The Power of People, Power of Education, Innovation and Imagination

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I have the distinct pleasure of welcoming you to the First Africa Forum on Science, Technology and Innovation.

I want to thank our guests, distinguished leaders and scientists who have joined us today to discuss what I believe will help Africa leapfrog its development process, expand jobs and opportunities for all, enhance standards of living, improve quality of life and increase its global competitiveness.

Special thanks to the Government of Kenya for hosting this forum in this magical land, often called the cradle of humanity – well-known for its unique wildlife and home to the world’s second-largest freshwater lake.

Every facet of our work in Africa – food security, clean energy, clean water to industrial competitiveness, and sustainable inclusive development – I could go on and on – involves science, technology and innovation. It is the bedrock of our entire development effort.

**The economic story, the rise of Africa**

Africa has come a long way over this decade. We bounced back from the financial crisis bruised but fitter. Africa’s collective GDP estimated at 1.6 trillion US dollars in 2008 is roughly equal to that of Brazil or Russia. Six of the top 10 fastest growing countries between 2001 and 2010 were in Africa. Seven out of the projected 10 fastest growing economies between 2011 and 2015 will be in Africa. Foreign investors from all parts of the world are finding profitable business opportunities in Africa. The risk appetite has reprofiled. Foreign direct investment jumped from nine billion dollars in 2000 to 62 billion in 2008.

**Our challenge: non-inclusive and jobless growth**

Yet we are still failing the poorest. Economic growth that is not equitable, that is not broad based, that does not create jobs, will not be sustainable. Africa remains the second most unequal region in the world, after Latin America. Six out of 10 most unequal countries in the world are in Africa.

The quickest way to inclusive growth, to narrowing inequality, is education, especially children of the poor, accessing quality education. Access to education has improved but quality of education is a serious problem – especially in maths and science. The best Sub-Saharan University outside South Africa in Africa is

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ranked 324th globally Far too often, skills produced do not match the needs of the labour market.

**Time to seize the demographic dividend.**

With almost 200 million people aged between 15 and 24, Africa has the youngest population in the world. By 2030, one out of four young people in the world will be African. By then Africa will also have the largest workforce in the world, surpassing China and India. They will all be connected to the internet or probably even more by then, who knows what technology will bring.

Many African countries are now in a position to reap the demographic dividend that benefited East Asian economies, capturing the window of opportunity where fertility and dependency ratios fell dramatically, thereby increasing the size and proportion of the working age population and triggering high rates of economic growth.

In East and Southeast Asia, the demographic dividend contributed to 45% of the actual growth in the GDP per effective consumer in the period 1970 to 2000.

Yes, vibrant, but often employed young graduates are in search of opportunities. In the world we live in, the world of the internet, twitter and Facebook, young people are all too aware of opportunities closed, of freedoms denied and aspirations thwarted by elites that are tempted to promote their own interests over the general good. Sparking off the Arab Spring, they are telling us: we are young, we are educated, we can take our fate in our own hands.

Let’s pause and imagine the power of this tremendous opportunity that lays ahead for our beloved continent. Now the onus is on us! We need to ensure that these people are educated and that they have the skills they will need for the jobs of tomorrow – jobs that you and I have perhaps not yet imagined.

**Science, technology and innovation is about using imagination to fuel growth and development**

Technological development is helping all sectors of development. Take the example of electricity in my country, Rwanda. SMS Media, a Rwandan IT Company, has developed a solution that allows you to purchase prepaid electricity (cash power) using your mobile phone.

Same with education. Learning can happen everywhere, through everyone, and increasingly from the internet. How many of us have children who know more than
we do on any one on a topic because they looked it up on Wikipedia or they googled it?

Formal higher education will dwindle. We will see less of big amphitheaters where one professor talks to 1,000 students and charges exorbitant fees.

African Virtual University, MIT, Stanford, the Agha Khan Foundation and others are leading the way in e-learning where thousands of course materials can be obtained – in some cases for free online – accessible to anyone, rich or poor, at any time.

We need to improve education so young people can get good jobs, but we also need to encourage innovators and entrepreneurs to take risks and create tomorrow’s jobs. When foreign investors open shop in Africa, they often find a shortage of key things such as infrastructure, but the biggest impediment is that of skilled workers. We have young people looking for well paid, productive jobs and employers looking for well-trained, productive workers.

We can no longer afford this mismatch. Our universities and training institutes must step in to train today’s workers for today’s jobs and for tomorrow’s jobs as well, with new approaches. Good jobs have to be created by innovators and entrepreneurs. That’s why I am so delighted that this conference focused on innovation and entrepreneurship, as well as on science and research and development.

The bigger story: moving Africa to a knowledge economy for the jobs of tomorrow

But let me tell you the bigger STI story. The one that I believe will help Africa compete globally – what you have heard the past two days. We need a scientific revolution in Africa: research and development is key. We need a “Sputnik moment” in Africa.

You will recall when the Russians first launched their Sputnik satellite into orbit in 1957: it created both paranoia and concern among Americans, sparking a revolution in scientific education in the US.

It is unacceptable that the best African university ranks 324th globally.

It is unacceptable that African parents have to use their life savings or sell their land to send their children to universities abroad to get a good quality education and secure a decent job.
We need to step up investments in scientific research at home. The best of us study abroad and stay abroad. We need to find ways to bring our best people back to move Africa from Consumers to Producers of Knowledge.

Research in Silicon Valley is not yet reaching Africans. We need to help Africa tap into the scientific inventions and discoveries that are happening around the world.

We need to invest in science, technology, engineering and maths education. Last year we invested 55 billion dollars in infrastructure. But what are these billion dollar investments worth if we do not have skilled labour?

Most importantly we need to help commercialize our own investments. We need to expand financial services for innovation. One example is M-Pesa, a mobile phone money transfer system invented by a Kenyan company and is now commercialized by IBM Global services on behalf of Vodaphone.

**Implications for the Bank**

Since 2008, the African Development Bank has been supporting the development of science in Africa. For instance, we are heading the financing process of the 775 million dollar project to construct what is to become Africa’s biggest wind farm which will start in June 2012 near Lake Turkana, in Northern Kenya.

Together with the African Union we launched the Pan-African University – a network of five regional centres of excellence focusing on research and postgraduate training in Humanities, Social Sciences, Governance, Life, Earth and Space Sciences, Water, Energy and Climate Change. They will be hosted by Kenya, Cameroon, Nigeria, Algeria and South Africa.

Nonetheless, it is now high time to ask: what is it that we will do more, or that we will do differently? What is it that we must now review, both in scale and scope, to ensure that the maximum number of African citizens benefit from the current growth momentum on the continent.

Many new ideas emerged from this forum in the past two days. You have heard new approaches on how to:

- Create a world class faculty of science in Africa for Africa;
- Create a culture of innovation and entrepreneurship to spark job creation on the continent, especially for youth;
- Use technology to improve governance and the business climate on the continent to attract foreign investors;
- Connect young graduates to the labour markets;
- Bring scientific research in areas of water, health, energy, agriculture, climate change to Africa;
- Commercialize existing African inventions.

You have seen a snapshot of Africa’s potential for innovation through the “Africa on the Move” exhibition showcasing Kenyan innovators and entrepreneurs.

I thank you your Excellencies, Honourable Ministers.

I thank eminent persons who joined us today, sister institutions, partners in the business world, and civil society for our mutually beneficial collaboration. It is an enormous honour and pleasure to work with you all.

There are 200 million youth in Africa, We have 200 million opportunities. Let’s seize that demographic dividend, what the East Asian Tigers could do, we can. Now let the African lions roar!

Thank you for your attention.