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**E-PARTICIPATION IN E-GOVERNMENT  
FOR IMPROVING LAND MANAGEMENT:  
A CASE STUDY OF LEBANON AND BELARUS**

The study aims to analyse the role information technologies can play in improving land management in the developing countries like Lebanon and Belarus. The study suggests to the policy makers from the developing countries like Belarus and Lebanon to develop strategies that discourage traditional methodologies of governance in land management and encourage the adaptability of e-participation in the government-public communication within this context. Further the study discusses the extent of adoption of ICT in different countries and compare it with its adaptation in Lebanon and Belarus. The study concludes with managerial suggestions for the land administrators to improve the land management in the regions.

**Key words:** information communication technologies, e-Governance, land management.

**Introduction.** The powerful technologies developed through innovation and modernization has changed the communication patterns within the organizations. Public Sector organizations have been long taking this leverage in streamlining their inner correspondence. Lately, this information channel has been adopted by the government to communicate with people, private sector and other industries, resulting in the formation of “e-Government”. Presently, governments throughout the world are taking initiatives to optimize the e-Government and are investing a substantial effort and a considerable amount of federal budget in development of this sector. In most of the literature, e-Government, digital government, internet government, e-gov etc. are multiple terms that refer to the same system of government and are used interchangeably [1]. Joon [2] has provided the earliest definition and the term ‘e-Government’ can be defined as the application of internet as well as the other information technology techniques in electronically delivering the government related information and services to the public. The more formal definition as provided by Joon [2] states that it is the utilization of information technology and the information and communication technologies in improving and refining the efficiency of service and information delivery in public or governmental sector [3]. Though, in the general reference and comprehension, the term emphasizes on the role of internet and worldwide web in the process, but the other digital means of communication like radio, TV, RFID, CCTV tracking, Bluetooth, SMS, MMS and other instant messaging services and biometrics are also part of the e-Government as argued by Gil-Gracia [4]. Thus, it can be concluded that the common attribute among these definitions is the use of ICT and IT systems for the interaction of government with other stakeholders and within itself. The ‘*Information Systems for eGovernment*’ the work of Viscusi [5] along with other author

highlights, e-Government exports the traditional governmental working over the digital world i. e. from the mere paper work to the computers, devices and internet.

The basic need is to make the information and other services available to every citizen without the implications of local existence or physical presence. The objectives of the e-Governance are the greater transparency, accessibility and efficiency in the system for the people as well as businesses in their interaction with the government. Developing a system which does not have to be bounded by official hours and working days, Viscusi [5], states that the e-Government establishes a channel which works 24/7, 365 days a year and from any part of the world. The e-portals that are used for the implementation of e-Government are the replacement of officials in the virtual world where the data is already present and one can simply access it without going through any particular physical effort [5]. Even before this time, the governments were using this system for internal functions and directions, but its external application took a concrete shape in the last decade of 20<sup>th</sup> century with the more massive availability of the internet and development in the interactive websites. It is then, the public sector organizations considered this platform to interact with the other stakeholders like citizens, businesses and employees [6]. However, Meier states that since, the development in that era was happening at a break-neck rate and every day was bringing a new revolution, a concrete line cannot be drawn to trace the history to one date [7]. It is the composition of multiple factors and diverse initiatives from around the world that led to the coining of this term. As, the origin of this development was rooted in internet boom, it became famous with the words that are synonymous to internet like e-, digital and electronic

**Main text.** With the passages of time the advancement in the technology, the different countries adopt the ICT in their working environment

for the growth and the productivity of their business. The different developing countries adopt ICT in different sectors for the better results. Turning to the developing countries the evidence is clear. In the Scandinavian belt, the rooting of electronic processes that are focused on citizen interface is also around the same time. Japan also started its e-Government structure by the end of twentieth century. So, all in all, many developed countries took pledge to integrate and enhance the ICT practices that emphasize on the user/public interface. And from this time, the growth happened at a rapid speed and the role of ICT and IT in bridging the gap between government and public and government and businesses simply became more and more integral [8].

The use of information technology and ICT in the internal management has the capacity to influence the management in the very efficient and positive manner. The communication gap between the different institutes of government can be overcome and processes can be simplified and organized with a single point access. Instead of the manual recording of the paper, the data can be summed up and stored at a virtual location. From the global rank of 49<sup>th</sup> in 2010 to 28<sup>th</sup> in 2012, UAE took a giant leap in developing its e-Government systems and to increase the dependency on ICT and IT in serving its citizens and businesses. As a strong oil economy, the government has dedicated its major resources in the development of e-Government infrastructure at all levels and to build a conducive environment of e-participation. The strategic frameworks involve the initiatives taken at a number of areas of focus along with the benchmarking to record the success and to measure the deviations. As a benchmark in the UAE e-gov index, the vision 2021 is bringing out the best potential and the implementation is under process at a break neck speed. Organizations have become reliant on information communication technology (ICT) for carrying out activities pertaining to all aspects of operation, management and control of the entity. This is probably because these advancements are resulting in the increase of efficiency and effectiveness of operation and are in alignment to the short and long-term objectives of organizations. However, it is important to appreciate that some organizations acquire technological elements that have no direct implication on organizational performance. In addition, some technological advancement, particularly those pertaining to information communication technology, require perpetual improvement and upgrade of the existing systems of operation of firms [9]. With the dynamic evolution that is currently going on in the field of technology, the likelihood of advancements, upgrades, and modifications of technological aspects

is very high. In recent decades, most if not all the organizations in the world rely on automated systems of information processing and dissemination.

These systems are crucial to organizations as they facilitate most of the business operations carried out by organizations today. The complete reliance on computerized information systems means that upgrades of these systems in organizations are inevitable in organizations as the technology dynamically changes. In the workplace, the change will therefore involve the replacement of the current information systems with new ones or a comprehensive improvement and upgrade of the existing computer systems of the firm [10]. The change is likely to encompass all aspects of information systems, such as computer hardware, software, and personnel as well as the rules and regulations pertaining to computer use. In addition, this could trigger a change in the organizational framework as authority and responsibility levels may undergo modifications in order to be compatible with the changes in the information system. In the United Nations survey of 2012, Bahrain has been proudly marked as an emerging leader in the e-Government implementation and has been identified as a leader in western Asia. Even though the country's sequential success in building a paperless forum for its citizens was badly affected by a declining position in 2010, it struggled hard and earned its consistent development. Now, according to the survey, e-Government is on its track to make record success and is aligned with the state's economic vision on 2030. The e-Government in Bahrain is a tell-tale of innovation and citizen oriented excellence [11].

The strategic framework of 2011–2016 as forwarded by the e-Government authority of Bahrain consist on the six step road which undertakes a wholly approach on all of the frameworks and delivery models. The strategic plans are so designed that each aspect of e-Government deployment is taken into account and control variables are matured to perform. The six steps as per the report summary are vision, framework, baseline, operating models, project charter and master plan and implementation requirements. Positioned at number 10 in the United Nations survey, Singapore has made a significant progress in the implementation of the e-Government practices. As cited in [12], the trust deficit has been an impeding factor in the deployment of ICT and IT based processes and the government has been bridging this gap through its exemplary transparent services. The strategic framework of e-Government in Singapore consist of 5 thrusts and 6 processes. The strategic outcomes from the first two action plans 2001–2006 and 2006–2010 have produced the desirable results and have created a strong foundation for the future

e-Government practices [12]. Reinventing Government, delivering integrated electronic services, being proactive and responsive, using IT and Telecommunications to build new capabilities and innovating with these systems are the five thrusts. When referring to provision of resources to people with sufficient capacity, we must understand that they have to have the qualifications and training required that the system has agreed to perform a certain task and this training must be recycled. If one does not have the level of training required the company must procure. Ensure that all necessary resources are included to satisfy the customer [13]. The model gives flexibility to lagging behind organizations to cope up with the challenges and match the overall progress of the country. Dedicating a particular stage to the public activation and participation, it is important to organize preparatory workshops to create awareness. The remote areas with low literacy rate must be emphasized with the specialized camps and the distribution of gadgets must be ensured.

What resources are needed to meet customer requirements? What resources are needed to communicate customer requirements and the importance of complying with them? What resources are needed to address customer complaints? In the management review should also address the issue of resources. The management review is a means to determine whether the quality system meets its quality goals and quality policy. It is also the point at which the necessary actions to improve the SAC are identified. The review team management should ask if the necessary resources are available to develop the proposed actions. If a problem is identified with the information system, the team should determine whether part of the cause is the insufficient amount of resources. Overall situation from the Stephen's report has identified the stage of engagement as the most entangled and the difficult to achieve. The optimization stage of the framework is still a distant dream for many countries in Africa, however some kind of online presence is achieved by all states. The most successful implementation of framework has been seen in Nigeria in which the e-Government's fundamental objectives are to earn transparency and accessibility. Choudrie [14] have identified the key gender and cultural challenges in diffusion of e-Government in Nigeria. The gender framework analysis has been conducted by the team and recommendations has been composed to minimize these barriers [14]. Positioned at number 10 in the United Nations survey, Singapore has made a significant progress in the implementation of the e-Government practices. The trust deficit has been an impeding factor in the deployment of ICT and IT based processes and the government has been bridging this gap through its exemplary transparent services [12].

### ***ICT in Lebanon and Belarus***

#### ***ICT in Lebanon:***

Krishnan, Teo, and Lim [15] has emphasized on the lack of finances that leads to the delayed maturity of e-Government. E-Government has become increasingly acknowledged during the last few years and a lot of governments in many countries desire for online services. E-Government strategies due to lack of capital required to implement it and lack of knowledge about Information Technology and internet [15]. The case study by Hammer and his co-authors reveals that many developing countries are susceptible to corrupt governments that restrict the level of Information Technology and Information Systems within the country, while in developed countries, implementation of e-Governance or e-Government produce effective results. Consequently, democracy is increased and the level of corruption is reduced. Since, the use of e-Government is very important for achieving citizen participation [16], states e-Government as a reciprocal of the democracy level. It becomes difficult when the government of a country is corrupt. Another obstacle for implementation of e-Government in developing countries is limited resources. But, even developed countries face troubles while structuring e-Government for their country [16]. The global ranking of Lebanon regarding e-Government is very low, but there is a high expectation of many Internet users in Lebanon toward e-Government. Most of them are ready to use e-Government. Further, since the attributes and features associated with the offerings an institution positively influence the perception of the intended users of the offerings [17] thus it can be argued that by making e-Governance more interactive using ICT and other methods, the government of the region can enhance the e-Government adaptability of the masses.

The e-Government is compatible with the culture and lifestyle of Lebanon and the Lebanese are ready to utilize e-Government when public services are not delivered. The Lebanon government including local as well as central government has started to develop and implement improved e-Government. In addition, the low quality and poor extent of system consolidated with high costs have made limitations for the exponential progress of Lebanon's ICT showcase. Besides, fragment faces distinctive challenges like the lacking managerial framework and reliable power outages. ICT headway in Lebanon is in like manner exhibited to liberal unsteadiness in light of crippling security issues. Also, the Lebanese ICT industry is unprotected against computerized security perils, subsequently undermining trust in the area. It is expressed, a couple of parts have added to the improvement of the ICT promote, including falling

device costs, establishment overhauls, and moreover attempts and open division modernization. The part moreover benefits by late interests in structure and frameworks, amplifying broadband point of confinement, extending web speed, and the energetic and talented work compel that passed on to the ICT showcase distinctive productive entrepreneurial exercises [16]. The impacting tech assemblage has put Lebanon among progressing ICT showcases in the zone. In any case, the change of this region remains subject to tremendous vulnerabilities as an eventual outcome of security issues that have been sponsorship off the headway of various money related regions in the country.

In addition, the vulnerabilities of the IT business turn around advanced security perils, which could undermine confidence in this division. The ICT portion is told by close to nothing and medium measured firms. These associations are possessed with the change of programming, flexible and particular applications, web game plans, programming outsourcing, e-Government, and also game plan of systems' answers and blend. Specifically, the territory encompasses more than 200 firms, of which forty-eight percent are possessed with programming progression, thirty-eight percent are worked in online application change, while the remaining fourteen percent are involved with compact based application change. Mechanical changes have urged the ICT business to create. Nevertheless, this improvement is still restricted by a couple of inefficient viewpoints including political motivation; annoy privatization, and deficient contention because of burglary.

Programming deals are required to be the quickest range of development in Lebanon's IT showcase in the coming years, in spite of the proceeded with drag from robbery, because of the execution of some legislature and private undertakings. Advance, the administration seems more centered around copyright security issues. Truth be told, programming robbery has dragged the advancement of the product sub-division and proceeds to adversely affect the product showcase disregarding the usage of open and private arrangements to breaking point theft in the nation. All things considered, powerful development in the product advancement sub-area depends on the execution of property rights, the restriction of programming robbery, the change of IT framework, and the assurance against the attacks of hacker.

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Inside the IT organizations sub-portion, support and upkeep constitute the greatest share of spending. Regardless, the market has seen a rising enthusiasm for more personality boggling organizations including workplaces organization organizations and regard included organizations. Besides, the IT organizations sub-portion offers noteworthy advancement openings, especially in light of the fact that of telecom associations and dealing with a record division's mounting enthusiasm for development things and organizations, joined with the pressing prerequisite for IT things upgrade in administrative workplaces. Further, higher improvement is depended upon to be driven by upgraded establishment and cloud organizations. The Lebanon's biggest achievement in this regard is the increasing rate of participation from all of the stakeholders and it is one of the very few states that have integrated all of the e-Government processes and information in a single integrated website. So, the people do not have to wander in between a large number of websites, rather all of the access is available on one website. Joon [2], describes that many initiatives taken by Korea have been import-

ed and implemented to other countries and this system is recognized for its efficiency and transparency all over the world. The government considered a more effective route to the implementation than the usual. Lebanon's command on technology was employed to ensure the mass access to internet and other technology devices. Thus, the country not only developed its policy into a more concrete one, but the participation by public has been emphasized at all level, resulting in a continuous improvement in the external interface of e-Government. In the article, the author has also evaluated the recent developments as well as the history, the most recent advancement in the implementation of e-Government is "Smart e-Government strategy" which involves the delivery of services and products beyond the limitation of time and space. In the recommendation part, Joon [2] has motivated the other countries to adopt the same model to increase the efficiency of their systems and institutions in becoming compatible to e-Government worldwide.

In development of this thorough framework, the suggestive measures and initiatives are presented in the light if available literature and from the examples of successful implementation. In spite of the way that every tradition is remain solitary bargain and has its own particular goals and responsibilities, they are in any case interlinked and related. These connections and association originate from the firmly related and weaved procedures and marvels that are normal for the "atmosphere – biota – arrive/soil" *ternion*. The key "outer" effect is produced by environmental change, a procedure that can be found in more regular, longer and more significant climatic irregularities. An extra "interior" variable is human exercises that offer ascent to arrive corruption, changes in vegetation cover and nearby atmosphere changes. As a consequence of these there is a higher danger of desertification and environmental change which prompt to the fatigue of plant, soil and water assets.

Utilizing the Lebanon's lead in information and technology and the government's devotion to citizens, it has set forth the perpetual steps to solve the critical social issues like public welfare and social security. The computer market is commanded by universal equipment producers, who have gotten to the Lebanese market through neighborhood operators and merchants. Notwithstanding, the PC equipment market is still a long way from being soaked and has strong hidden development potential given that the general PC entrance rate in Lebanon is still at sixteen. Thusly, interest for PCs is rising consistently at family level and in addition business level. This is to some extent credited to the late open and private plans, which have made low-value PCs accessible, built up the broadband framework, and put re-

sources into electronic administrations. Moreover, Lebanese customers are as of late indicating inclination to acquiring tablets as opposed to desktop PCs and journals. As the quantity of tablets sold developed, the development in the PC equipment fragment backed off because of the way that the tablets' normal offering cost is on the decrease. The augmentation found in this sub-division comes as a prompt result of the rising spending on e-benefits by associations, telecom associations, and government workplaces. Inside the IT organizations sub-part, support and upkeep constitute the greatest share of spending. Coincidentally, the market has seen a rising enthusiasm for additionally bewildering organizations including workplaces organization organizations and regard-included organizations. Additionally, the IT organizations sub-part offers critical improvement openings, especially by virtue of telecom associations and keeping cash division's mounting enthusiasm for development things and organizations, joined with the pressing necessity for IT things upgrade in authoritative workplaces. Further, higher advancement is required to be driven by improved establishment and cloud organizations.

#### *ICT in Belarus:*

With the passage of time, advancement in the new technology ICT has quickly come to play the positive roles in the Belarusian society the government as well as the private companies also adopt the information technology to attain the competitive advantage [19]. According to the survey conducted in 2002 around 40% of the Belarus population is computer literate. The students in the Belarus are most frequent users of the internet. Around 75 percent internet users are men and the rest of the users of the internet are students of higher education. The Belarusian government and the private companies are used to support the education of the ICT in the country. For the improvement in the country the system is used to cover all the aspects of the ICT education. The strategic outcomes from the first two action plans 2001–2006 and 2006–2010 have produced the desirable results and have created a strong foundation for the future e-Government practices [20]. Reinventing Government, delivering integrated electronic services, being proactive and responsive, using IT and Telecommunications to build new capabilities and innovating with these systems are the five thrusts. The key feature in the Belarus's initiatives are the customer oriented collaborative government in which everything is available through single channel. Citizens becomes customers and thus, the government ensures that they are entitled to the best services and convenience while interacting with government and seeking e-services. The vision 2016 is based on ADVANCE, which promises the

achievement of next generation of excellence in alignment to the previous policy, delivering services, adding the value efficiency, advocate proactive engagement from customers, nurture the entrepreneurship, collaboration with stakeholders and to encourage innovation.

The G2C involves the online availability of the form, submission of online requests and forms, the database collection about commodities such as the vehicles and property. The users are given the liberty to go to the government's website or other portal and may conduct multiple tasks. It is a direct link between the government and its public without the limitation of date and time. It may also include the transaction such as the payment of utility bills, property tax or other governmental charges. In short, Belarus has completed the groundwork for creation of information society [19].

**Conclusion.** There is saying that change is the only constant in the world. Intuitions and organizations that are most adaptable to change are less likely to perish however ones who are not evolving themselves are not aligning themselves with the latest trends in the market are destined to fail in long run. There was a time when traditional man-

agement was popular in various institutions around the world but then many moved to projecting their operations to make themselves more adaptable to fast-paced changing environment [21]. Similar phenomenon was observed in the developing countries where the institution of government transformed it into a virtual system of governance and the phenomenon of e-Governance emerged as a result of embracing information communication technologies to serve the public more effectively and efficiently. These days e-participation in the way government communicates with the public has increased manifold. The study demonstrated how information communication technologies can help e-Government officials in facilitating the people and assisting them in communicating the government departments and institutions more easily. The study suggests to the policy makers from the developing countries like Belarus and Lebanon to develop strategies that discourage traditional methodologies of governance and encourage the adaptability of e-participation in the government-public communication and relationships while establishing good land governance.

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