

**8th World Telecommunication/ICT Indicators
Meeting (WTIM-10)**
Geneva, Switzerland, 24 - 26 November 2010



Information document

Document INF/22-E
19 November 2010

English

SOURCE: Ministry of Communications and Information Technology, Egypt, in cooperation with ORBICOM – the International Network of UNESCO Chairs in Communications

TITLE: Statistical Compilation of The ICT Sector and Policy Analysis: The Case of Egypt

“Statistical Compilation of The ICT Sector and Policy
Analysis: The Case of Egypt”

Background Paper

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Statistical Compilation of The ICT Sector and Policy Analysis: The Case of Egypt

1. Introduction

The main focus of this study is to quantify Egypt's ICT sector and analyze its sectoral composition and evolution. Particular focus was placed on the contribution of ICT sector to real GDP and to employment, as Egypt's ICT sector has become an essential building block in both social and economic development. This paper also highlights Egypt's effort to measure the performance of ICT sector and how to utilize ICT indicators to support the decision making process through linking and compiling ICT statistics and policy analysis.

This study was conducted in cooperation with ORBICOM- the International Network of UNESCO Chairs in Communications- in the context of ORBICOM project for "Statistical Compilation of The ICT Sector and Policy Analysis", applied on six selective countries: India and Malaysia from Asia, Brazil and Argentina from Latin America, and Cameroon and Egypt from Africa.

The paper confirmed that Egypt has exerted many successful efforts to move towards the knowledge economy. Following the successful implementation of the Egyptian Information Society Initiative in 2006, which focused on improving productivity, citizens' quality of life and Business Park establishment, MCIT initiated an ICT strategy covering the period from 2007 to 2010 with the objective of increasing ICT exports and Industry development. As a result Egypt is ranked in 2009 as one of the top five global destinations for outsourcing industry. Now Egypt is moving towards formulating a new strategy for communications and information technology for 2011-2014 that will focus on innovation moving Egypt to the high end of the value chain. This paper shed light on Egypt's ICT sector as a highly dynamic sector contributing positively to the economic growth and social development. Despite the effect of the financial crisis; the sector has successfully managed to maintain positive and double digit growth rates. This study confirms the economic importance of Egypt's ICT sector with respect to its contribution to real GDP growth rates, employment and overall economy.

Egypt follows the internationally agreed-upon definition of the OECD for the ICT sector, with more emphasis on ICT services. Accordingly, financial data has been compiled and indeed proven that ICT services contribute the most ICT value added and investments (estimated to range from 70 to 80%). Egypt puts a great emphasis on developing the reliable and updated indicators that reveal the economic and social contribution of the ICT sector.

2. Magnitude And Composition Of The ICT Sector:

The value added of ICT GDP at current prices reached EGP 30.9 billion (US\$ 5.6 billion in 2008/2009, while the ICT value added at constant prices reached EGP 30.3 billion (US\$ 5.5 billion) with an annual growth rate 14.5%. The ICT sector recorded the highest growth rate proving that it can maintain growth momentum even during times of crisis. The private sector is playing a leading role in generating the total ICT value added as it contributed with about 69 % of the total value added generated in 2008/2009.

Egypt's ICT sector shows competitive performance regarding telecommunications revenue as a percentage of GDP based on World Bank figures, which reached 3.8% in 2006, coming ahead of a number of developed and developing countries, such as Argentina, China and Germany and preceding the MENA region average. The relative importance of the ICT sector is even higher when measuring it relative to the total services sectors' real GDP as it reached about 9.4% in 2008-2009.

The ICT sector in Egypt has succeeded in attracting local and international companies to invest in different lines of business, including high value - added services and call centers. The number of ICT companies in 2009 was 18 % higher than in 2008. Consequently, the total number of direct employees in the ICT sector reached 181.734 thousand employees in 2009. Egypt's ICT sector is expecting to generate around 40 thousand new direct job opportunities in the next 2-3 years in addition to 100 thousands indirect jobs after the launch of the second investment ICT zone in Maadi.

3. Productivity:

Many macro-level studies show that ICT has considerable economic effects through the expansion of ICT-related production of goods and services as well as via capital deepening. Within this context, Egypt's ICT sector witnessed a significant increase in productivity in the last ten years. The productivity of an employee in ICT private sector increased from 8 Thousand EGP in 97/98 to 132 Thousand EGP in 07/08. The continuously compounded average growth rate of ICT productivity reached 25% in (97/98-07/08) exceeding the average productivity of other services sectors.

4. Employment Characteristics:

Egypt's large population (close to 80 million) is characterized as young population, with an average age of 24. This constitutes a strong advantage in a world in which talent needs to be built (or upgraded) at a rapid pace. Egypt is rich in talented, skilled workers who are eager to work and value multilingual abilities. Egypt has also been able to build on its familiarity with Western culture and its long-established international educational institutions (English, French, and German high schools and universities). Moreover, around 330,000 students graduate annually from universities in Egypt; The ICT sector in Egypt benefited from this strong critical mass of talented pool.

Concerning the gender analysis in ICT sector, it is notable that women in Egypt have started to play an increasing role in ICT Sector. This trend is obvious through many indicators that confirmed the diminishing of the gender gap in ICT employment. In this context females accounts for around 30-40% of the total workforce in ICT sector. Females' participation is higher in the fixed telecommunications sector reached 35%, while the females in mobile communications services account for 27% of the total employees within the sector.

Moreover, The results of a recent field survey study conducted by Information and Decision Support Center confirmed (IDSC) revealed that 72% of ICT surveyed companies have no gender preference with respect to hiring new employment. Egypt's ICT Companies are keen in general to grant their employees many incentives to attract the young and talented employees. 98% of ICT companies provide social insurance and allow their employees to have annual leaves, while 86% offer health insurance, 74% offer promotion and 70% of them ensure the right of their female employees to have maternity leaves. The average daily working hours for ICT employees reached 9.2 hour, which is higher compared to the similar average of other sectors in the Egyptian economy.

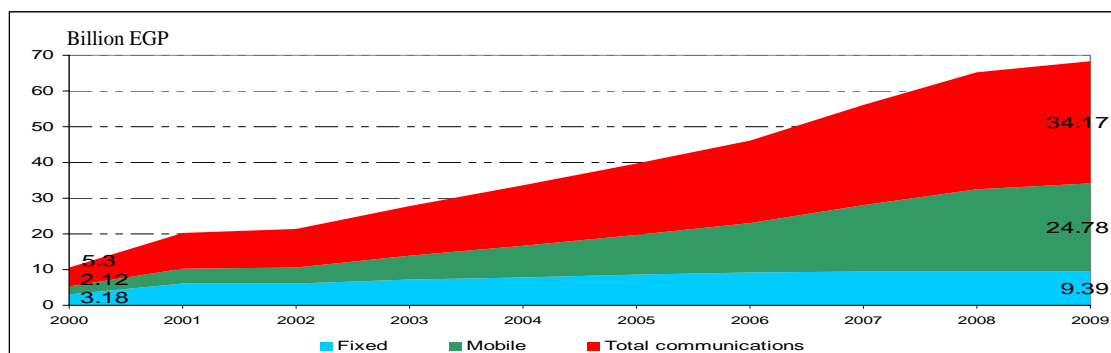
5. ICT Investments:

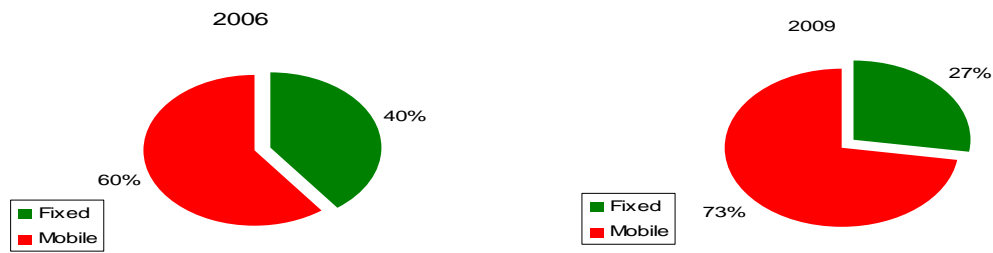
Egypt's ICT sector is highly dynamic and attractive for both local and foreign investment. The total issued capital for ICT companies reached EGP 44.37 billion (US\$ 7.9 billion) in 2009 compared to EGP 38.62 billion in 2008 (US\$ 7 billion) with an annual growth rate of 15%. It is worth noting that the percentage of Issued Capital of telecommunication companies reached 81.40% while it reached 16.52% for IT companies and 2.09% for IT enabled services companies.

6. Evolution of Egypt's ICT Sector :

During the past few years, Egypt's ICT sector has become one of the key drivers for economic and social development. It has also become an Egyptian role model in terms of pace and policies of deregulation and privatization, as well as a catalyst for reform in other sectors. The substantial increase in ICT usage in Egypt in the last ten years lead to a parallel increase in telecommunications revenues which rose from only EGP 5.3 billion in 2000 to 34.17 billion in 2009 with a CAGR reaching 23%. The statistics shown in this study revealed the evolution of mobile sector in Egypt during the past ten years, as the Compound annual growth rate of mobile subscribers reached 56%. Mobile revenues have witnessed an enormous increase during the past ten years, it have increased to EGP 24.8 billion in 2009 (72.5% of the total telecommunications revenues) compared to EGP 2.12 billion in 2000 (40% of the total telecommunications revenues). The following figure sheds lights on the evolution of mobile market in Egypt.

Figure (1)
The evolution of mobile market in Egypt (2000-2009)
Telecommunications revenues (Billion EGP)

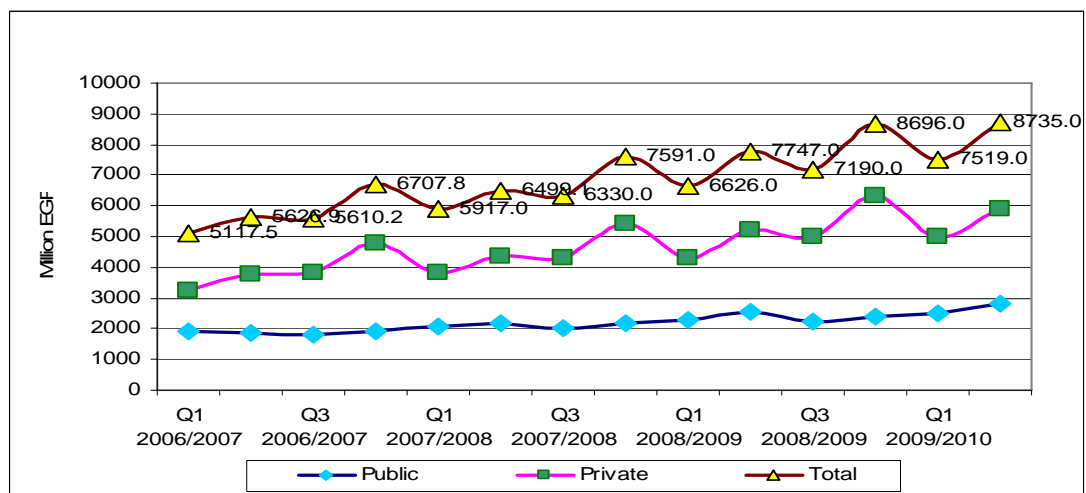




Source: Ministry of Communications and Information Technology.

The ICT sector has been contributing significantly to GDP and its growth rates in Egypt. In the year 2001/2002, the ICT sector component of GDP at current prices has reached only 6.4 billion EGP, while in 2008/2009; it reached 30.9 billion EGP. The ICT GDP at constant prices has also been increasing; as it has reached EGP 30.3 billion in 2008/2009 compared to EGP 23 billion in 2006/2007. This increase reflected the growth of ICT users and the decrease in the ICT services' prices. Using quarterly data; the ICT value added at constant prices increased from only EGP 5.1 billion in Q1 2006/2007 to EGP 8.7 billion in Q2 2009/2010. The private sector contribution in total ICT value added increased from 63% to 67% during this period. The figure below highlights the growth of ICT value added during this period.

Figure (2)
ICT value added at constant prices (Q1 2006/2007-Q2 2009/2010)



Source: Ministry of state for economic development.

Moreover, the ICT sector contribution to GDP has reached 4.2% in Q2 2009/2010 compared to 2% in Q1 2006/2007. Concerning ICT contribution to Egypt's overall GDP growth rate which had reached 6.45% in Q1 2007/2008, the sector has contributed with 0.45 pps, this contribution has increased to 0.50 pps in the second quarter of 2009/2010.

7. International Trade :

One of the principal areas of industry development for the government is creating a framework that will attract multinationals to Egypt, and foster the growth of new ICT line of businesses such as contact centers. A parallel objective is to improve the international competitiveness of existing exporters to enable them to successfully manage market-led development. Ultimately, this should result in improved export capability and penetration of new markets. Between 2004 and 2010, Egypt's exports grew from US\$ 150 million to US\$ 1100 million with an average annual growth rate of 90% percent. The key element that led to such growth in ICT exports was the tremendous development in offshoring business in Egypt, which enjoys high value propositions in this area. Egypt aims to achieve a target of export revenues of over US\$ 2 billion by 2013.

8. Policy Relevance And Linkages:

The Government of Egypt was keen in the past ten years to continue the process of liberalization of Egypt's ICT sector, which in turn increased levels of competition between different operators. As a result of these policies, a major decline in the prices of ICT services took place in Egypt where telecommunication services prices declined by 55% through the period 2002-2009, as the communications composite price index has decreased from 214.6 point in 2002 to reach 96.3 point in 2009. The prices of ICTs in Egypt are considered very competitive compared to many countries around the globe. The study addressed the linkage between some selective ICT policies and the performance of Egypt's ICT sector within certain periods. The study attempted to analyze the effects of broadband initiative -which has been launched in 2004 to increase Broadband subscribers- on number of ADSL users using. In addition, the study tried also to analyze the effect of deregulation process of mobile market on mobile subscribers and mobile prices.

To analyze the relation between ADSL prices and ADSL users, regression model was conducted to estimate the relation between ADSL prices as an independent variable and ADSL users as a dependent variable. The study came out that the broadband initiative, which was very successful in reducing the ADSL prices led to real increase in the average number of ADSL users. In addition, the results referred that ADSL prices affect significantly number of ADSL subscribers. If price decrease by EGP 10 (US\$ 1.8), number of ADSL users will increase in average by 90000 users.

Concerning the impact of the deregulation policies on mobile subscribers and prices, the study tested if there a relation between the deregulation processes and mobile prices in Egypt using non parametric test (Mann-Whitney Test) and showed that the entry of third mobile operator (Etisalat) affected significantly mobile prices, as the mobile price deflator has decreased by 162.36 point after the entry of the third GSM operator

In addition; the study also examined the effect of mobile price index on number of mobile subscribers using regression model. The dependent variable is the number of subscribers and the independent variable is mobile price index. Results referred that if mobile price deflator decreases by one point, number of mobile subscribers will increase in average by 10510 subscribers.

9. International Comparisons:

ICTs became in many aspects the main driver for economic growth and development in the world's economy. In 2007, Egypt telecommunication revenue as a percentage of GDP accounted for 4%, a rate higher than other countries in the region, such as Saudi Arabia, Syria, Algeria, Oman and United Arab Emirates (3%). This percentage was also higher than other countries such as China (3%), Indonesia and India (2%). (Worldbank, 2009)

Improved access to ICTs is necessary to narrow the digital divide and to progress towards the creation of an equitable information society. Thus, it is important to monitor the diffusion of different ICTs to access the extent of connectivity. Egypt is well positioned in comparison to almost all the Arab countries by having the highest number of subscriptions in terms of the infrastructure indicators; fixed lines, mobile and the Internet reaching 11.9 million, 41.3 million and 13.6 million respectively in 2008.

Affordability of ICTs is another key element in measuring accessibility to ICT services. In this area, Egypt proved that it has a competitive edge in terms of ICTs' affordability compared to the MENA countries and some of the comparable countries who act as observers in the OECD. For instance, Egypt offers the lowest price basket for mobile service in comparison to MENA countries at US\$4 in 2007, a rate that reached US\$75 in Kuwait, US\$20 in Lebanon and Morocco. Egypt also enjoys competitive prices for Internet services compared to the MENA and the selected comparable OECD observers. In 2007, the price basket for Internet services was US\$4/month in Egypt, compared to US\$30 and US\$29 in Bahrain and Brazil during the same period of time

The competitiveness of Egypt was not only witnessed by the indicators mentioned earlier, but also through composite indices. According to the Global IT Report 2009/2010 published by the World Economic Forum (WEF), Egypt was able to improve its ranking in the Networked Readiness Index (NRI) by achieving the 70th position (out of 133 economies), up 6 ranks compared to last year.

Concerning Outsourcing, Egypt is recognized as an off-shoring global delivery hub and many recent reports published through 2009 by many distinguished research institutes confirm the progress that Egypt has made. An Example of this is a study conducted by the "Commonwealth Business Council and CyberMedia, **stated that Egypt is ranked as the first outsourcing destination in Africa** among the fifteen countries studied in the report. As well, in Everest Research Institute "Global Location Insights" Egypt was positioned **as one of the leading African countries in terms of the scale of direct employment in IT and BOP.**

The outsourcing unit of the London School of Economics & Political Science found that **Egypt offers one of the most attractive cost bases for outsourcing work** in its "Beyond BRIC: Off-shoring in non-BRIC countries: Egypt a new growth market" report. The 2009 A.T. Kearney Global Services Location Index in its report "The Shifting Geography of Offshoring" **ranked Egypt in the 6th position.** Egypt in this regard achieved an increase of 7 positions compared with the year 2007.

10. Conclusion:

Looking ahead, Egypt aims at introducing 4G mobile services in 2013, which expected to attract around US\$ 1 billion new investments in mobile sector, and encouraging convergence between communication and media to launch interactive TV services in 2015. Moreover, the main features of MCIT new plan (2011-2015) are to: maintain high growth rates of ICT sector reached 15% annually, develop new centers for cloud computing industry and further develop the National Broadband Initiative to enhance ICT value added services and to connect 40 million Egyptians by the end of 2015 with total investments expected to reach US\$ 3 billion.

Egypt's ICT exports is expected to grow to US\$ 2 billion in 2013 and US\$ 10 billion in 2020. Attention is being also placed on diminishing the digital divide between ICT usage in urban and rural areas through utilizing more advanced techniques like satellite connections. The modernization of the ICT infrastructure will remain the main focus of the government which looking forward to encourage investment in more submarine cables in the Mediterranean and the Red Sea benefiting from the strategic location of Egypt.