems caused by legacy infrastructure and housing, and resistance from entrenched interests benefiting from the status quo. But neglect of urbanization strategy and enabling policies would seriously compromise an important strand of development and also cripple efforts to limit climate change and mitigate its consequences. Urbanization strategies for the African context, or for that matter the context of more developed countries, are highly complex, and most municipal administrations lack the technical capacity, the administrative skills and the financing to convince the many stakeholders of the long-term efficacy of a particular strategy. Moreover, they also struggle to mobilize the wherewithal to implement it step by step over a matter of decades even as officials change, new technologies evolve and the thinking as to the optimal configuration of a city moves in new directions. Perhaps the best that a report such as this can offer is to spell out the most attractive options given current technologies and indicate a possible way forward with reference to the many hurdles that urban policymakers confront.

22. **Agricultural productivity and rural development.** Although all eyes are trained on the growth possibilities inherent in urban-based activities, for decades ahead, Africa’s growth and export prospects will hinge upon the productivity and resilience of the agricultural economy, which in almost every country is the largest employer, especially of women, and, given Africa’s large reserves of unused arable land, a potentially large source of exports. Africa has neglected agricultural research, and as a result labour and land productivity is well below levels elsewhere. African researchers are making limited progress in developing disease-resistant and drought-resistant strains of the crops most vital for farmers. Compounding the problem is increasing water scarcity in a number of countries, particularly in the north and the east of the continent. This is likely to worsen as populations expand, industrial and urban demand increases and global warming takes its toll through worsening desiccation, which is already apparent in Ethiopia and Kenya. Not just the rural population but also urban dwellers will need to come to terms with water scarcity in the coming decades, and the risk is that difficulties in agreeing on a fair sharing of water resources will sow conflict among riparian nations. A combination of pricing, conservation and many technological fixes will be part and parcel of development strategies, but recent history offers scant encouragement. Evidence of shrinking freshwater resources has been growing, but African countries have yet to take the needed initiatives to manage their water resources. Whether independently or in conjunction with agricultural development, water will figure prominently in the calculations of planners charting an economic course. Agricultural productivity and water management will make additional claims on limited resources through needed investment in human

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45 See Klaus Deininger and Derek Byerlee (2011), Rising Global Interest in Farmland. Washington DC. World Bank. They note that of the 10 countries with large stocks of potentially cultivable land, 5 are in Africa. Globally there are 446 million hectares of such unutilized land that is unforested, non-cultivated and with less than 25 people per square kilometre. Of this stock, 201 million are in Africa. Chad, the Democratic Republic of the Congo, Mozambique, the Sudan and Zambia head the list.

46 The breakthrough will come from replacing annuals with equivalent perennials so as to reduce erosion and enable soils to hold on to nutrients.

capital, research that is put to practical use, and modern infrastructure.\textsuperscript{48} This will be a vast and expensive undertaking, but without it, economies will be under unbearable pressure (from rising food prices, trade imbalances and water stress) and cities will buckle under the weight of unchecked migration from rural areas.

23. **Regional and global trade:** Last but not least, because most African countries are small, their growth prospects will hinge to a considerable extent on the external trading environment. A “benign” globalization with increasing mutually advantageous regional and South-South as well as intracontinental trade would reinforce other policies. Sustaining globalization and contributing to the public goods that will maximize its advantages might have priority over the medium term. However, Africa’s many small landlocked countries stand to benefit from increased intra-African trade, which currently amounts to only 10 per cent of Africa’s total trade, with the large countries accounting for the lion’s share.\textsuperscript{49} The recent decision by the African Union Summit to begin work on the establishment of a continent-wide free trade area gives some hope for boosting the share of intra-African trade in the overall trade of the continent. Are better-functioning regional economic communities the answer? Or do African countries have to put more of their effort into trade facilitation, industrial diversification and improving the continent’s notoriously poor transport infrastructure,\textsuperscript{50} which adds time and financial costs to the movement of goods?\textsuperscript{51} It would seem that a proactive and strategic approach to international economic relations is unavoidable. But in addition to strengthening their trading relations with neighbours and maintaining their trade ties with traditional Western partners, African countries will need to come to terms with the competitive strengths of China, India and other South and South-East Asian countries. This too will call for the coordination of policies and the forging of a regional approach.


