

# **E-GOVERNMENT AND GENDER DIGITAL DIVIDE: THE CASE OF JORDAN**

Boran A. AL-Rababah<sup>1</sup> and Emad A. Abu-Shanab<sup>2\*</sup>

<sup>1</sup>*ChangeAgent for Arab Development and Education Reform*

*Amman (11821), Jordan*

<sup>2</sup>*Yarmouk University*

*Irbid (21163), Jordan*

## **ABSTRACT**

There is an indicator that e-Government projects have gaps in dealing with gender digital divide especially in developing countries and rural areas in industrialized countries. This research aims to review experiences on integration of gender equality issues with e-Government projects all over the world, and introduce justifications for the need of poor women to access e-Government information and services. Jordan embarked on many initiatives that are related to women and rural areas development and support. This research explores all previously mentioned initiatives to suggest how e-Government project in Jordan can empower poor women in rural areas with minimal or no ICT skills, and with no computers or Internet at their homes. This study interviewed fifty women who utilized support from previously mentioned foundations and concluded that e-Government project in Jordan did not reach the required level of service towards helping in bridging the gender divide and help poor women improve their lives. Conclusions and future work are stated at the end.

**Keywords:** E-Government, Gender Digital Divide and Advocacy, Poor Women Empowerment, Jordan

## **1. INTRODUCTION**

Information and Communication Technology (ICT) is becoming a need not a choice for both governments and citizens to survive in the digital economy, but there is a focus on ICT as a tool more than on the reality of people who will use it and the environment of use. Researches in the area of "e-Government's evaluation" focus on citizens' centered services and availability to all citizens at the same time. Many countries are introducing e-Government initiatives with high aspirations and enthusiasm through mocking other countries experience with shallow exploration and preparation for the pre-requisites and concurrent management issues [18].

This research will be one of the first that focuses on the future of e-Government empowerment roles for poor women and girl's in developing countries based on reality needs and strengthen by a suggested model to empower poor Jordanian women in rural areas by finding a link between what is already their in Jordan related to initiatives that support this targeted group.

The following section will review the related literature, where gender analysis is introduced and

success stories are presented. Next the research method is described with the sample utilized. Finally, conclusions are presented with future research recommendations.

## **2. LITERATURE REVIEW**

How to integrate e-Government with what citizens really need out of information and services was the urging question through years of research; the topic for many researchers is one of many challenges facing e-Government, which focuses on how to deal with, manage and solve these challenges. One of these challenges is gender equality; which means males and females need to have equal opportunities to access and use e-Government information and services regardless of any barriers [19]. To ensure gender equality e-Government projects need to start with gender analysis to avoid women's marginalization since women frequently lack Internet access and computer availability because of skills, interest, money and social life. Research shows that gender issue could be solved through e-Government if strategic planning for e-Government takes into consideration reality dialogue and citizens as both men and women. The following sections will review all related topics to

---

\* **Corresponding author:** [abushanab@yu.edu.jo](mailto:abushanab@yu.edu.jo)

gender's equality and empowerment in e-Government projects.

### 2.1 E-Government and E-Governance

Yildiz [24] concluded that there still no standard definition of e-Government, and it is a concept of many things related to many groups [5]. Some researchers define e-Government as "a process of reform in the way governments work, shares information and delivers services to external and internal clients. E-Government harnesses information technologies (such as wide area networks, the internet and mobile computing) to transform relations with citizens, businesses and other arms of government" [2]. Another definition states that e-Government is all about customer services, social inclusion and democracy and accountability [15]. E-governance is a wider concept than e-Government since it focuses on change in internal and external relationships in order to utilize all resources that the country has specially human resources and Information technology [2].

### 2.2 Citizens "Needs and Feedback" and E-Government Evolution

In recent research in e-Government area there is a clear focus on citizens' empowerment through e-Government. "Connected governance" concept is a "bigger and better' front-end with a 'smaller and smarter' back-end" [17]. The United Nations e-Government Survey [23] presents a comparative assessment of the 192 United Nations Member States' response to the ever-pressing demands of citizens and businesses for quality government services and products. The survey evaluates the application of information and communication technologies (ICT) by governments. United Nation (UN) E-Government Survey 2008 suggested the model depicted in Figure 1 for what they called the "connected government."

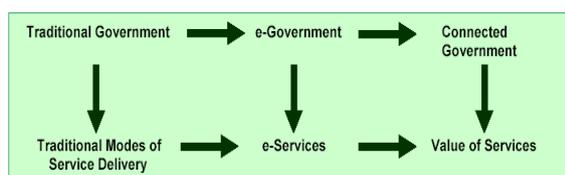


Figure 1: From government to connected government [23]

The survey describes connected government as "is a systematic approach to collection, reuse and sharing of data and information. The key platform on which connected government is built upon is the concept of interoperability which is the ability of government organizations to share and integrate information by using common standards. 'Successful service innovation and multi channel service delivery depend on strategies, policies and architectures that

allow data, IT systems, and business processes and delivery channels to interoperate" [23]. Connected governance focuses on adding value to services delivered by e-Government in order to enhance citizens' lives. Connected governance is the fifth and most sophisticated stage in e-Government evolution which is related to the response to citizen's need by creating an integrated back office process, the four stages before connected governance are emerging presence, enhanced presence, interactive presence, and transactional presence [23]. Other research models that investigated e-Government in the literature with the same four stages model that portrayed the evolution process of e-Government projects with informational stage, the communication stage, the transaction stage and the transformation stage [1,2,4,16].

E-Government's evaluation focuses on the accessibility of e-Government to all citizens [13] and the authors meant all, not men only! So "Political and social rights are considered important for further promoting e-Government. Network problems are also a major barrier. Users may feel helpless when they have to deal with technological problems [11].

### 2.3 E-Government Projects and Poor Women

Most of the research related to gender and e-Government points to gender digital divide in ICT access for many limitations. Rathgeber [19] asserts that "most e-government initiatives have been designed without recognizing that female and male everywhere have different patterns of interaction with computers and the Internet. In many industrialized countries, female use of the Internet is comparable to that of males, but women use it mostly for practical purposes, i.e. to find specific information or to shop". Women and girls in developing countries and rural areas in industrialized countries have limitations in accessing e-Government delivered information and services since they are, as Rathgeber claimed, less likely than men to use the Internet because they do not have access to it. Also, she claimed that they do not have skills, they do not have disposable income or they do not have time and/or interest. Finally, as males and females have different patterns of usage, then the effort made by governments to provide ICTs is not benefiting the gender cause [19].

Trying to understand ICT and their potential for the empowerment of women [12], gender digital divide was defined as inequality to women in access to ICT for many limitations such as education, traditional cultured beliefs and practices, economic inequality and ICT design and creation which are mostly men-dominated environments and as a result they do not correspond to the special needs of women [10].

Main critics of ICT and poor women issues point to major needs of women in developing

countries for safe water, adequate food, improved health, and better education rather than access to ICT but the counter argument that safe water, adequate food, education and ICT are not in opposite to each other because ICT can be a tool to empower women and provide health, food, and education [22]. From this perspective there is an indicator of marginalizing women in e-Government [19], also research indicated that most e-Government applications have recent origins and have not addressed women issues and needs [2]. Main reasons for gender digital divide beside the unreliable and inaccessible technology and electricity in rural areas is the gender roles and socio-cultural customs including domestic chores, difficulty in traveling to access cybercafés and telecentres, safety and security of women traveling away from their homes; as well as expectations that women don't "do" technology and cost of access [12]. The high cost of services in relation to users' income and earnings has been identified in a review of telecentres access in Africa as a main limitation for women, the unemployed, students and poor community members. Other issues include class and level of education, literacy (literacy levels are lower for women), lack of interesting or relevant content for women, and language of available information.

#### 2.4 The Importance of "Gender Analysis" in E-Government's Projects

Some definitions of gender analysis consider it as a tool while others consider gender analysis as a process but in both types of definition it is clear that gender analysis is a helpful step in any governmental initiative. Gender analysis "is the process of assessing the impact that a development activity may have on females and males and on gender relations, the economic and social relationships between males and females which are constructed and reinforced by social institutions [9]. But the quality of gender analysis depends on statistical data and reliable data collected about women, where data on women and ICT exists but partially and not globally and only in developed countries. There is no single consistent source of information about the use of the Internet in developing countries. A 2001 study of 560 users in Sri Lanka found that the vast majority of users were male, below 56 years and had a relatively high level of education" [19]. A Gender-based Analysis Guide [8] gives a summary for a good quality gender-based analysis that includes the following:

- Clearly present what the gender implications are for each policy option, whether the recommended option supports gender equity, and how affected were women and men when they participated in its development.
- Substantiate options with relevant, reliable gender-disaggregated data, and/or reliable

information from informants with experience and knowledge in the area.

- Place this information in the policy environment, with historical information, the policy context, comparative information from other jurisdictions and community-based information and studies, where appropriate.
- Help present recommendations in a credible and practical way, and demonstrate how gender considerations are balanced with other government priorities and considerations.
- Communicate the policy in a respectful, appropriate and inclusive manner.

An efficient gender analysis in e-Government initiatives helps governments make women benefit from delivered information and services since analysis will offer an in depth data on what women need.

#### 2.5 E-Government Empowerment for Poor Women

The practical examples on how e-Government empowers poor women and girls are very rare but the theoretical parts mostly depend on ICT experience with women empowerment. Huyer and Sikoska [10] suggested that any approach for women empowerment through ICT needs to support women individually and in groups, deals with limitations first then with ICT issues, and requires policy makers' support which is very crucial. Another critical issue for women empowerment through e-Government is the need to provide local content with local language.

The inclusion of women and girls in e-Government is likely to occur only if at least some of the following factors are in place: first, a strong commitment by national government to e-Government services to be designed in such a way as to be available to all citizens. Second, telecommunications policy frameworks that ensure the needs of girls and women are part of the national structure. Third, ICT training for girls and women is needed. Fourth, affordable connectivity and safe convenient centers where women can use computers are needed (telecentres, post offices, community centers, etc.). Fifth, clearly designed content in local languages is important. Finally, feedback mechanisms that allow women and girls to have input into e-Government need to be built [19].

Rathgeber suggested telecentres and internet cafés as good tools for women empowerments and gender analysis support. But she argued that telecentres needs fees from women who usually have less disposable income than men. Hafkin [6] states that women could benefit from many e-Government services especially land and voter registration and license applications. They would especially profit from online availability of services that would otherwise require travel to the capital city.

Gender Advocacy; The act of pleading or arguing in favor of something, such as a cause, idea, or policy; active support is a concept related to women empowerment which can be integrated in ICT policy [3] to empower women and how they benefit from services. Research in this area (including reports and academic articles) ignores NGOs roles in enhancing e-Government roles in empowering poor women. This powerful tool can aid a lot in empowering and helping women to benefit from the services offered by governments.

### **2.6 Practical Success Stories**

E-Government in most developing countries is still considered a new paradigm even for men [20], but in East Asia e-Governments started to improve health services for women [2]. Dubai e-Government has a specific website known as E-women but mostly targets business women. Also projects like supporting female farmers in Ghana, and Schoolnet Africa [20], are examples on how could e-Government empower women and girls. Suggested tools that can help e-Government administration empower poor women in areas where they have no access to Internet like: telecentres through intermediaries, CDs have information and materials targeting women as in health area, and mobile devices, like electronic delivered SMS from e-Government websites [12] [20]. Also, in addition to intermediary e-Governments, uneducated women and girls in rural areas can benefit from traditional methods such as radio channels and TV.

In the year 2008 governmental and nongovernmental organizations have started working on action plans for gendering e-Government and one good example is Africa e-Government gendering action plan. The purpose of this action plan on gender and e-government is to map out and develop an agreed set of activities (goals) and strategies to promote the development and implementation of gender-sensitive and women-supporting e-Government in the African region. This action plan gave many successful strategies including the use of traditional technologies such as radio, TV, and print. Also, the action plan recommended blended-technology strategies, which connect technologies such as radio to computers and Internet. Radio in particular has the potential to be a useful e-inclusion technology for women, as it can be used in areas where electricity is irregular or nonexistent; it is a medium which transmits programs in local languages and it is relatively inexpensive. Examples exist in the form of "radio listening clubs" in which community groups gather to listen to and discuss educational and informative programs. Two-way radio listening devices are also becoming more common, which allow listeners to respond to programs and/or public officials. The action plan

pillars were suggested solutions to women barriers in access to e-Government information and services which were mentioned previously.

### **2.7 Conclusions from Literature Review**

E-Government is more than a website that offers information and services for citizens, businesses and government agencies. Research did not reach an agreement on a definition for e-Government, nor attained solutions for challenges facing e-Government projects all over the world. Also, what applicable in one country would not necessarily succeed in another. Starting from reality of people who will use e-Government services and take into consideration the environment of users' characters will determine which information and services can add value to citizens' lives. Governments need to engage citizens to use e-Government services will be easier if this information and services make citizens' life better.

All over the world and from the start of human kind women have significant roles in their families and countries. It is more important now to enhance e-Government support for women especially poor women in rural areas to support the argument that women need water, food, health services as much as they need e-Government projects.

## **3. RESEARCH QUESTIONS**

In Jordan, the national e-Government initiative launched in the year 2000, aims to drive the nation's transformation into a knowledge society. In relation to women empowerment initiatives in Jordan, a survey conducted by knowledge stations in 2005 indicated that 77% of the sample agreed on Knowledge Stations (KS) role in developing women skills in ICT in rural areas (KS website; Jordan River Foundation (JRF). Non-profit and non-governmental foundations offer needed training and financial support for women in rural areas in Jordan to help them start small projects and put forward jobs for thousands of poor women [14].

The main research question is: To which extent e-Government in Jordan is able to empower poor women? This question can be explored more through the in depth investigation of the following two questions:

- How e-Government in Jordan can utilize existing strengths such as KS and JRF to make poor women empowerment possible?
- How e-Government in Jordan can utilize women experiences and knowledge in empowering poor women?

## 4. RESEARCH METHOD

Fifty Jordanian women, who benefited from small projects initiatives, and live in rural areas were selected randomly from a list provided by KS customers and used as a sample for this pilot test. Selected women operate project in different rural areas of Jordan and in professions like sewing, raising animals and farming, and. Subjects were invited to conduct semi-structured interviews, where a set of questions were prepared that try to explore the reality of this issue. The following will present the set of questions, where each question is followed by a summary of responses collected from the fifty women interviews.

*Question 1:* Do you know anything about Jordan's e-Government portal? If yes, what type of services you know?

- Seven of them have use services of e-Government, which are related to their cars (online traffic tickets).
- Twenty five of them have heard about Eduwave (e-learning services portal built by the Ministry of Education in Jordan) but they did not use it.
- Eighteen have no information about Jordan's e-Government project/portal.

*Question 2:* How can e-Government project in Jordan improve poor women ICT Skills; to be able to access e-Government services?

- Poor Jordanian women cannot improve their ICT skills individually.
- Knowledge stations or JRF centers can help in training women in Jordan to benefit from e-Government services.
- E-Government projects can't improve women lives without top management support.
- E-Government projects can employ qualified women in the ICT field to offer on-site training for women in regions, where women cannot travel for reasons related to society and tradition.

*Question 3:* What added value can e-Government services provide to encourage poor women get interested in this track?

- E-Government services need to be very quick to be noticed by the target group. It is better to start with needed services like support and help in building small-sized projects related to sewing works, raising animals and farming.

*Question 4:* If you were a policy-maker what would you recommend to make e-Government services more effective and efficient towards poor women in Jordan?

- Providing information support by e-Government for poor women is "Not" enough, financial support is important.

## 5. CONCLUSIONS

E-Government is becoming vital to facilitate public services all over the world. The United Nations Survey [23] indicated that only 2% of the world's countries did not start yet an e-Government project (website). E-Government projects face many challenges when they try to provide services to all citizens or businesses, and especially poor women. On the other hand, it is more difficult for government to address poor women needs and provide an added value service to them in rural areas. Gender analysis is an important tool for decision makers in e-Government projects to take women needs into consideration.

This work explores the literature related to e-Government and gender divide, where aspects and real cases related to this area are presented. Also, this study explored the Jordanian environment in relation to the infrastructure that can support in bridging the gap and help reach poor women. Quality research in the area of gender analysis and e-Government support is scarce due to the vagueness of the topic, and sensitivity of the topic. In Jordan, the same limitations exist, where scarcity of information on existing gender analysis in Jordan is an obstacle that hinders research in the field. Even if such information is available, it is not accessible to public. Another obstacle is related to the need for a higher level coordination and cooperation between e-Government, KS, and JRF in Jordan, where synergies can be gained and a better potential support can nurture. Finally, data collected for research need to be improved as the size of quantitative data available is not adequate to generate quality research. Comparing the results of analyzing women's answers in the survey with gender issues in other countries, it's clear that there is a gender digital divide in both developed and developing countries but the difference is related to having awareness in solving such issue by having a gender need analysis to any improvement in e-Government at developed countries [21].

## 6. IMPLICATIONS AND FUTURE RESEARCH

Future research need to pay attention to this topic and especially the area of gender analysis and e-Government in Jordan, social network and e-Government, M-government in Jordan, and citizens-centered e-Government. More research is encouraged to help the government bridge the gap and reach poor women on-site. Finally, other research methods should be employed to improve our

understanding of this area and reach better conclusions, methods like empirical and survey testing, longitudinal studies and case studies are encouraged.

On the other hand, forming a committee from JRF and KS to integrate Jordan's e-Government services and information available in this field would help decision making and provide important synergies. Practitioners need to encourage research in generate sound strategies and address poor women needs especially in rural areas.

Research asserts that e-Government effectiveness is not about the tool, but it is about people who will use the tool and the reasons they are using it for. If poor women believe in e-Government as a tool, they will improve their quality of life and will lead them to needed water, food, and health; this will be a blueprint in e-Government's history.

## REFERENCES

- Anderson, K. and Henriksen, H., 2006, "E-Government maturity models: Extension of the Layne and Lee model," *Government Information Quarterly*, Vol. 23, pp. 236-248.
- Bhatnagar, S., 2004, *E-Government from Vision to Implementation a Practical Guide with Case Studies*, IMA, India, pp 35-39.
- Chamberlain, L., 2002, Considerations for Gender Advocacy vis-à-vis ICT Policy and Strategy, <http://www.un.org/womenwatch>.
- Gil-Garcia, J. and Martinez-Moyano, I., 2007, "Understanding the evolution of e-Government: The influence of systems of rules on public sector dynamics," *Government Information Quarterly*, Vol. 24, pp. 266-290.
- Grant, G. and Chau, D., 2005, "Developing a generic framework for e-government," *Journal of Global Information Management*, Vol. 13, No. 1, pp. 1-30.
- Hafkin, N., 2002, "Gender issues in ICT policy in developing countries: An overview," <http://www.womensnet.org.za/gender-issues-ict-policy-developing-countries-an-overview>.
- Heeks, R. and Savita, B., 2007, "Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice," *Government Information Quarterly*, Vol. 24, pp. 643-665.
- HRDC, 1997, Gender-based Analysis Guide, <http://www.generoyambiente.org/>
- Huyer, S. and Sikoska, T., 2003, "Overcoming gender digital divide: understanding ICT and their potential for the empowerment of women," *Instraw Research paper series*, No. 1, P 17-57.
- Huong, H., 2007, "e-Government in Singapore: A SWOT and pest analysis," *Asia-Pacific Social Science Review*, Vol. 6, No. 2, pp. 103-130.
- INSTWA, 2003, Summary of the Online Discussion on ICTs, Gender and E-Government Workshop May 2007, Cardoso, Maputo, <http://www.epolafrica.org>.
- Jaeger, P., 2006, "Assessing section 508 compliance on federal e-government web sites: A multi-method, user-centered evaluation of accessibility for persons with disabilities," *Government Information Quarterly*, Vol. 23, pp. 169-190.
- JRF Annual Report, 2005, <http://www.jordanriver.jo>.
- King, S., 2007, "Citizens as customers: Exploring the future of CRM in UK local government," *Government Information Quarterly*, Vol. 24, pp. 47-63.
- Layne, K. and Lee, J., 2001, "Developing fully functional e-government: A four stage model," *Government Information Quarterly*, Vol. 18, pp. 122-136.
- Millard, J., 2007, E-Public services in Europe: Past, present and future: Research findings and new challenges, <ftp://ftp.cordis.europa.eu>.
- Rahman, H., 2007, "E-Government readiness: from the design table to the grass roots," *ACM*, pp. 225-232.
- Rathgeber, E., 2006, *Engendering E-Government in Developing Countries, Women's Studies*, University of Ottawa/Carleton University, <http://www.egovmonitor.com>.
- The World Bank, 2004, "Engendering information & communication technologies challenges & opportunities for gender-equitable development Africa e-Government gendering action plan," <http://www.epolafrica.org/>.
- The World Bank, 2006, "Engendering information & communication technologies challenges & opportunities for gender-equitable development," <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS>.
- UNESCO, 2001. "Educating girls and women," *Information Kit on Education for all*. Paris.
- UNEGS, 2008, *From e-Government to Connected Governance*.
- Yildiz, M., 2007, "E-Government research: Reviewing the literature, limitations, and ways forward," *Government Information Quarterly*, Vol. 24, pp. 646-665.
- Yong, R., 2007, "E-Government for better performance: Promises, realities, and challenges," *International Journal of Public Administration*, Vol. 30, pp. 1197-1121.

## **ABOUT THE AUTHORS**

**Boran Rababah** works as a master trainer, graduated from Yarmouk University in 2004 with a Bachelor of Computer Science, and currently a Masters student majoring in MIS. She is a certified master trainer in the field of professional development from In Holland Academy, Netherlands and a team leader of 25 certified master trainers. Trains in change management, positive thinking, and assessment and follow up in learning institutions, facilitating techniques, and building training plans. Her research interests are e-Government, ICT in education, school of future and Teachers training.

**Emad A. Abu-Shanab** earned his PhD in business administration, majoring in MIS area in 2005 from Southern Illinois University - Carbondale, USA. He is an assistant professor at the MIS department in Yarmouk University, Jordan, where he teaches courses for both the bachelor and master degrees. His research interests are e-Government, technology acceptance, E-learning, GDSS, ERP, and strategic issues of information systems. Wrote a book in e-government topic in Arabic.

(Received June 2009, revised July 2009, accepted July 2009)

## 電子化政府與性別上的數位落差：以約旦為例

Boran A. AL-Rababah<sup>1</sup> and Emad A. Abu-Shanab<sup>2\*</sup>

<sup>1</sup> *ChangeAgent for Arab Development and Education Reform  
Amman (11821), Jordan*

<sup>2</sup> *Yarmouk University  
Irbid (21163), Jordan*

### 摘要

處理性別的數位落差是否有所延宕是衡量電子化政府企劃中的一個指標，尤其在開發中區域及工業城市中的農村地區。這篇論文旨在回顧過往經驗，整合隨著電子化政府企劃而起的全球性性別平等議題，並引為論證來說明貧困女性在取得電子化政府的資訊與服務上的需求。約旦開始了許多關於女性與農村發展與支持的行動。這篇論文探討所有先前提及的行動，以建議如何讓約旦的電子化政府企劃可以讓農村中僅備有少許甚至沒有任何ICT（資訊電信科技）技能及家中沒有電腦或網路家的貧困女性來接受。這個研究訪談了50位運用先前提到的資源所給予的資助的女性，並做出以下結論：在約旦施行的電子化政府企劃，在撫平性別落差方面並沒有達到要求的服務水準，也沒有幫助貧困女性提升他們的生活。結論與未來工作方向將在文末說明。

**關鍵詞：**電子化政府、性別上的數位落差與提倡、貧困女性的活力化、約旦  
（\*聯絡人：abushanab@yu.edu.jo）

The Gender Digital Divide refers to women and girls lack of access to, use and development of information communication technologies (ICTs). Social norms refer to responsibilities, roles and behaviors associated with being a man or a woman.Â For example, Internet service providers took action in less than one third of reported cases of online violence. [vi]. Human rights and the digital divide are negatively impacted by restrictive social norms, discrimination, and violence against women. Multi-stakeholder Action Needed. To build a more democratic and prosperous world, the private sector, governments, and civil society can work together to enhance women and girlsâ€™ access to, use and development of technology.