Economic Development: Development through Technology:

Sankofa54: African Youth Empowerment Conference.

Yale University
Economic Panel
April 13, 2013

Presentation by Ms. Sophia Bekele

Introduction

Sophia Bekele

BS, MBA, C.I.S.A, C.C.S, CGEIT,

CEO/Founder

CBS International

DotConnectAfrica

sophiabekele.com

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Africa's Economic Statistics

- Africa is the world's second-largest and second-most-populous continent
  - **Area** 30,221,532 km2 (11,668,599 sq mi) ,
  - **Population** :1,032,532,974[1] (2011, 2nd)
- Africa grew from 221 million in 1950 to approximately billion in 2009.
- Is the most sought destination as an emerging market and consumer of digital products

  ➢ GDP (current US$) $1.263 trillion 2011
  ➢ GNI per capita, Atlas method (current US$) $1,257 2011
  ➢ Urban population (% of total) 36% 2011
  ➢ Primary completion rate, total (% of relevant age group) 70%

http://data.worldbank.org/region/SSA

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Technological Advancements in Africa

No doubt Africa is the new fertile place for technology and innovations, many companies are jostling to set up regional offices in what is commonly called the Emerging markets in the EMEA(Europe, the Middle East and Africa) region.

Opportunities driven by:
➢ Mobile
➢ Broadband
➢ Internet
➢ Cyber Cities
➢

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Africa's Mobile usage Statistics

- More than 50% of internet users in Africa use mobile as their main internet connection

- Africa which has an approximate population of 1,073,380,925 and with a penetration percentage of 15.6 %.

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Africa's Mobile Developments

▪Africa has the best growing telecommunications network with vibrant mobile technology installations that cover the entire country.

▪Mobile technologies are increasingly being used for solutions

Sub-Saharan African mobile and/or Internet trends:

- There is an estimated 63% mobile-cellular penetration as of 2013
- 16% of Africans are using the Internet
- The Internet penetration rate in Africa is half that of Asia & Pacific
- 7% of African households have Internet access
- Annual household Internet access growth stands at 27%
- Fixed-broadband penetration rates are less than 1% in SSA
- Less than 10% of wired broadband subscriptions have speeds of 2 Mbit/s or more
- Mobile broadband penetration has increased from 2% in 2010 to 11% in 2013
- A computer-based mobile broadband plan with 1GB of data costs more than 50% of Gross National Income (per capita)
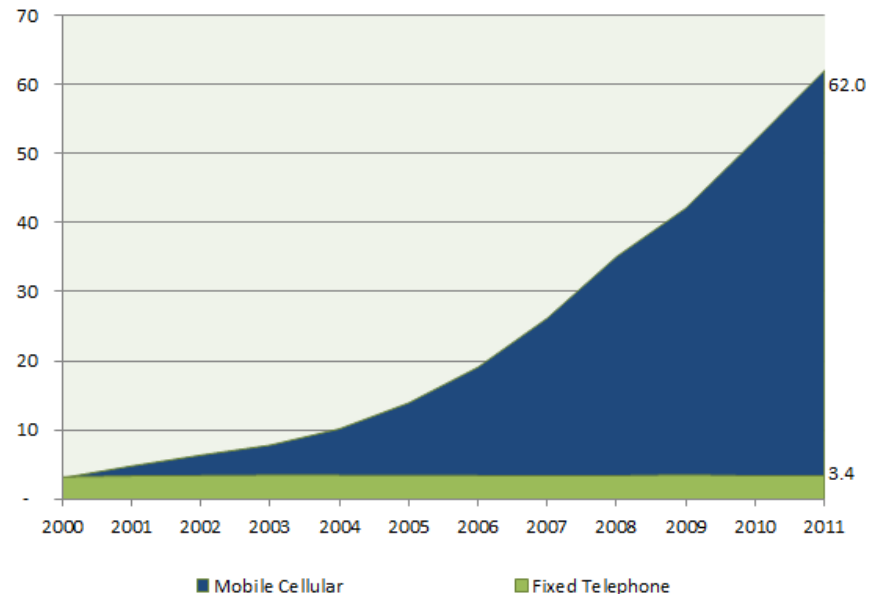
Economic Development: Development through Technology

Sankofa54: African Youth Empowerment Conference.

Sub-Saharan African mobile and/or Internet trends:

By the end of 2013 there will be an estimated:
93 million mobile broadband subscriptions
11% mobile broadband penetration
82% compound annual growth rate for mobile data plans

Mobile vs. Fixed Phone Subscriptions per 100 Inhabitants in Sub-Saharan Africa
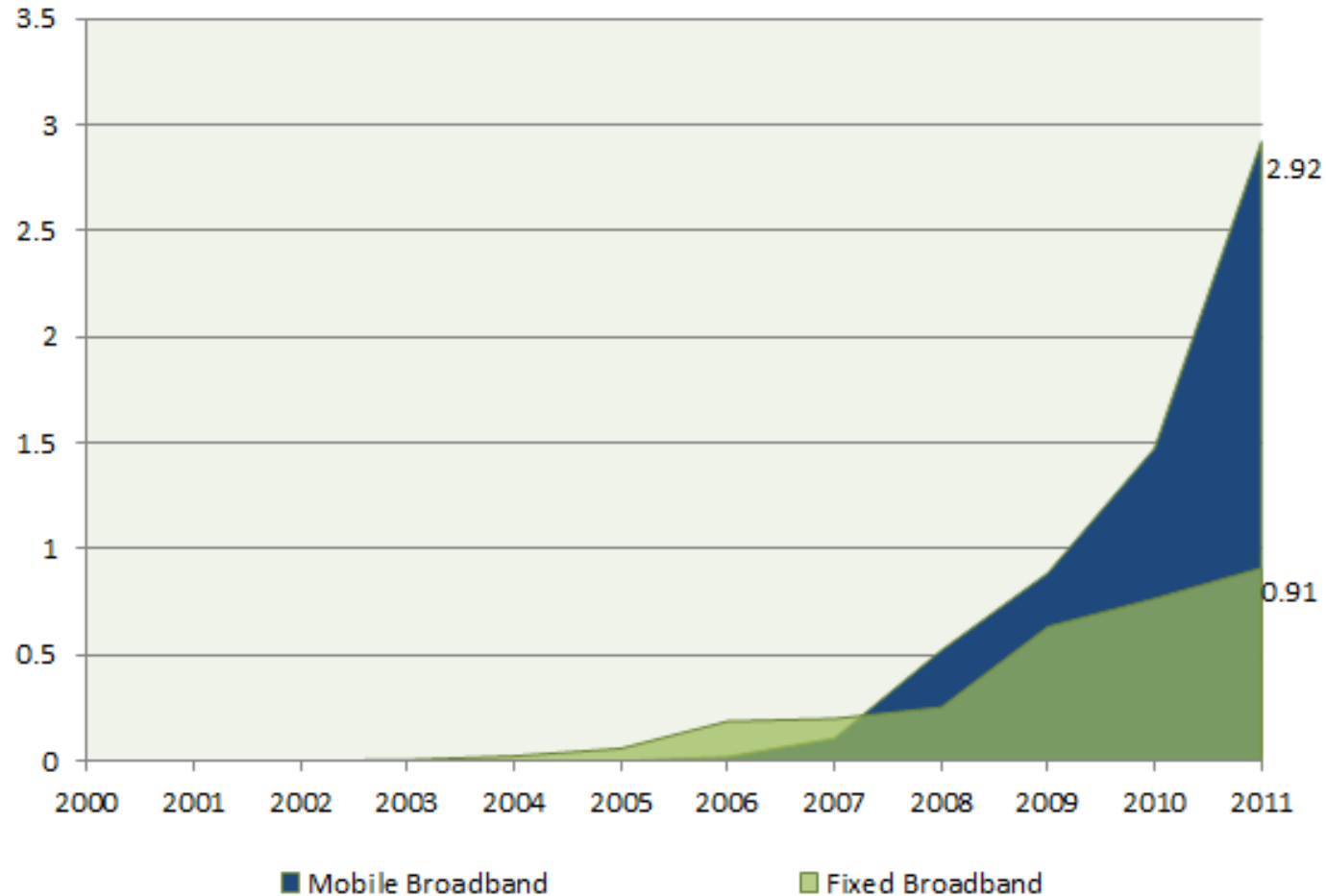Data Source: ITU Database

70		
60		62.0
50		
40		
30		
20		
10		
-		3.4

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

■ Mobile Cellular   ■ Fixed Telephone

NB:Sub-Saharan Africa is, geographically, the area of the continent of Africa that lies south of the Sahara.
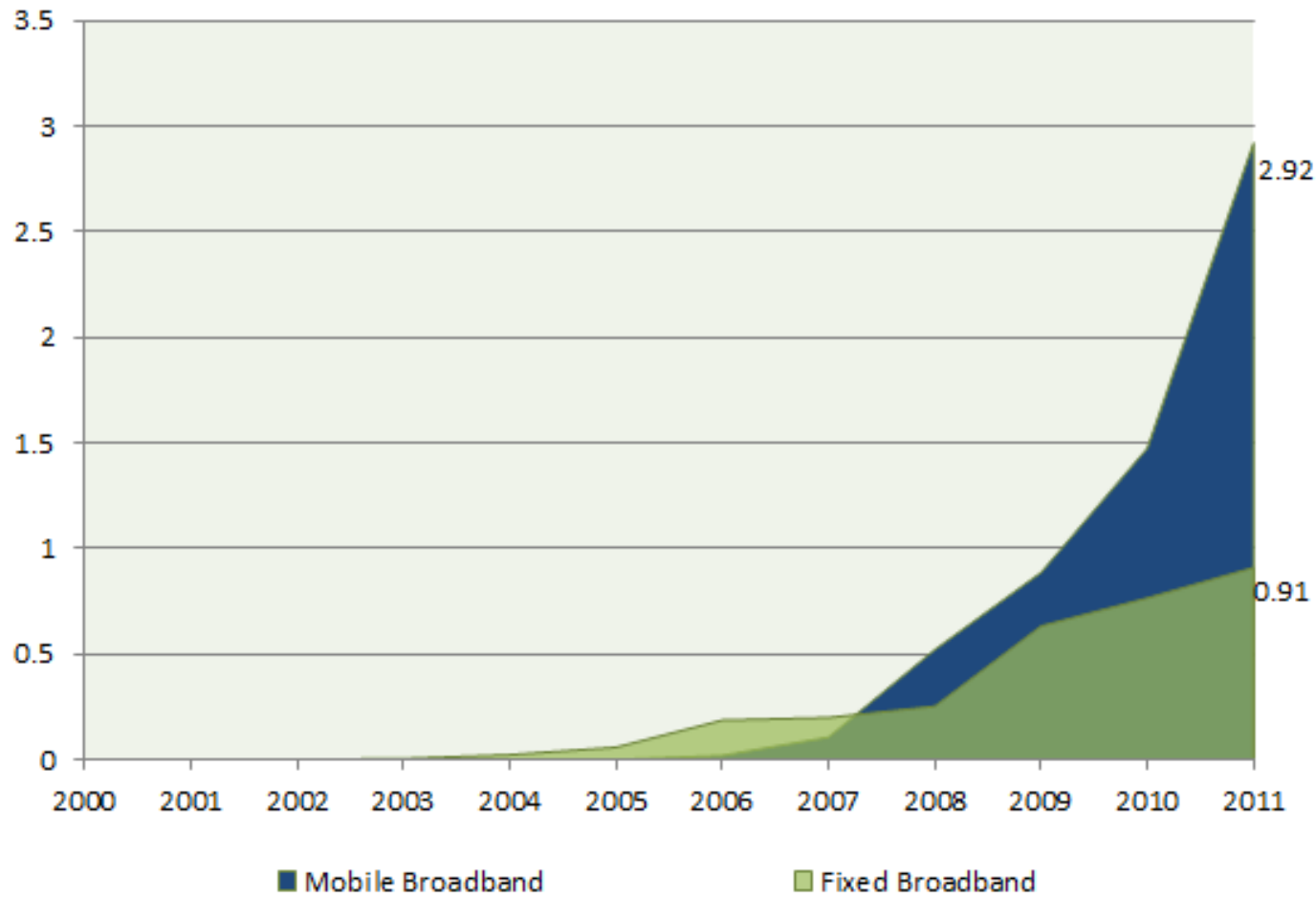
Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Mobile vs. Fixed Broadband Subscriptions per 100 Inhabitants in Sub-Saharan Africa

Data Source: ITU Database and GSMA

Legend: ■ Mobile Broadband   ■ Fixed Broadband

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Mobile vs. Fixed Broadband Subscriptions per 100 Inhabitants in Sub-Saharan Africa

Data Source: ITU Database and GSMA

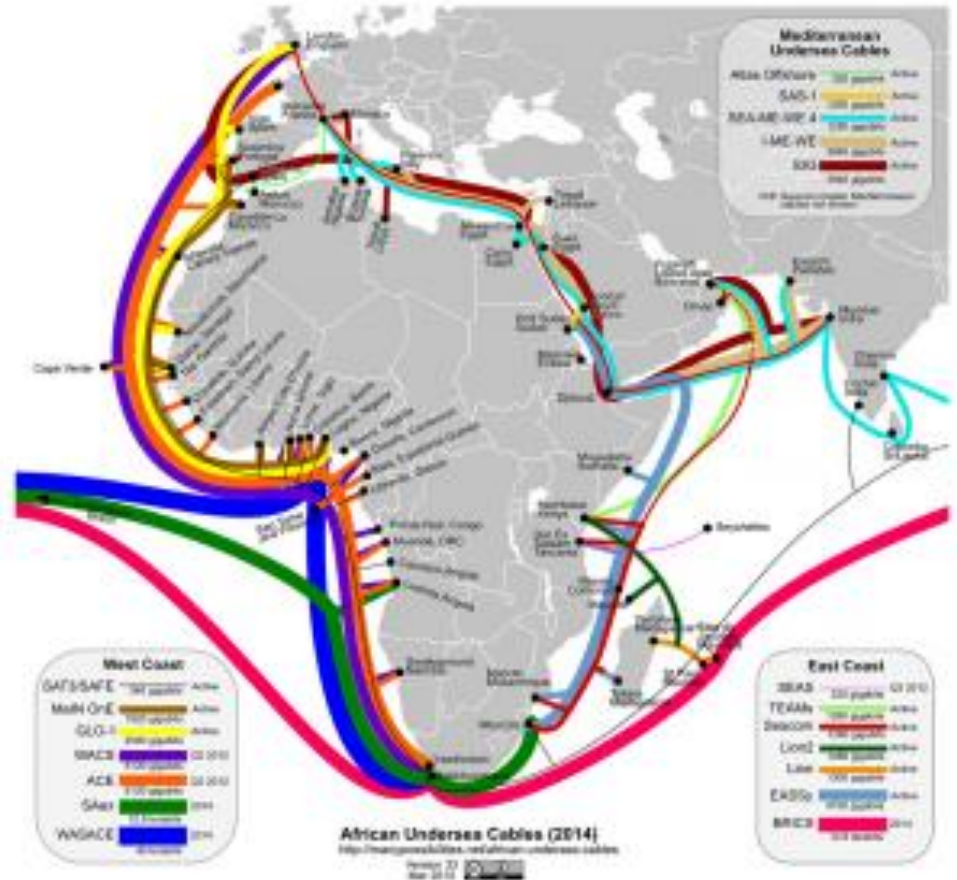Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Africa's Broadband Connectivity

Late 2000s, several new undersea fiber optic cables were installed on the east and west coasts of Africa, including EASSy, SEACOM, TEAMs, WACS, Glo 1, and LION.

An expected $2.8 billion Went into installation of these cables between 2010 and 2012

(Phillip, Lyons, Page, Viviez, Molina, & Ensor, 2011).

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Africa's Mobile Developments

- Reach the unbanked through services like M-Pesa, the origin of mobile money where banks are also connecting the mobile money portals with respective accounts
- Connect the last mile for those who cannot access national fiber optic trunks
- Educate Farmers and entrepreneurs through mobile applications like mcow, mfarmer
- Contact user groups for educational and other transactions
- Used by government to send out advocacy messages that spur development

Mobile Tech-Developments

Mobile applications are becoming increasingly important to the African tech users, with the majority especially the youth enjoying the basic smart phones, the use of tailored mobile apps is improving
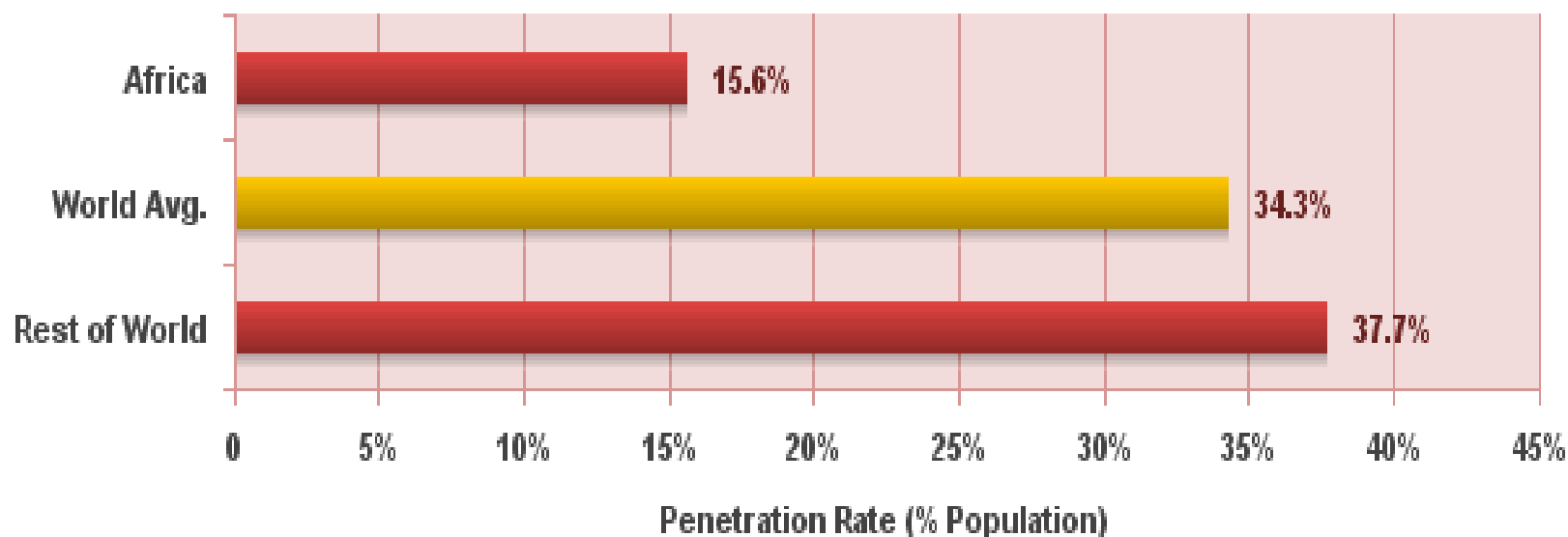
Advantages of the mobile applications include:

➢Job opportunities for the vast majority of programmers who are specializing in web based and mobile based applications

➢Innovations that can be recognized globally like the Mpesa

➢Health facilities and information are harnessed through mobile application like m-health thus touching on epidemics like HIV aids , Cancer among others

➢Revenue generation through mobile app advertizing and monetization

Africa's Internet Statistics

Internet Penetration in Africa
2012 Q2

Penetration Rate (% Population)

Source: Internet World Stats - www.internetworldstats.com/stats1.htm
167,335,676 estimated Internet users in Africa for June 30, 2012
Copyright © 2012, Miniwatts Marketing Group

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Cyber Cities

Africa now is home to several cyber cities that are modeling on the Silicon Valley Format

- **Konza Cyber** city in Kenya better known as silicon Savannah
- **Ghana Cyber city**
- **Ethio ICT** (Ethiopia)

Konza Cyber city in Kenya

These are examples of purpose-tailored strategically geo-located cities that have attracted top notch blue chip companies who will invest as well as innovate and also create employment opportunities which is still a major African concern

Technological Training Opportunities:

- Africa has now in a similar fashion been founding incubation hubs where young university students are able to nurture their tech-skills and harness resources like wifi, development tools and tutorials as well as network with different people including fellow geeks, employers who come to scout for talent to impart their organizations
- Such hubs include : ihub and nailab in Kenya, kLab in Rwanda among others, examples of innovations spun out of these hubs include :ushahidi

Domain Name Industry Brief.

VeriSign, Inc. (NASDAQ: VRSN) just published it quarterly Domain Name Industry Brief. Announcing that more than 6 million domain names were added to the Internet in the fourth quarter of 2012, bringing the total number of registered domain names to more than 252 million worldwide across all top-level domains (TLDs) as of Dec. 31, 2012
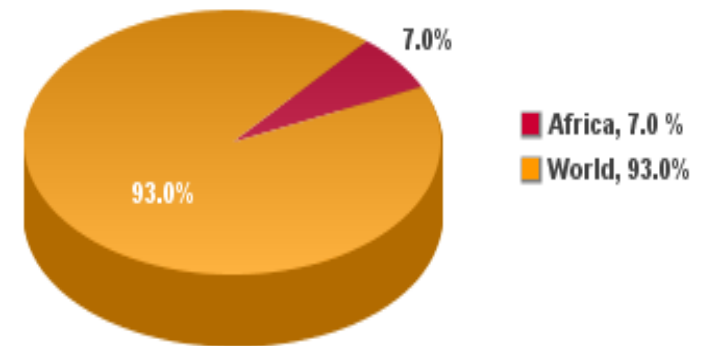
DNS in Africa

17New gTLDS Applied in Africa

4 Geographic
.Africa
.joburg
.capetown
.durban

9 Brands
.multichoice ,
.supersport ,
.kyknet ,
.mnet ,
.gotv ,
.africamagic
, .dstv ,
.mzansimagic

Internet Users in Africa 2012 - Q2

7.0%

93.0%

■ Africa, 7.0 %
■ World, 93.0%

Source: Internet World Stats - www.internetworldstats.com
167,335,676 estimated Internet users in Africa for 2012 2Q2
Copyright © 2012, Miniwatts Marketing Group

Challenges being faced:

Even though the continent is increasingly becoming fiber optic connected, there is still much to be done in terms of:

- Improving the last mile connectivity without reliance on the mobile network
- Building more institutions that can accommodate the growing number of innovative youths
- Creating more geo-tailored testing and accreditation models for software and applications
- Huge overreliance on overseas developed software's such as the ERP's
- Availability of high-end equipment that are faster and more efficient in developing systems
- Few ingrown investment firms that are willing to fund individuals and institutions
- Low funding for projects and research a key instrument in understanding the complex African dynamics

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

References

- https://investor.verisign.com/releasedetail.cfm?ReleaseID=754909
- http://www.mckinsey.com/insights/mgi/research
- http://www.internetworldstats.com/africa2.htm
- http://www.slideshare.net/jonhoehler/insights-into-the-mobile-internet-in-africa-8654168
- http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,menuPK:258649~pagePK:158889~piPK:146815~theSitePK:258644,00.html
- http://en.wikipedia.org/wiki/List_of_countries_by_number_of_broadband_Internet_subscriptions
- http://www.extensia-ltd.com/articles/africa-broadband-access-can-help-bridge-educational-divides-empower-students-un-report/11106
- http://investeddevelopment.com/blog/2012/06/closing-the-digital-divide-with-mobile-broadband-in-africa/
- http://techloy.com/2011/07/28/opera-spotlights-africa-in-state-of-the-mobile-web-june-2011/
- http://www.socialbakers.com/countries/continent-detail/africa/

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.

Economic Development:
Development through Technology

Sankofa54: African Youth
Empowerment Conference.