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# **The Economic Impacts of Broadband in Egypt**

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# Introduction

- ❖ The Internet has fundamentally changed the way that the world economies interact with each other.
- ❖ The term “Broadband” is used to denote an Internet connection with download speeds faster than traditional dial-up connections (at 64 kbit/s).
- ❖ In the last decade, broadband has been recognized as it is an increasingly integral part of the economy, and has an important role in the economic growth and sustainable development.

## **Introduction** cont.

- ❖ There are evidences that broadband, when combined with ICTs, has many channels to affect the economic growth.
- ❖ Direct effects result from investments in the technology and rolling out the infrastructure itself.
- ❖ Indirect effects come from all aspects of economic activity affected by broadband and which drive economic growth and prosperity, e.g. firm efficiency and increased productivity, reduced costs, innovation, globalization, and new employment opportunities resulting from the gains achieved.

## **Cross-Country analysis of the Economic Impacts of Broadband Penetration**

- ❖ A Macro-level cross country analysis has been made - in 2009 - by the World Bank to measure the economic impacts of Broadband.
- ❖ The world Bank used an econometric model to test the impact of Broadband Penetration - and other variables - on the average growth rate of the per capita GDP for 120 countries, the majority of which are developing countries.
- ❖ Sources of the collected data are ITU and World Bank between (1980 and 2006) .

## ❖ Variables used in the global model

**Dependent Variable:** The Average growth rate of per capita GDP between 1980 and 2006.

### **Independent variables:**

- Per capita GDP in 1980 ( $GDP_{80}$ ).
- Average ratio of Investment to GDP between 1980 and 2006  $(1/y)_{8006}$ .
- Primary school enrollment rate in 1980 ( $PRIM_{80}$ ).
- Average penetration of broadband and other telecommunication services between 1980 and 2006 for developed countries (BBNDH).
- Average penetration of broadband and other telecommunication services between 1980 and 2006 for developing countries (BBNDL).
- Dummy variables for Sub-Saharan Africa (SSA) and Latin America and Caribbean Region (LAC).

## The results of the global model

Variables	Coefficients
$GDP_{80}$	-0.100
$1/y_{8006}$	0.164
$PRIM_{80}$	0.001
BBNDH	0.121
BBNDL	0.138
SSA dummy	-1.108
LAC dummy	-0.655
Constant	-1.726

## The results of the global model (cont.)

- ❖ The results of the model showed that – holding other factors constant:
  - A high income countries with an average of 10 broadband subscribers per 100 people would have enjoyed a 1.21 percentage point increase in per capita GDP growth.
  - With a similar magnitude for developing countries, about 1.38 percentage point increase in per capita GDP growth rate for each 10 percentage point increase in broadband penetration.

## Internet and Broadband Evolution in Egypt

- ❖ In January 2002, MCIT launched the free Internet Initiative providing access to the internet across the country at the same price as a local call phone. The initiative was marked as a national mega-project that was based on Public-Private Partnership (PPP) and which has laid the foundation for the information society in Egypt.
- ❖ in April 2002, NTRA introduced a partial unbundling local loop. the Internet Services Providers (ISPs) were allowed to share the local loop with TE to provide broadband internet services using the ADSL technology; while maintaining TE rights over voice services.



## Internet and Broadband Evolution in Egypt (cont.)

❖ The development of Broadband in Egypt can be highlighted as follows:

Sep. 2004

The first broadband initiative where prices were reduced by 50% to reach 150 L.E./month for 256 kbps.

July 2006

The lowering of the basic monthly subscription by 36% (95 L.E./month for 256 kbps).

Sep. 2007

Where prices were halved once again (45 L.E./month for limited 256 kbps).

Aug. 2009

The NTRA regulation of the floor prices for some unlimited packages and thus having a space for competition between different service providers.

## **Internet and Broadband Evolution in Egypt (cont.)**

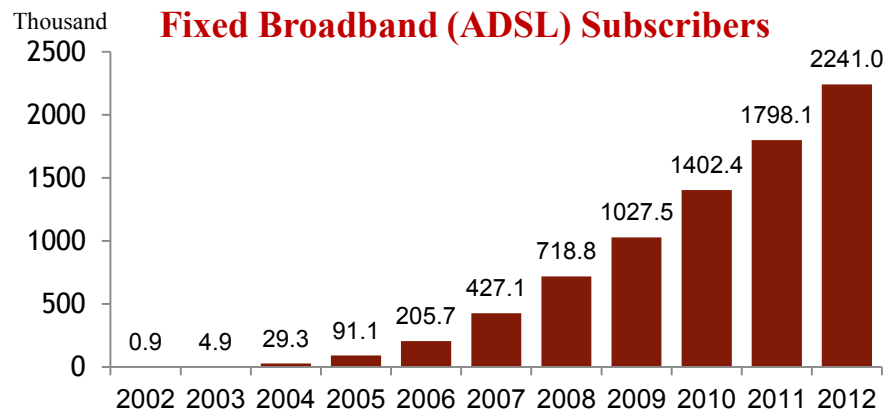
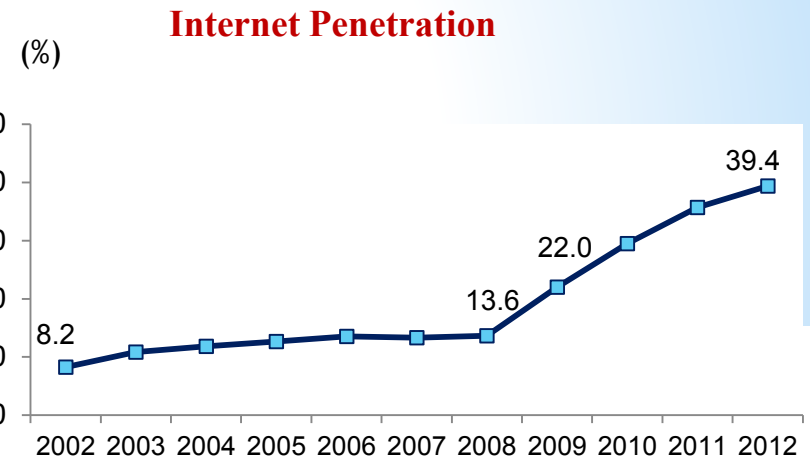
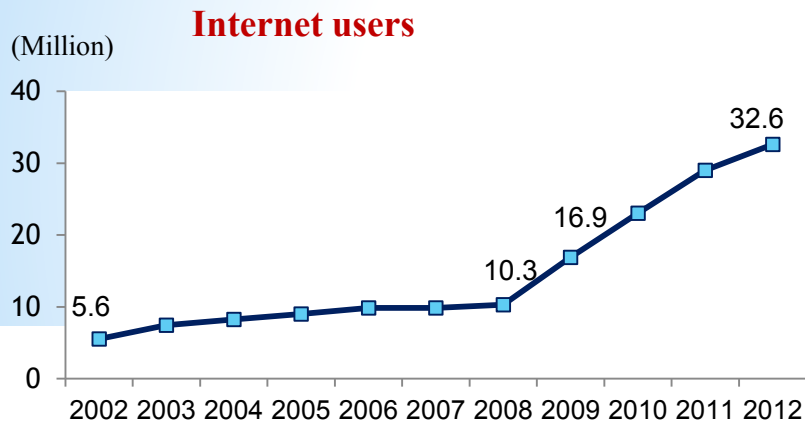
- ❖ In 2005, in the first step towards a more encompassing broadband wireless program, a WiMAM field trial was initiated by MCIT as a short term action on the broadband roadmap.
- ❖ In May 2007, two WiMAX pilots were launched to establish trial WMANs in touristic areas inside Luxor and Sharm El-Sheikh. The two pilots were carried out through a PPP program between MCIT and NTRA in cooperation with USAID.
- ❖ In Oct. 2009, NTRA announced an initiative for the interested companies to bid for two licenses to install and operate access telecommunication networks in closed compounds.

## Internet and Broadband Evolution in Egypt (cont.)

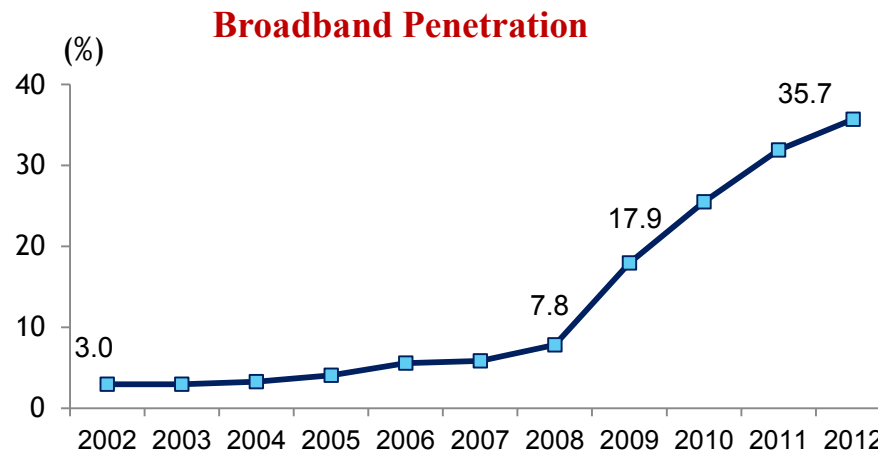
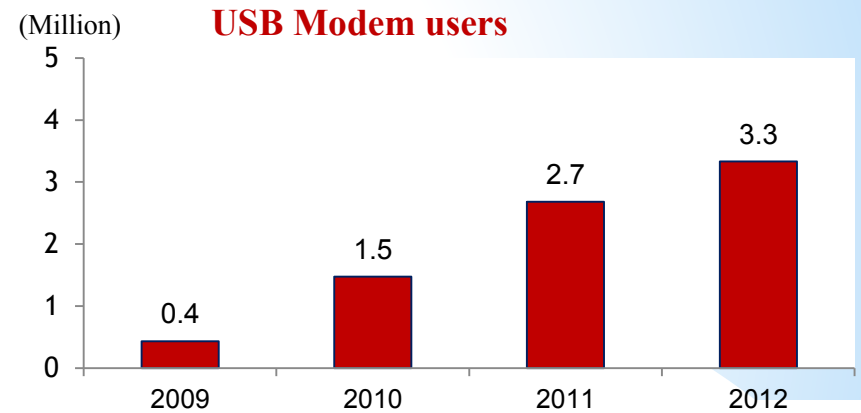
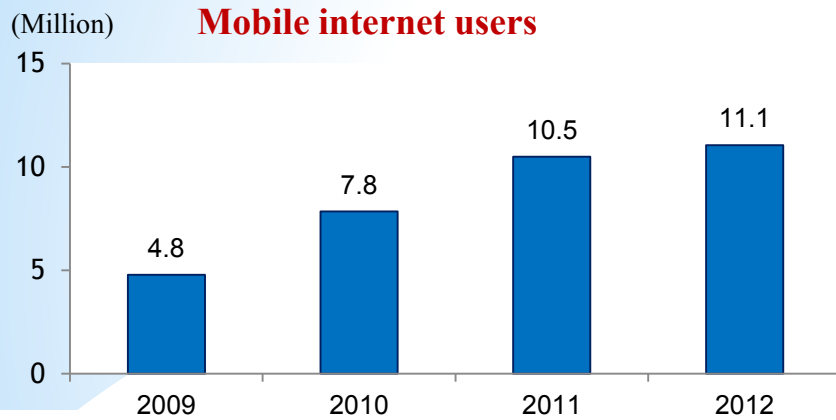
### ❖ Mobile Broadband in Egypt

- In Q2 2006, NTRA granted the first license for the provision of 3G services and the third mobile license in Egypt to a consortium led by Etisalat of UAE for USD 3 billion. In Q1 2007, NTRA granted a similar 3G license to the existing mobile operators.
- By 2008, people became more acquainted with mobile broadband services and prices became more affordable by the virtue of providing a variety of packages and services.
- In response, mobile operators reduced their tariffs, introduced multiple packages, and improve their service quality.
- By the end of Q2 2011, the mobile penetration has amounted to 95%.

# Internet and Broadband in Egypt



- Internet users jumped from 5.6 million users in 2002 to 32.6 million users in 2012, during the same period internet penetration in Egypt increased from about 8.2% (8 users per 100 people) in 2002 to 39.4% in 2012.
- ADSL subscribers increased from less than 1 thousand in 2002 to more than 2.2 million subscribers in 2012.



- **The mobile internet users in Egypt accounted for 11.1 millions in 2012, while 3.3 millions use USB Modem at the same year.**
- **From 2002 to 2012, Broadband Penetration in Egypt increased from 3% to 35.7%.**

## **Measuring the Economic Impact of Broadband Penetration in Egypt**

- ❖ An attempt has been made by MCIT to measure the economic impacts of the Broadband in Egypt using similar Macro-level econometric model proposed by the World Bank.
- ❖ The model aims at testing the impact of Broadband Penetration - and other variables - on the average growth rate of the per capita GDP in Egypt.
- ❖ Time frame of the analysis is started from 2002/2003 to 2009/2010.
- ❖ The last two years (2010/2011 and 2011/2012) are excluded from the analysis due to the negative impact of the political events on the economic growth in Egypt.

## ❖ Variables used in the local model

**Dependent Variable:** The Average growth rate of per capita GDP during (2002/2003 – 2009/2010).

### **Independent variables:**

- Broadband penetration during (2002/2003 – 2009/2010).
- Investment Rate during (2002/2003 – 2009/2010).
- Literacy rate (15+) during (2002/2003 – 2009/2010).
- Dummy variables for the impact of the global financial crisis in 2008.

## The model results

Variables	Coefficients
BBNDP	0.09
INVESTMENT	0.53
LITERCY	0.35
DUMMY	-2.49
Constant	-9.43

- **The results show that – in Egypt - a 10 percentage point increase in broadband penetration leads to about one percentage point increase in the growth rate of per capita GDP.**
- **The results also show that both the investment rate and literacy rate have positive impact on growth rate per capita GDP. On the other hand, the global financial crisis has affected the growth rate of per capita GDP negatively.**



**THANK YOU**

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