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Quality Management in Public e-Administration

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***Abstract*—**Since the late 1970s, quality management has become an important tool for achieving a high quality of public e-administration services in many countries. Very important part of quality management in e-administration is measurement of quality indicators related to this sector. Therefore, this paper gives a description of e-administration, including statistics about it and other examples from many countries worldwide, as well as the explanation of quality management in public e-administration. The paper also gives a list and description of quality indicators relevant to e-administration, as part of quality management within the e-administration. Through a literature review and best practices, the paper aims to analyze quality indicators measurement and other parts of good quality management when it comes to the public e-administration and consequently to show the usefulness of quality management in public e-administration in order to provide services of high quality.

***Keywords*—**e-Administration, quality indicators, quality management.

I. Introduction

ALTHOUGH the first administrative organization was founded about three thousand years ago, the theory of public administration started to gradually develop at the end of the nineteenth century. Starting from the key attitudes of government theory, two most important schools were clearly pointed out. The first was a classic organization theory, which was based on the experience of the industrial revolution, urbanization and intensive economic development. Second was, in contrast to the first one, more focused on the behavior of individuals and groups in organizations of administration, on the motivational forces and intergroup interaction.

For many years public administration has struggled for its independent position in the social sciences. While in its early years it was part of the more conservative fields of law, politics and economy, today it has been developed to a unique field, independent in many ways but still enjoying mutual contributions of other disciplines in the social sciences [1]. Wilson held that "the business of government is to organize the common interest against the special interest". Goodnow advocated for a distinction between the functions of the politics and the administration of government [2] Basu said that, public administration is the management of affairs of the government at all levels - national, state and local [3].

The purpose of public administration is the most efficient use of the resources available for officials and employees. We understand public governance to be the ways in which stakeholders interact with each other in order to influence the outcomes of public policies. By 'good governance', we mean the negotiation by all the stakeholders in an issue (or area) of improved public policy outcomes and agreed governance principles, which are both implemented and regularly evaluated by all the stakeholders [4]. Without public administration, which reminds legislators that concepts like social equity and organizational efficiency are important, the policy process would likely suffer [5]. This paper describes e-administration, statistics about e-administration, development of quality through history, stakeholders, and their needs as well as quality indicators.

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II. Difference between "Public Administration" and "Public Management"

"Public management" can be defined in two ways. First, it focuses on the behavior of top leaders rather than on issues of interest to top, medium or functional managers. In this paper, administration is short term and limited function as opposed to management and as a result, change from the public administration to the public management includes major changes of both theory and function.

"Public administration" is the use of managerial, political and legal theories and processes to meet the legislative, executive and judicial mandates for government services and regulatory functions for society as a whole, or for specific segments. It is a comprehensive definition, putting into the term of public administration, every conceivable part of the public sector.

The words are close in meaning, but there is a certain difference. Governance refers to how to organize the administrative parts of government and how to produce outputs in policies, laws or products. Administration essentially involves instruction and services, while management involves achieving results and the personal responsibility of the managers for the results. Public administration is focused on processes, procedures and correctness while public management involves much more than that.

III. e-Administration

The development of information and communication technologies, the need to improve the quality of services and monitoring of users in public administration, has led to e-government. This method of government, citizens see as increasing government accountability to citizens, greater access to information, more efficient government, but it still raises the question of security and privacy of information. E-

government is sometimes referred to second revolution in public management and according to the economist it will transform not only the way in which most public services are delivered, but also the fundamental relationship between government and citizen [6].

E-government is a good example of "Kano Model" because a few years e-government is a mesmerizing quality characteristic, which was not expected. Now it can be said that this kind of needs has come in one-dimensional quality characteristics of "Kano Model". Today, e-government is the need of the citizens to be expressed and its presence creates a satisfied user. Public administration (e-government) in this way wants to bring citizens and enterprises their government. The reason for the concern may be whether e-government is a method for the integration of a large number of citizens in government or exclusion less technologically educated citizens. Research conducted by MORI has revealed that the British public wants to increase interactivity with governments -75% of respondents wanted to access a local or central government service electronically [7]. In the United States, spending on e-government projects is expected to grow 6.9% each year, reaching $5.8 billion by 2009. Yet, despite the governments' growing investment in electronic services, citizens are still more likely to use traditional methods, e.g., phone calls or in-person visits, than the Web to interact with the government [8]. A possible reason for this behavior is still under-achieved level of trust among citizens, especially when it comes to the safety of the interaction with the government. Any change creates resistance, which is why quality assurance in e-government, big bites. Trust of a party A to a party B for a service X is the measurable belief of A in that B behaves dependably for a specified period within a specified context (in relation to service X) [9]. The study reports that municipalities mainly offer online email addresses for citizens to complain or raise questions (91%) and the possibility of downloading and printing forms (70%). It is worthwhile to mention that 36% of the municipalities affirm that they undertake processes of public consultation through their websites [10]. A low level of trust on the government coupled with a high level of trust on Internet leads to a situation where citizens might use technology as a competitive tool against the government. A high level of trust on the government but a low level of trust on the Internet indicates a scenario where the citizens will try to cooperate with the government efforts but the lack of their trust on the technology will inhibit this cooperation [9].

IV. Quality Management in Public Administration

The quality movement in public administration is part of reform and modernization [10]. Public administration reform strategies strive to identify measures for ensuring the modernization of public administration in order to optimize decision-making, to improve human resource management, public finance, quality of public services by promoting, and introducing quality management elements [11]. Reforms in the public administration in the Member States of the European Union (EU) and individual countries of Southeast Europe, also track harmonization with EU standards. The ISO standards identify a set of eight quality management principles that, once implemented, will be responsible for increasing performances. [12]. The principles are: customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision making and mutually beneficial supplier partnerships.

Since the late 1970s, quality management (QM) has become an important tool for the implementation of comprehensive public sector reforms in many countries [13]. Total quality management (TQM) was initially used in the private sector, in order to achieve integral monitoring and to estimate all relevant activities of an organization, in view of reaching excellent results in business [11]. The reforms have embodied various approaches including QM, privatization, business process re-engineering and benchmarking [13]. Unlike the United States, in the United Kingdom public administration reform preceded the introduction of QM. Reform began in late 1970s, whilst the emergence of QM in the public sector took place in the late 1980s [13].

Quality is a generic concept that has been implicit in the concept of public administration from the moment it began to be associated with the respect of procedures and regulations. But later 90's, quality becomes an everyday word in rhetoric in Western Europe when we talk about public administration.

The concept of service quality of public administration is based on expediency. Service organizations - banks, insurance companies, transportation companies, hospitals, educational institutions, etc. have in common that they provide services to people. Therefore, the relationship between the person who provides the service and the user is constructive only if the services with their cost, duration, convenience and represents a response to the needs and requirements of users. Quality management and improvement of quality of services/products to organizations represent a way of gaining trust and quality assurance but does not always mean the trust of customers. If we take the example of the food in the restaurant, it was delicious, well seasoned, even meets and exceeds the requirements but is guest a safe and confident in its correctness? Will you bring your child to eat lunch at the restaurant? Trust can be built up with the help of experience. Certificates (HCCP, ISO 27000, ISO 9001…) are one way to ensure the confidence of customers and to align services/products to the requirements of these standards, followed by re-certification and periodical checks. Verification of services and public administration does not necessarily mean validation. If the service works well for the procedures and rules, it does not mean that the user is satisfied. Users mustn't be confident in the quality level of the institution.

Zhang and Prybutok (2005) found that service quality brings about a greater degree of perceived satisfaction and subsequently its adoption [14]. Thus, a high quality public

administration must not only be able to increase customer satisfaction with public services but also build trust in public administration through transparent processes, accountability and democratic dialogue.

In order to achieve a high quality of public e-administration, it is necessary to satisfy the needs of all the relevant stakeholders. In this case, depending on the available resources, the priority, legitimating, power, urgency and context, an example of stakeholders is shown in Fig. 1.

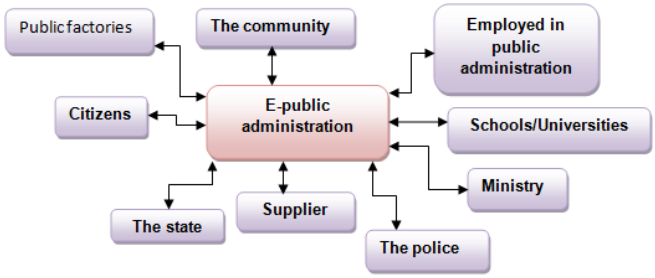

Fig. 1 Stakeholder model for the public e-administration

As mentioned earlier, user requirements must be met and overcome in order to achieve high quality. For example, if we offer typewriter in to the market, we will realize that it was made as it was designed in accordance with the requirements of the former quality. It's perfect, it works great but no one wants to buy it. It simply does not meet the quality requirements of today. Thanks to the improvement of the quality and development of technology, the typewriter was replaced by a personal computer, enabling typing in color, deleting text, formatting with less noise etc. All this proves that the user requirements change over time. The conclusion is that it is necessary to restore public trust in government and restore confidence of the public administration. There are two essential techniques to improve the quality of administration and operation of its services. Those are Quality Working Groups and Total Quality Management.

Public administration's employees should continually analyze the impact of administrative activities and prepare reports on the quality of administrative action. They have periodical meetings where they analyze the efficiency and effectiveness of administrative action. The implementation of total quality management in public organizations is usually associated with the rise of New Public Management (NPM). Apart from the discussion of TQM's suitability for public agencies, there is an ongoing discussion about the downsides of TQM as such. One of the most serious objections to TQM is that it creates mechanistic solutions and increases bureaucracy [15].

Surveys show considerable variation in public satisfaction with different state institutions, but overall satisfaction with virtually all state institutions is low. A 2004 study by the Public Opinion Foundation found that 71% of respondents were dissatisfied with the quality of public services, as against just 14% who expressed overall satisfaction [16]. Many are the ways in which the state is trying to improve the quality of public sector but before that it must identify the indicators of quality in public administration

V. Indicators of Quality in Public e-Administration

A large number of indicators needs not to be collected by institutions, especially if they are related to research, satisfaction or post-graduation experiences. If indicators in these areas are chosen for a common data architecture, data collection could conceivably be done by third parties [17]. If we want to measure the quality of public administration, and public e-administration as its part, we must first have a theoretical and practical knowledge about what comprises administration. Indicators measure different aspects of the quality of administration, for example severity of corruption, the extent of civil liberties, bureaucratic efficiency, the rule of law, and the predictability of policymaking. Measures differ in terms of specificity regarding the aspect of governance being assessed. For example, an indicator of "corruption" is less specific than an indicator of "corruption in the bureaucracy".

Web Measure Index (WMI) is an indicator of e-government development provided by the UN (2003) report. WMI aims to evaluate the services and facilities provided by government Web sites. WMI is a quantitative index that measures the generic capability of governments in employing e-government. Since Web presence directly reflects the e-services provided to the public, the WMI is a straightforward assessment indicating the progress of e-government development of that country.

The Telecommunication Infrastructure Index is a composite weighted average index of six primary measures of a country's ICT infrastructure capacity. These are: PCs/1000 persons; Internet users/1000 persons; Telephone Lines/1000 persons; Online population; Mobile phones/1000 persons; and TV's/1000 persons.

The Web Measure Index (WMI) (UN, 2002-2005) assesses the websites of the governments to determine if they are employing e-Government to the fullest. This index provides an evaluation of Internet and World Wide Web utilization by the PA for the diffusion of information and the public services delivery [18].

Human Capital Index is a composite index of the adult literacy rate and gross enrollment ratio. Adult literacy rate is weighted 67% and gross enrollment ratio is weighted 33% [19].

Readiness index is a composite index comprising the web measure index, the telecommunication infrastructure index and the human capital index.

VI. Public e-Administration Quality Management in Different Countries

Recognizing the power of communication technologies, many developing countries, with the assistance of the international organizations, have begun building and encouraging e-strategies and initiatives for addressing a wide range of economic, social, technological, infrastructural, legal

and educational issues. Consequently, initiatives have flourished in many developing countries, such as Brazil, India, Chile, Argentina, the Philippines etc. Administration has a great potential and opportunity for developing countries to improve their governance and raise citizen satisfaction. However, to realize the full potential of these applications, the administrations have to accommodate certain unique conditions and be able to manage a set of issues, problems and related challenges.

In Bahia, *Brazil*, the municipal service offers more than 500 different services. These services are located in shopping malls or other public places so that people, when they go shopping, can simultaneously use a variety of public services, such as obtaining identification cards, the search for a new job, getting passports or checking retirement eligibility. The study found that over 89% of people assessed service centers as excellent. Therefore, the quality of services is provided by reducing time that users spend on obtaining official documents and time of waiting to receive documents, by reducing costs, eliminating paperwork and so on [20].

The Central Vigilance Commission (CVC) of *India* has launched an initiative to create a web site with the goal of reducing corruption and increasing transparency by sharing a large amount of information corruption-related with citizens. CVC site interacts directly with the public through messages of strengthening confidence in the institution. It informs the public about its efforts in the struggle with the corruption and makes public the names of officers from the elite administrative services who were given the penalties for corruption. Members of the public are very encouraged (mostly by prizes) to provide the complainants with information about taking bribes so Commission can take the necessary actions against corruption and eliminate bribery in order to increase the transparency of policies, procedures and services.

The *Colombian* government has the government web portal which is an entry point for each site of government agencies in the country and which allows citizens to seek information from the government by the e-mail of government representative and to complain about problems or to make suggestions. A special department "The Government Online Network" composed of eight persons trained on the government portal technologies was designed to make the Colombian website a place for giving advices, support, training and monitoring.

The *Argentine* government is also working to improve e-government and thus launched the expansion of information on the usage of public resources, including information about the amounts of money for various programs, financial data, account of the public debt, including the conditions, guarantees, costs and outstanding tax and customs obligations of private companies [20].

The *Philippines* has even changed the legal framework and issued new rules and policies that manage and regulate electronic commerce. The e-procurement system aimed to simplify the purchase of goods and services for a large number of government departments and agencies.

In *Pakistan*, the Ministry of Interior and the National Database introduced a chip-based electronic passport (e-passport) to help secure identity of citizens. Pakistan is one of the first countries in the world issued a multi-biometric e-passport compliant with ICAO standards. E-passport uses security features on the page with data and it is supported by sophisticated technology and business logic, which makes it one of the most modern passports at this time.

The *Europe* has the highest level of e-government development, about 50 percent more than in the whole world. Western and Northern Europe offer the biggest number of online services, but there is significant difference from Southern and Eastern Europe [21].

The *Serbian* government has developed a program of e-administration, but progress was slow due to the low level of penetration of computers to the population. According to the available data, only about 32.2% of households in Serbia have internet access, compared with about 52% of households in the European Union, but this number is bigger than last year. According to the Action Plan for the reform and development of e-administration, adopted in 2006, the Serbian government has make a promise of investment financial assets worth 43 million U.S. dollars for the establishment of an integrated electronic network that should cover all state organizations. The formation of the new Serbian Ministry of Telecommunications and Information Society in 2007 pointed out the priority to accelerate the application of information technology. European Agency for Reconstruction, finance the Ministry of Education program known as "Expert reform of secondary education". According to the program, some millions of dollars of IT equipment should be installed at more than 300 locations throughout Serbia. High school students are a particular focus. In the meantime, the new computers are also provided for government agencies such as the National Employment Service and the Ministry of Labour and Social Policy [22].

VII. Conclusion

The adoption of Web-based technologies conducting government services has become a global trend in public administration. Creation and management of web sites is becoming an essential element of modern public administration. E-government inherits administrative reforms inspired by New Public Management implemented across the whole European Union over the past twenty years, which advocated that many of the organizational techniques of private sector can be applied to government organizations. The emergence of e-administration has provided new opportunities to improve governance, including improvement of efficiency, new services, citizen participation, and strengthening the global information infrastructure. Today, governments around the world recognize the information technologies as a powerful tool for the promotion of civic

engagement in public policy and as a means of straightening public confidence in the government. It can be said that today the presence, representation and usage of e-administration is one of the indicators of the quality of public administration. e-Administration represents the logistics to the comprehensive public administration and expressed need of society, government and administration. However, the law for personal data protection and authentication of systems are necessary in order to enhance public confidence in electronic transactions. Citizens are becoming more demanding and less tolerant of poor government services. It is necessary to consider the quality indicators of public administration and measure them. Obtained results have to be used for applying corrective and preventative measures that is improving quality and exceed stakeholders' requirements. It certainly should not be the end when it comes to quality management in public e-administration because there are no restrictions in quality improvement, they should be continuous, incremental and the resulting in terms of increased efficiency and effectiveness.

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