ELECTRONIC GOVERNMENT AND ITS IMPACT ON SERVICES IN DEVELOPING COUNTRIES

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Abstract

Electronic government is taking a front place in developing countries, governments in developing countries use new technologies and (ICT) information, and communication technology services, to transfer its services to be smarter.   This research analyzes the development of e-government in Egypt's readiness. This study could help to make plans and strategies to improve e-government in Egypt. This, in turn, enhances the quality and efficiency of the citizen services and reducing its cost.

Keywords: E-government, Egypt, ICT**,** Developing countries.

1. INTRODUCTION

The Digital government (E-government) is the management of public affairs by using new technologies, to facilitate government financial transactions. Several governments have started to use the term digital government on a lot of services involving contemporary technology, such as big data, automation or predictive analytics, to make services radically smarter, more effective and cheaper (1)**.** E-government helps citizens who entering a country website to communicate with government via the Internet.   The basic aim of the e-government is to increase the efficiency and transparency of public services to citizens.   E-government makes government services easier.

Many services such as, marital status, driving license, electricity bill, and political campaigns take a lot of paperwork for citizens. Electronic government makes it convenient to individuals.

2. E-Government

E-government or digital government simply defined as "Internet employment for delivering government services to the citizens" (2). According to (Jeong-2007) (3), E-Government term consists of (C2G) between citizens of the country and their government, (G2G) between government institutions, (G2C) between government and citizens. (G2E) between government and employees and (G2B) and between government and businesses. Digital Government can be very useful Can assist the government in its objectives, can improve effectiveness and help to achieve government goals.

3. Government Uses of Digital Technology

Digital technologies can help governments to revenue collection, publishing details of service availability, policies, plans, and budgets online to inform citizens, using the World Wide Web to offer health services to citizens, offering learning services online, for students of all ages, citizen Registration like birth, marriage registrations, ID cards, Driving License, Job matching, providing online safety and security advice, by using of chat rooms and E-mails to citizen concerns about criminal activity and other public dangers, citizens can track all of their complaints and cases submitted online with updated information, E-Government transactions cost 65% less, reduced travel and waiting compared to ordinary transactions (4).
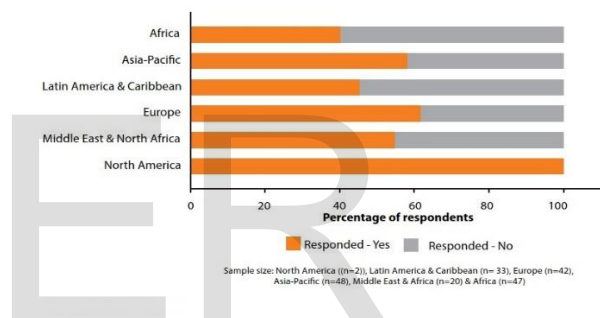
Financial development enhances economic growth, via the channel of e-government. Interactive effect of electronic government and financial development has positive and significant influence on economic growth. The net marginal impact of e-government indicates that one per cent increase in e-government in relationship to financial development will enhance the per capita income (about 4.6 per cent). Similarly, one percent increase in financial development in relation to e-government will boost the per capita income (about 0.25 % to 1.57 %) (5).

E-government helps in disaster prevention. United Nations Electronic government Survey, (2018), highlight the accessible capacities, preparation of e-government, challenges, and opportunities, with managing disaster risks (6). The relationship between internet connectivity and emergencies shows that the internet could decrease disasters. E-government weather and disaster information on websites lower casualties.

The Figures below show weather and agriculture updates services. First, North America responded at any time, the last one is Africa by responded by 40%.

Figure 1: Percentage of countries with e-government sites that share updates and Information

Sample size: North America ((n=2)), Latin America & Caribbean (n= 33), Europe (n=42), Asia-Pacific (n=48), Middle East & Africa (n=20) & Africa (n=47)

4. Fundamentals of Electronic Government

There are major Fundamentals to transform government to be smarter: citizens, information and communication technology (ICT). ICT specialists (Human Resources).

First is citizens or people of the country, it should be the intention and trusting of citizens, that is an important issue to success the processes of transformation to electronic government, and training them on the new technologies. Second is the infrastructure of the (ICT), includes internet networks, computers, communications services.

In Egypt the most important of these indicators, the high rate of growth of the (ICT) sector to reach 16%, according to the ministry of information and communication indicators (2019) indicators. As well as an increase in the proportion of the sector's contribution to GDP from 3.2% in (2018) to 4% in (2019). The value of investments in the sector increased during the same year from 28 billion pounds to 35 billion pounds, in addition to increasing the volume of exports of digital services from 3.2 billion dollars in (2018) to 3.6 billion dollars in (2019), an increase of 12.5%. The number of mobile subscribers reached 95 million in (2019) and the number of internet subscribers reached 40 million in (2019) (7).

Third Fundamental is the availability of technical expertise. In Egypt, Training programs includes courses related to communications and training courses for software development that are designed by the Ministry of Communications and Information Technology and its affiliated bodies to help develop and operate efficient and experienced cadres, which will lead to the availability of the required capabilities for the Egyptian community.

5. E-government Readiness in Developing Countries

The United Nations Department, of Economic, and Social Affairs (UNDESA) has published, Government Survey (2001). The Survey measures e-government effectiveness in the delivery of public services and identifies patterns in e-government development and performance as well as countries and poor areas. There has been a steady

increase in the number of country websites with information about specific programs benefiting women and children, persons with disabilities, older persons, indigenous people, and people living in poverty. Increasingly, still, the majority of the world's population remains offline, which increases the risk that groups without Internet access will fall further behind in the rapidly progressing digital society.

E-government has been growing rapidly, since the first attempt of the United Nations to benchmark the state of e-government in 2001. In the 2018 Survey, 40 countries from all 193 Member countries scored (Very High), with Electronic Government Development Index (EGDI), there has been steady progress in improving online public services. However, 14 countries in the low (EGDI) group are African. In the first places, Denmark, Australia and the Republic of South Korea, those countries leading the world in providing electronic government services.

European countries lead to e-government development. Many people in African countries are unable to benefit from the electronic government because of poor internet connectivity, high cost of access and lack of information and communication skills.

In some countries, such as Colombia, the electronic government is used to improve governance and peace to help heal the wounds of years of internal conflict and crime. The only ties between the citizens and the State are through public services.

In Southeast Asia, Cambodia try to combat malaria. The Malaria Information

System (MIS) has been set up to process data from village malaria workers and health facilities, and to use open source software for MIS reporting via mobile phones. And that also a system called (drug stock out) tracking in health centers and clinics stock drugs.

In Ghana, a Danish ICT company, launched an affordable and sustainable project in rural communities in Ghana, prior to it being rolled out across the country. A Wi-Fi hotspot station powered by solar energy established, bringing connectivity to the most remote areas of the world. Users can browse the web, stay in touch, or participate in educational programs, by using any smartphones, tablets, and laptops. Easy access to E-learning, E-health, and allows citizens to share information, such as health care and agriculture, as well as to communicate online with government authorities. Farmers can watch training videos to help them and to sell their crops at a good price (8).

The Rwandan government signed a partnership with an American drone company (Zipline), to cut the delivery time of medical products to remote areas. Also, whenever a hospital needs blood, they send a (WhatsApp) message or online order, when the drone is coming, SMS message is sent, informing the doctor that the drone will soon dispatch the package (9).

Santiago one of smart cities in Latin America, which represents 40 % of Chile's population, includes a focus on resources and opportunities for older people and people with disabilities. In Santiago, there are business and innovation strategies for attracting massive (ICT) infrastructure investment. Chile ranked in the global top 10 for the most sustainable buildings with investments in green infrastructure, including renewable energy. The first of its kind in Latin America uses smart apps for real-time information, booking and location updates.

Another Successful applications of using innovative technology in solving a global social problems, is the partnership between the government of Jordan and the World Food Program. By introducing an innovative iris scan payment system in Jordan's Zatari refugee camps allowing Syrian refugees and migrants to use digital money deposited on electronic cards to access food and basic services, instead of using cash (10).

Electronic government services should be sheltered from the impact of cyber-attacks, governments should find ways to ensure security standards in online public services such as electronic health.

E-government also used in disaster Preparedness, The Case of Chile, one of Latin America countries, by using Sensor Detection for disasters Early Warning. The earthquake that occurred in (2010) was strongest. Chile government took early warning alert system (11).

6. E-government indicators in Egypt

Egypt one of the developing countries in North Africa, those countries try to make sustainable development by using electronic government. The main aim of the electronic government is to introduce governmental services, with efficiency,

quality and more transparency. For example, the infrastructure in government and public sector in Egypt as a percentage of total entitles is Fixed phones 99.8 %, Computer 99.9 %, using internet 95.3 and mobile 20.3% (12).

As shown in the next figure, providing Information about Electronic Governmental Services in Egypt 25.7%, Users Can Download Government Forms/Applications Online 19%, receiving Forms/Applications from Users Electronically and Collecting Government Service Fees Electronically from Users 47%. In Egypt, the smarter government is presenting its services to citizens and businesses, for citizens like birth and death certificates, national identification card, gas, water and electricity bills. On the other hand, services for businesses like a license for opening new investments, tax payments.

7. A Proposed Model for Transformation to E-government Services in Egypt

To ensure the successful implementation of the e-government program, it requires the steps of determining and analyzing each step. There are several models of e-government. This model in this paper based on the United Nations (UN) and American Society for Public Administration (2001) (13), which consists of five stages: Emerging presence, Enhanced presence. Interactive presence, Transactional presence and Connected presence. The First stage (Emerging presence), a few autonomous government web sites provide formal, but limited and static information, like websites for government ministries that

provide an introduction to these ministries, their administrative structure, the services they provide, their addresses and how to communicate with them. Second stage (Enhanced presence), government web sites supply specialized, dynamic and updated information. Like updated information, indicators, downloaded documents. Third stage (Interactive presence), government web sites act as gate connected citizens and their services providers, the interaction takes place at a more advanced level. Such as providing a service to communicate with citizens and respond to their inquiries through the government website. Fourth stage (Transactional presence), it is the ability to make complete transactions with high security, for example, obtaining passports, birth and death documents through a single government web site. Fifth stage (Connected presence), governments used the single universal site to supply governmental services. Citizens can access all kinds of available services. Countries such as Sweden, Denmark, Singapore, the United States of America and United Arab Emirates have taken the lead in the fifth stages (14).

8. Challenges of E-Commerce in Developing Countries

There are major challenges that can affect the success of E-Commerce implementation in developing countries (15). It can be categorized into major parts, First Cultural issues, traders afraid to sell their products over the Internet, because of the lack of online buying habits of the society. In addition, the lack of trust, people in developing countries are not confident with online business

transactions. Because business is usually done on face-to-face, they are trying to trust people they do not see and maybe found thousands of kilometers away. On the other hand, there are no e-commerce rolls and laws in most of developing countries, to protect them in case of disputes. Second Infrastructural issues, most developing countries have Internet connection not stable and not high speed. Besides the cost of it is high. Banking in most cases, in the developing countries, lack the facilities of online merchants.

9. CONCLUSION

The study has shown that (ICT) has a significant relationship with public sector management. Smart government raises the quality of public services and the living conditions of citizens. ICT solutions can enhance public services in Africa. To get the most out of e-government interest, it requires programs or models. There are several models of e-government. One of them is the United Nations (UN) model, this study tries to apply the stages of this model to Egypt to make a successful transformation. Many developing countries face challenges for transformations, such as infrastructures, Cultural issues, and technical resources.

There are several recommendations to apply proposed system such as, developing countries required many issues to enhance the speed of the process of electronic government transformation such as: implemented legislations and laws regulating electronic commerce, banking institutions should support commercial transactions on the Internet and facilitate these transactions. Increasing the degree of awareness

among citizens in developing countries of electronic commerce importance. Emphasize on the importance of digital financial inclusion for citizens.

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