Digital Divide in Libya: A General Assessment

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Abstract

The aim of this paper is to shed light on the digital divide in Libya in order to discover the current state of this phenomenon and its consequences on the standards, policies, data, and procedures that are needed to support the effective coordination and dissemination of essential societal information.
The digital divide is often characterized as being the inequality in the relationship between information and communications technology ICT and groups of individuals who are situated within a complicated arrangement of social, political, and economic issues. In the course of recent years, the subject has attracted the attention of both the scholarly and the political world.

In addition, the design of this paper is based on theoretical approach. Various tools have been used and applied to accomplish the objective of this paper such as personal readings of intellectual production, literature review, experience, and the insights of other researchers and specialists in the extent of digital divide.

Moreover, the paper concludes that there is a clear evidence of a huge digital gap within the country. This gap has had a negative impact on the progress of information technology in Libya as many organizations were deprived from improving their capabilities and participation in the so-called information society.

Keywords: Digital Divide, Internet Usage, Internet Penetration.

1. Introduction

It was noted over the most recent two decades that the digital divide which is still widening between developed countries and the third world nations still on the increase. The term digital divide was coined in the 1990s to describe the growing gap between those who have access to, and the skills to use, ICT and the Internet and those who have limited or no access. In other words, it is the gap between the haves and have-nots, or the information rich and the information poor.

The digital divide is a term that refers to the gap existing in the chances to get to data and information between geographic zones or by people at various financial levels.

The Oxford English Dictionary Online [1] define the digital divide as "the gap between those who have ready access to current digital technology (esp. computers, wireless communication, and the Internet) and those who do not; (also) the perceived social or educational inequality resulting from this"

The divide within a certain country such as digital divide in Libya refers to inequality between a group of people, households, and specific geographic areas which are living at different social and economical levels.

2. The Digital Divide

The digital divide is a complex issue, so measuring those with and without Internet access is not enough. Blau [2] points out how limited a digital divide discussion is when seen only in those terms. First, the gap is hard to measure as the type of access can vary greatly by location (home or work or school), by connection (dial-up or high-speed), by computer (operating system and speed). Second, it is clear that having access does not mean that it is meaningful access. There can still be significant barriers to use, including lack of familiarity with computers, inadequate skills in looking for information, inability to interpret and use content.

The graph below shows the digital divide phenomenon and the factors associated with this phenomenon. These factors are as follows:

1. Social factors :

    a) Literacy skills

    b) Disability vs. fit

    c) Age: old vs. young

2. Economic factors :

    a) Developing nations vs. Advanced countries

    b) Poverty, i.e. unaffordability

    c) Lack of international investment and funding

3. Cultural factors

    a) Family background (income and education)

b) Ethnicity and language (non-English speaking)

4. Geographical factors

    a) Rural areas vs. Suburban

    b) Underdeveloped nations vs. developed nations

5. Approach factors

    a) Fear of technology
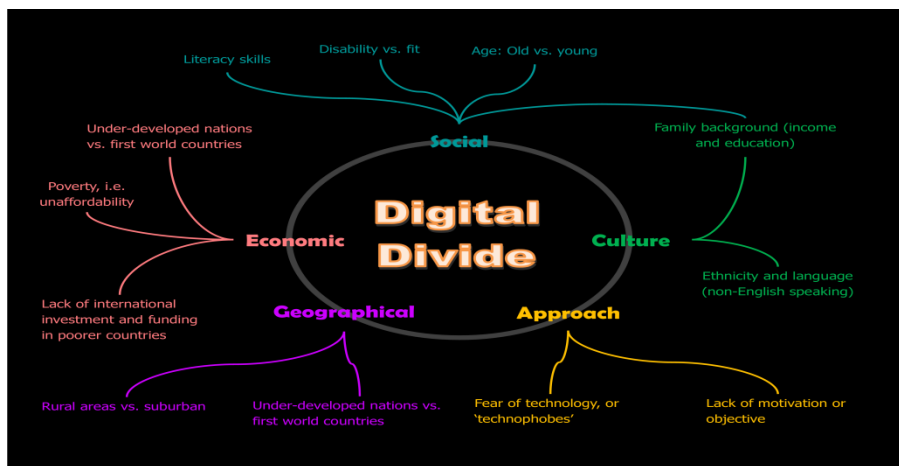
    b) Lack of motivations
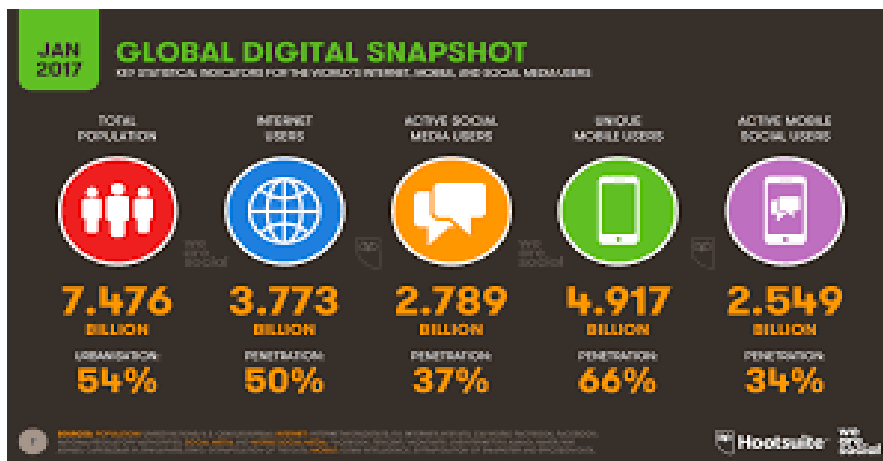

Figure1, shows the digital divide factors

Figure 2, Shows global digital snapshot in January 2017

3. A View over Libya

Libya is one of Africa's largest countries. It is situated in northern Africa, bounded by the Mediterranean Sea to the north. Egypt lies to the east, Sudan to the southeast, Chad and

Niger to the south, Algeria to the west and Tunisia to the northwest. The official name of Libya is the Great Socialist People's Libyan Arab Jamahiriya. Libya consists mostly of huge areas of desert and covers an area of 1,757,000 square kilometers. The population is concentrated along the coast, which stretches to 1770 kilometers [3]. The discovery of oil in1959 has transformed Libya from a poor nation at the time of its independence to a far more prosperous one ranking 12th among all petroleum producing- countries in 2004 [4]. Therefore, the Libyan economy relies mainly on the revenues from the oil sector which account for almost all of its export earnings and about 25 percent of its GDP. The petro-chemical industry, which depends on the oil sector for raw materials, has grown rapidly, with large-scale industrial complexes situated at RasLanuf and Bu Kammash. Oil now provides the government with its main source of revenue and constitutes 99% of Libya's exports. [5] Agriculture output is, however, limited by the climate and soil therefore Libya still imports about 75% percent of its food despite the government's encouragement and endeavors to establish very large-scale agricultural projects to satisfy local consumption.

United Nations sanctions on Libya, which lasted eleven years, have had a negative impact on the progress of information technology in Libya as many organizations were deprived from improving their capabilities and participation in the so-called information age. This in its turn has reflected badly on the performance of these organizations and their efficiency and effectiveness in terms of playing their role in the advancement of society. In light of the above Libya needs to develop its ICT infrastructure and to focus on the application of IT in the agriculture, industry, and service sectors in order to a achieve greater efficiency and effectiveness. In doing so, Libya will be able to participate in the current information revolution which will reflect positively on the total economy of the state as many enterprises will be able to operate and compete on a global level, launch new products, and market their products and services. This should reflect itself in terms of improvements in standards of living, health, and educational sectors. At present, the use of technology in Libya is at an early stage as with most developing countries."It is in need of an enabling framework of standards, policies, and procedures that is needed to support the effective coordination and dissemination of essential societal information"[6].

4. ICT Levels and Internet Usage in Libya

The Internet market in Libya has increased over the last decade but not at the rates seen elsewhere in the regions. This can be observed from Internet usage statistics for Africa.Table1. Internet World Stats, 2017 [7] shows Libya estimated populations, the number of Internet users in Libya in 2017,the percentage of growth in Internet usage between 2000 and 2017,the percentage of population penetration and the total percentage of users in the country. The table demonstrates that the population of Libya in 2017 reaches 6,408,742. The table shows also that the number of Internet users in 2000 was 10,000 users, which increased dramatically to reach 2,800,000 users in March 2017.Face book users has increased also to reach 2.800,000 in 2017. It can be clearly seen that Internet penetration boost to reach 43.7% in 2017.This indicates that there is a considerable change in the development of the Internet and it's technology infrastructure in Libya that will influence the forthcoming strategies and policies concerning the adoption of ICT.

Table 1, Internet World Stats
(2017)

LIBYA
LY - 6,408,742 population (2017) - Country Area: 1,777,060 sq km
Capital city: Tripoli - population 1,018,648 (2012)
2,800,000 Internet users as of March, 2017, 43.7% of the population, per IWS.
2,800,000 Face book users on June/2015, 43.7% penetration rate.

With regard to modern telecommunications infrastructure, which is essential for the adoption of information technology, only one company was operating in the country until 1999. This company was the regulator and operator of all communications services in the country. It was established under the Ministry of Transportation and Telecommunication, which was changed later to the General People's Committee for Telecommunications. The General Post and Telecommunication Company is still operating and has a leading role to play in the future. However, competitions required to encourage development. Therefore, the establishment of a new telecommunications firm was essential for the country. In2000, a new company was established in order to provide efficient services in Libya. The new firm is called Libya Telecom and Technology (LTT) and provides the following services: Libya Telecom and

Technology.

1. Internet Access Solutions
   - Dial-up Internet Access
   - Libya DSL
   - Broadband Internet Access over XDSL
   - Broadband Internet Access over Wireless
   - Satellite (DVB-RCS) Access

2. Data network connection Solutions
   - Data Network via Wireless
   - Data Network via XDSL
   - Data Network via VSAT

3. Communication Solutions
   - VSAT
   - Microwave
   - GSM

4. Value-Added Services
   - Web hosting and Mail Services
   - Network Security Service

5. Consultation Services
   - Technologies& Communication

This indicates that the information and communication infrastructure in Libya is steadily progressing. It is also worth mentioning in this context that the number of mobile phones has increased dramatically in the past three years.

5. Digital Divide in Libya

Libya is one of the third world's developing nations which still suffer from violent struggles. Since 2011until the present time, most of the country's infrastructure has destroyed, thousands of its citizens killed and injured, and millions of others have left the country. At present, the development of Libyan information infrastructure (LII) is being carried out through a systematic, practical process that will establish a strategic and evolving frame work or a long-

term LII, which gives coordination and support to the advancement of its different segments through a precisely imagined and guided incremental process. The General Authority for Information and Telecommunications in Libya is sponsoring this initiative in Libya [8]

At start point, the government of Libya has faced many challenges and difficulties in all sectors including ICT. The sector of information and communication infrastructure in Libya is steadily progressing. It is also worth mentioning in this context that the number of mobile phones has increased dramatically in the past three years. The number has risen from 24,000 with limited access and coverage in 1996 to around 5,900,000 subscribers in 2017 with almost full coverage and access in addition to 3G services, which became operational in the beginning of 2007 through the Libyana and Al-Madar Mobile phone networks.[9]

Libya max is a new wireless broadband network powered by WiMAX technology to give subscribers new and futuristic experience of the Internet , With Libya max subscribers, get better Internet speed, mobile, broadband connection in most districts in the country.

As digital divide in Libya still widening, there is a need to improve the current state of ICT infrastructure and providing coverage for the remaining population which counts for more than 56% specifically in the rural areas. There is also a need to introduce reliable and faster Internet. Implementation of E-government all across the country is also a necessity that should be taken into consideration. Additionally, in this regard, the focus of socio-economic impact of the digital divide is essential for better health, better quality of life, and better education results [10].

There are several gaps making up the digital divide in Libya :

1. There is a technological huge gap in infrastructure due to the current struggle in the country which started in 2011 in the so-called Arab spring. In addition to this, the ICT infrastructure in Libya was too poor even before 2011 and needed to be modernized to suffice the demand required for Investments in the area of human capital and establishing skills and scientific capability and providing educational, training, and qualifying programmes for the labor force.

2. There is a content divide – a considerable web information is not relevant to real needs of Internet users in Libya. Adding to this, the digital Arabic content on the Internet is very weak and represent only 5% from the total content on the web. Nearly 70% of the

World's web sites are in English language. Therefore, only a small number of people can make use and benefit from the content on the Internet. Suitable digital content can assist maintaining and sustaining current standards of living and then developing and improving them continuously.

3. There is a gender divide in Libya with women and girls enjoying less access to information technology than men. This is maybe due to cultural and social issues. Such issues anyway should be taken into consideration when drafting the new constitution of the country. In doing so, the society can achieve human development in accordance with international standards and national particularities.

4. There is a commercial divide. Online business is connecting some countries and organizations ever more firmly together. But others run the risk of further marginalization. E- commerce in Libya still very weak due to lack of adequate ICT infrastructure and lack of reliable internet connection in some districts in the country.

5. There is also an economic divide between the rich and the poor people in Libya. Several studies have pointed out that the high cost of computer hardware, software, and wireless communication have badly affected the poor as it prevented them from access to information needed on the Internet.

6. Information literacy between educated and less educated in the country is an important factor for digital divide in Libya, as a lot of people cannot make use of IT applications. This, in turn, has deprived them of getting the information required for daily life and take advantage of E-learning opportunities.

7. There are also obvious social, literacy and other disparities and obstacles that affect the country's ability to take advantage of digital opportunities.

Conclusion

To conclude, there is a huge digital gap within the country. This gap has had a negative impact on the progress of information technology in Libya as many organizations were deprived of improving their capabilities and participation in the so-called information society. This in turn, has reflected badly on the performance of these institutions and organizations and their efficiency and effectiveness in terms of playing their role in the advancement of the society. In light of the above, Libya needs to develop its ICT infrastructure and to focus on the

application of IT in the agriculture, industry, and service sectors in order to achieve greater efficiency and effectiveness. In doing so Libya will be able to participate in the current information revolution which will reflect positively on the total economy of the state as many enterprises will be able to operate and compete on a global level, launch new products, and market their products and services. This should reflect itself in terms of improvements in standards of living, health, and educational sectors.

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