E-GOVERNMENT SYSTEMS AND APPLICATIONS IN DEVELOPED AND DEVELOPING COUNTRIES

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E-government has become one of the important subjects in all over the world. It can be defined as providing certain processes of public services in digital realm by computer and information technologies. In last decades of 20th century, e-government policy and practices have allowed countries to carry out fast, cheaper and less bureaucratic public services. E-government is not only serving all citizens in the country, it also saves a lot of money of the country, utilise the time and effort of the public sector employees, provide accelerated and accurate completion of transactions, reduce the pressure on workers. E-government practices have been used by developed countries but now the usage are has extended worldwide and in Turkey as well.

The transition of the countries to the e-government applications took place after a certain period of time. First, information communication technologies such as computers, fax machines and calculators were used in government offices in the 1960s and 1970s. In this phase called automation, some processes of public services, and a reduction in the amount of paper used had been aimed. In the process of transitioning to information society, the first major step towards e-government took place in the 1980s with the widespread use of personal computers.

E-government applications started in the local administrations first and have emerged and become widespread in economically developed countries. Then, while the purpose of using of

e-government changed slightly, developing countries as well as Turkey benefited from e-government applications. Especially in the US and the European Union, the adoption of e-government as a general policy have influenced the spread of e-government.

There has been a rise in the number of countires which use e-government to supply public services through one-stop-platforms which is a system that makes easier and faster to access public services. There had been only 45 countries that had one-stop-platform and only 33 countries provided online transactions. Now, 90 countries provide one or more single platforms on public information or online services and 148 countries offer one online transaction services, according to 2016 survey.

More governments are trying to make e-government system more effective and inclusionary. Many countries are opening up their data for public information. The 2016 survey shows that now 128 countries provide datasets on government spending in machine readable formats.

The purpose of this study is to explain the concept of e-government system, the history and development of e-government in Turkey and in the world, benefits and aims integrated in the practise of e-government and to compare the system differences between developed and developing countries.

WHAT IS E-GOVERNMENT?

The word eGovernment can be translated as "electronic government". However, the term eGovernment has established itself worldwide with the meaning of "the administration of government by means of electronic technology". In general, it means the simplification of work routines and processes through the application of information and communication technologies (ICT) in the areas of information, communication and transaction within and between state institutions as well as between the government and citizens or businesses.

Interaction levels in eGovernment

eGovernment is classified into the following areas:

-Information: Making information available online, for example, on the Web site of a public authority.

-Communication: The ability to interactively access and exchange information.

-Transaction: The actual carrying out of services, including the signation of application forms and electronic delivery of official documents and notifications.

-Personalisation: Based on personal user profiles, content is adjusted to the different requirements and life situations of people in order to make information as targeted as possible.

eGovernment is the set of all electronic public administration services available to everyone in the country. It is also a synonym for a modern and innovative land, in which quality, trust and quickness play a central role. Public authorities use technologies such as the Internet or mobile services to get into contact with citizens and businesses. They also use these technologies to carry out internal work processes. eGovernment has an impact on every citizen, business and public authority.

E-government evolution

-Web Presence

Agency web sites provide citizens with information on rules and procedures

-Limited Interaction

Intranets link departments allowing for Email contact, access to online databases & downloadable forms.

For all the countries in the world, there is a great deal of progress in terms of providing online service to their citizens. However, it is clear that there are big differences between the e-government services that are presented all over the world, especially in underdeveloped

countries. It is unfortunately not wrong to say that underdeveloped countries with low income levels and island countries are lagging behind Europe. Nonetheless, some low-income countries have posted progress on online service they offer their citizens. The use of new technologies, such as the Geographic Information System and the Internet of Objects, helps to develop more targeted and specialized public services and effective policy processes.

The e-government is a good way to ensure that everyone benefits from public services, including the undeveloped countries, and improve their services.The e-government helps governments to develop if it is used to support effective, transparent and participatory institutional systems.Countries around the world are trying to implement and disseminate e-government services, particularly in developing countries, and have to handle with a number of factors that prevent e-government from being effectively implemented in countries.

E-government applications have many benefits for citizens, including government agencies, the business community.Thanks to the e-government, people have the convenience of accessing current government information every day of the week.

In addition, the use of the e-government system helps to improve the efficiency of the current system, to improve itself, and to provide a better service for all citizens. It also enables the e-government system to be developed and made transparent, while integrating the individuals into the information society. It also enables the e-government to economize through the e-government due to the low transaction costs of the existing services because public institutions operating in a traditional manner are unable to afford the services they need to provide. Services that are based on stationery and bureaucracy take a lot of time and cause spending to increase.

Problems

One of the biggest problems that the e-government system is not taken up by the state and public institutions. The e-Government structure, which is not handled by the specified

structures, will develop and will not lead to successful results. Contrary to this situation, too much ownership of the system by public institutions can cause problems of sharing among bureaucratic units.

It is an important problem whether the current legal order can not keep up with innovations in information technologies. The fact that the existing personnel structure does not fit into the new system is a major problem for those trained staff who prefer to work in the private sector instead of the public sector or abroad.

The fact that geographical and socio-economic conditions are not equal in terms of access to information and communication technologies by different institutions and individuals is the most important social problem of information age.

In the electronic information processing activities, that is to say in the information environment, since abstract phenomena are seen more intensely from concrete events, difficulties arise in determining the actions that have the crime feature and therefore legal problems arise in the operations and processes.

Because digital evidence is easily and quickly directed, crime is becoming increasingly difficult to prove, and a separate field of expertise is needed in legal proceedings. As a result, the issue of unauthorized access to personal and institutional information and documents is a separate problem.(E-Government and E-Signature Infrastructure Applications in Turkey, Rafet Çevikbaş)

Because of the expansion of computer usage environments, such as e-government applications, citizens are less connected with their neighbors, their participation in voluntary charitable associations and foundations is decreasing, their worship and entertainment places are less frequent and widespread evening meals are less organized. Coexistence occurs at a lower rate. As a result, people become independent and at the same time lonely. This social

withdrawal has an impact on supporting more pollution, less government activity and more crime.

E-government applications or e-government projects are generally designed in four ways. These are: 1. government to government, 2. government to business, 3. government-to-citizen 4. government-to-employee. Some aspects need to be considered in order e-government applications to provide flawless, citizen-centered, effective and efficient public services. Firstly, a government should focus primarily on the needs of citizens. The production of public services should not public-centric, but it should meet citizens' wishes and expectations. Secondly, user-friendly public services should be provided. Virtual platforms that citizens can use easily should be created. Thirdly, personalized public services that meet needs of an individual basis should be offered. Fourth, public services should be accessible at the desired location and speed 24/7.

Citizens should be allowed to make transactions on internet sites. Citizens who live in different countries should benefit from e-government applications.

E-government applications of Turkey will be examined in the next topic.

Emergence and Development of E-Government Applications in Turkey

The first e-government applications in Turkey is Population Statistics Project (MERNIS) that has been started by Ministry of Interior General Directorate of Population and Citizenship Affairs. This project, which can be defined as an automation, the computerization of the population administrations and the the connection to the whole country, has been completed with the support of national and international institutions and resources and today has become one of the most important application of e-government projects of Turkey. MERNIS starting as an automation project and while continuing to evolve to e-government, number of computers in public agencies of Turkey had increased. In 1993, for the first time, an internet

connection was provided via a line between Middle East Technical University and the USA. In the same year, Turkey Informatics and Economic Modernization project has started.

MERNIS project, counted as one of the first e-government projects in the world, is an example of many projects in Turkey and Europe. The MERNIS project, which has more than 120 million records in the database, provides reliable information support to the government to increase the speed in business and operations and also bacame a key of the electronic government projects implemented.

An another project called as ISASS is a Government-to-Government (G2G) e-government system that was launched in 2009 and is now in its final phases of development. As of March 2014, seventeen million assistance cases were provided via ISASS, which resulted in great savings in time and resources, as well as increased transparency and accountability. The level of integration ISASS has achieved goes beyond what has been achieved in many other countries. ISASS integrates 16 public institutions via web service and incorporates information from 1001 local social assistance offices. All social assistance processes ranging from applications to payments can be carried out in an electronic platform. For example, information about all government-funded social assistance cases can be accessed in one centre. Institutional arrangements for data sharing among government institutions are important for effective integration.

In 2014, the Tenth Development Plan (2014-2018), which directs public policy at the highest level, has been published. The target e-Government structure for this document is defined as follows:

"To contribute to effective, participatory, transparent and accountable public administration; it is the basic aim to create an e-government structure that will be designed to meet user needs, including disadvantaged segments, providing personal information confidentiality and

information security, and being presented from various platforms, user-focused, interoperable, integrated and reliable."

In 2014, the preparatory work for the second information society strategy and action plan was completed and the 2015-2018 Information Society Strategy and Action Plan (ISS) was put into practice. 2015-2018 The center of the ISS was defined as increasing growth and employment and an axis named "User Focus and Efficiency in Public Services" was defined which will direct e-Government studies. The main objective for this axis is expressed as:

"The main purpose of e-government services is to ensure effectiveness in services from design to application stage and to adopt user-oriented principle. In this context; the needs and expectations of citizens and entrepreneurs will be analyzed first, public business processes will be simplified within this framework and services will be designed to provide the highest benefit to the users. Similarly, e-Government services; to ensure transparency, reliability, accountability and participation in public administration. "

Approximately 3.6 billion TL annual appropriation for 224 projects is allocated to public ICT investments in 2013. The said size represents a 3-fold increase in real terms compared to 2006. The recent investments are usually directed towards renewing, improving, matured and disseminate existing practices. In this frame, from the beginning of the process; solutions have been introduced primarily for basic e-government applications and the basic infrastructure for integrated e-government services has been established, with the aim of increasing the quality of these services with the approach of reducing citizen-oriented and administrative burdens instead of the number of e-government services offered at the point reached, participation in public decision-making mechanisms has gained importance.

The e-Government Gate, which aims to provide electronic public services from a single point, integrated and secure, has been in service since 18 December 2008. Recently, local government services, which closely concern the daily lives of citizens and entrepreneurs have begun to be intensively included in the e-government.With the introduction of intensive services at the e-Government Gate, a remarkable improvement has been achieved in the number of registered users.

According to E-Goverment Benchmarking Report on Turkey published by EU in 2013, "e-government services maturity" indicator, which is expected to have a significant impact on the use of e-government services and in terms of "ease of use in presentation of online services" developed for user-focused service delivery, Turkish e-government system is above the AB27 + average.

TURKSTAT Household Information Technologies Usage Survey According to the results of the year 2014; 28.7 percent of the population between 16-74 years of age in Turkey, while 53.3 percent of individuals using the Internet is to use e-government services. Among the purposes of usage, obtaining information from internet sites belonging to public institutions is in the first place with 51.2 percent. On the other hand, according to the results of the survey on the use of information technologies in TURKSTAT Initiatives in 2013; 73.7 percent of all enterprises with 10 or more employees in 2012 use e-government services. According to the results of TURKSTAT 2013 Life Satisfaction Survey, the satisfaction rate of e-government services is 86.2%.(2015-2018 Information Society Strategy and Action Plan)

Comparison of E-government Application of Developed and Developing Countries

When the history of Turkey’s and the United Kingdom’s e-government taking into consideration, it is seen that both countries have started e-government applications in 1990s but the United Kingdom(2003) have laid the foundations of e-government before than

Turkey(2008). Besides, much more work has been done on e-government in the United Kingdom over the course of nearly 25 years. Recently, importance of e-government increased in Turkey, and more studies have been conducted. Although the economy is important for establishing the information society infrastructure in the e-government process, findings have been shown that economy is not the main factor. It's seen that economically developed countries did not take place near the top in the E-government Development Index, and the countries that took place in top 10 in E-government Development Index have not well economic situation. Turkey lags behind the United Kingdom in the use of e-government portals. According to the level of satisfaction of finding information on e-government in Turkey seems to be lower than the United Kingdom. The main reason of this is not the inadequacy of e-government websites, but the basic computer and internet usage of the citizen is low. For this reason, one of the things that needs to be done in the development of e-government use is the educating people about computer and internet usage.

IMPLEMENTING E-GOVERNMENT:LESSON LEARNED FROM SEOUL, REPUBLIC OF KOREA

There is a high level representation in e-Government studies in South Korea. The President of South Korea gives political support to the work at the highest level. It seems that the provision of technical support and the increase of the capacity in the e-Government activities in South Korea is provided by the National Information Society Agency (NIA) on behalf of the Ministry of the Interior. NIA conducts activities related to MOI or MSIP according to the study area. The study area of the NIA is determined as follows:

To develop national information society plans and provide expert support in the realization.

To manage and operate the network infrastructure used by public administrations.

To support the standardization and development of information and communication.

To support the management of information resources of public administrations.

To support the consultancy, standardization and evaluation processes of information technology in the public administrations.

To provide IT consulting services to developing countries.

The concept of e-Government in South Korea began to emerge in the 1980s, after which basic national information systems were established. Strategic plan periods prepared in this process and defining the upper frame are listed below:

National Basic Information Systems Project (1987 - 1996)

High Speed Broadband Network Project (1995 - 2005)

Framework Plan for IT Development (1996 - continuing with new stages)

Priority e-Government Projects (2001 - 2011)

Smart State (2011 - 2016)

e-Government Master Plan 2020 (2016-2020)

The "e-Government Master Plan 2020", which entered into force in 2016, is the current e-Government policy. The policy is based on 3 main headings:

Citizen experiences

Clever state

Digital new layout

Five key objectives have been identified in this context:

Redesign of public services.

Providing cognitive and predictive intelligence management.

Establishment of new ecosystem that e-government and industry can exist together.

Expansion of trust-based and future-oriented infrastructures.

Providing your leadership for global e-Government.

Gov 3.0 is a new paradigm for government work that aims to encourage the active sharing of public information and to eliminate barriers to better cooperation between ministries. In this

context, public administration has been redefined as providing services as a platform, sharing information, publicizing information, and cooperating (between ministries and citizens) and setting key tasks for Gov 3.0. The main objectives are summarized as follows:

Providing citizen-centered innovation in the state.

Implement and disseminate core values (openness, sharing, communication, collaboration) in all management areas.

To provide services customized to citizens.

To create employment and to support the entrepreneurial economy.

The Gov 3.0 policy consists of 3 basic strategies and 10 goals.

Transparent State.

Provision of the right of people to acquire knowledge through public disclosure of information.

Used public datas as active by the public.

Strengthening public-private relations and cooperation.

Competent State.

Removal of obstacles between ministries.

Improving the work of the public for better cooperation and communication.

Providing scientific management with large data usage.

Service-oriented State.

Integration of personalized services.

Enrichment of single-stop services for businesses.

Strengthening access to services by those with inadequate information.

Development of new services using developing technologies.

There are four basic values for the Gov 3.0 strategy:

Transparency

Sharing

Contact

Cooperation

South Korea needs to make more use of its information systems than ever before in order to achieve a transparent, competent and service-oriented management approach that is targeted by the Gov 3.0 policy. Public ICT investments are targeted to increase in this context. The budget to be used by South Korea for common e-Government solutions in 2015 has increased by 47% to US $ 115 million. Among the important targets is the provision of administrative services on mobile devices, the use of large data analysis in defining public policies, the use of cloud computing facilities in all steps of administrative services at the highest level, and the provision of cloud-based intelligent management.(www.dijitaldonusum.gov.tr)

AN EXAMPLE FROM A DEVELOPING COUNTRY MALAYSIA

GIS-enabled e-Government Service in Malaysia: Sarawak, Malaysia uses enterprise wide GIS as a central component of its eGovernment strategy. Sarawak is the largest state of Malaysia has taken its enterprise data and built a GIS interface to make geospatial information and technologies available on every employee desktop. Government leaders believe that this strategy improves the quality of information used to manage public services. The GIS tools are easily accessible and the tools are very user friendly and the data is well organized and documented. Users can view health, education, public safety, shopping and other important information overlaid on a map with the local road network.(UN E-Government Survey 2016)

BIBLIOGRAPHY

https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2016

https://www.dijitaldonusum.gov.tr/guney-kore

2015-2018 Information Society Strategy and Action Plan of Turkey

E-Government and E-Signature Infrastructure Applications in Turkey, Rafet Çevikbaş

THE ASSESSMENT OF THE IMPACT OF E-GOVERNMENT PRACTICES ON MANAGEMENT PRCOCESSES WITHIN THE CONTEXT OF SAMPLE PROJECTS IN TURKEY (Dr. Yılmaz DEMİRHAN, Dr. İrfan TÜRKOĞLU)

E-Government between Developed and Developing Countries (S. A. Nawafleh, R. F. Obiedat, O. K. Harfoushi)

Electronic Government for Developing Countries – (ICT Applications and Cybersecurity Division Policies and Strategies Department ITU Telecommunication Development Sector)

TÜRKİYE'DE E-DEVLET NASIL OLMALI? – (TÜRKĐYE BILIŞIM DERNEĞI (TBD) KAMU BILGI ISLEM MERKEZLERI BIRLIĞI ÇALIŞMA GRUBU (KAMU-BIB)

E-Government: Key Concepts and Applications to Development (Gordon Wilkinson University of North Carolina)