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«E-government» system as a tool for improving the competitiveness of the State

In the article is considered the concept of «national competitiveness»; the authors identified the influence mechanisms of «e-government» development on the level of state competitiveness in all the components. The research contains an analysis of policy of formation the information society in the Republic of Kazakhstan through the development of «e-government» projects, which helps to optimize the government activities, establish the mutual exchange of information among all concerned institutions of the country and citizens. Work contains an analysis of the current status of «e-government» in Kazakhstan, considering its positions in the world development rankings and assessment of the system development impact on the competitiveness level.

Keywords: competitiveness, «e-government», global competitiveness index, information technologies, government, efficiency, information society, innovations.

Contemporary development and globalization processes of the world economy, the intensified economic interdependence, the formation of global commodity and financial markets have led to increasing interest to the issue of international competitiveness. Issues of international competitiveness according to the priority comes out on top of issues of national importance, as closely linked to the achievement of dynamic economic development of the country and improving the living standards of its citizens.

Interest to this problem has intensified in recent years due to the fact that most economies of the world were involved in the fierce competition. Currently in research of the competitiveness issues are involved a large number of economists and major international institutions, which are helped by the national institutions of more than 100 countries.

The main objective of this research is to determine the place of «e-government» system in the formation of country's competitiveness level; among the targets, set for the solving in the research — an assessment of the system's impact on the level of state development; the implementation of analysis of the current status of «e-government» development in Kazakhstan with a view of its place in the world rankings.

The methods applied to the research: logical, comparative, statistical, graphical, method of analysis of the legal documentation, etc.

Most contemporary researches are based on the similar principles of calculating the level of competitiveness and ranking of the countries according to this level.

The main differences in the ongoing researches are manifested in the formation of a set of factors affecting on the level of state competitiveness and assessing the strength of this effect, i.e. the level of weighting factors and the number of indicators determining them. It is also important, that the modern methods of determining these indicators take into account the main trends of the global economy, computer, internet — technologies development, the latest achievements of scientific and technical progress and the progressive development of statistics in the world.

National competitiveness is treated as a multifaceted concept, which in most cases means:

- An ability of the country to achieve high rates of economic growth, which would be stable in the medium term;
- The level of productivity of factors of production in the country;
- An ability of companies in the country to compete successfully in international markets [1].

Currently, the primary mean of generalized competitiveness ranking is Global Competitiveness Index has been formed by the World Economic Forum.

The World Economic Forum determines national competitiveness as an ability of the country and its institutions to ensure stable economic growth, which would be stable in the medium term, emphasizing, that countries with high rates of national competitiveness tend to provide a higher level of welfare to the citizens [2].

The Global Competitiveness Index is composed of 113 components that describe in details the international competitiveness of the countries, which are at the different levels of economic development. Set of variables by two-thirds consists of the results of a global survey of business executives, in order to cover a

wide range of factors affecting the business climate in the surveyed countries; by one-third — of publicly available sources: statistical data and studies carried out on a regular basis by international organizations.

All variables are grouped into 12 main components, determining the national competitiveness: The quality of institutions;

- Infrastructure;
- Macroeconomic stability;
- Health and primary education;
- Higher education and professional training;
- Efficiency of commodity and service markets;
- Efficiency of the labor market;
- Development of the financial market;
- Level of technological development;
- Size of the domestic market;
- Competitiveness of companies;
- Innovative potential.

Formation of this set of variables is determined by the range of theoretical and empirical researches, given the fact that no particular factor can alone ensure the competitiveness of the economy.

Attempts to improve the macroeconomic environment, for example, to optimize the control of the public finances, will be successful only with adequate transparency of the financial management system and the absence of large-scale corruption and irregularities. Entrepreneurs will be willing to introduce new technologies only in that case, when the potential profits will exceed the necessary investments.

Thus, according to the World Economic Forum's findings, the most competitive economies are usually the economies of those countries, which are able to carry out an overall policy, taking into account the whole range of factors and the interconnection between them.

Among the factors influencing on 12 components of competitiveness, highly developed countries consider the development of «e-government» system as one of considerable tools.

Although, it is important to note, that most of the researches focus on the positive impact of the «electronic government» introduction only in terms of reducing bureaucracy and saving resources. We insist on a broader and deeper understanding of the correlation of «electronic government» and the level of international competitiveness.

«E-government» is a concept that actually assumes succinct description of the modern approach for defining the role of government agencies in the state and the society.

This concept represents a new way to organize and develop the public administration; the process of its transformation to dramatically improve the indicators of obtaining specific useful results, greater efficiency and responsibility of public authorities. This method is based on a focused and coordinated application of new information and communication technologies for the implementation of the government's functions.

That is, the system of «electronic government» is designed to optimize the state apparatus, whose activity, in turn, has at least three levers of influence on the economic performance of economic actors: taxation, government expenses and government regulation. Taking into account the influence of government agencies on the growth of competitiveness, development of «e-government» system is intended to implement two strategic purposes:

- maintaining efficient operations within the public sector;
- reduction of administrative barriers for business.

With regards to the determination of the potential growth of public sector efficiency, the impact of «electronic government» on the efficiency of the public sector can be classified into the following categories [3]:

1. Reducing costs of maintenance through automation.
2. Savings on delivering services through self-service.
3. Reducing government spending on procurement.
4. Improving the supply chain management.
5. Reducing the cost of tuition and business trips.
6. Reducing mistakes, fraud and abuse of authority.

«E-government» system creates a new model of the public sector functioning, making it more responsive and adaptable to the growing needs of the citizens and business-structures.

In addition to improving the efficiency through cost savings, «electronic government» allows to optimize revenue collection through innovative approaches to maximize the use of existing sources of income due to the reorganization of business processes and revenues.

The most common of these tools are the systems of «detection taxes», which use databases and other technologies to find taxpayers who evade taxes or do not pay them completely. Thus, in conditions of limited budget, the system of «electronic government» provides valuable new tools to improve the efficiency of tax administration and tax collection. Within World Economic Forum's index of global competitiveness «e-government» is a tool capable of a positive impact on most of the components of competitiveness (Table 1).

Table 1

Influence of «electronic government» system on the components of competitiveness

A component of the competitiveness	The impact of «electronic government» system
Institutes	Increasing the transparency and efficiency of the public sector, reducing the burden of state regulation
Infrastructure	Increasing the management efficiency of the transport system, improving the infrastructure of information and communication technologies in the country
Health service	Control of the costs of public funds for the procurement of medicines and other.
Education	Control of education quality, increasing of transparency during the exams and tests; providing the access to knowledge for students.
Efficiency of the commodity market	Increasing competition in the market, the transparency of tenders, reducing the tax burden, e-customs
Efficiency of the labor market	Ensuring transparency of relations in the labor market
Development of the financial market	Increasing the availability of funding sources, more effective regulation of the financial market, variety and availability of financial instruments
Level of technological development	Support the use of ICT in business processes, promoting the spreading of new technologies.
Size of the domestic market	Stimulation of the IT — services market
Competitiveness of companies	Improving the business climate: simplifying the business environment, reducing the tax burden; Transparency of tender system; the spread of new business and organizational models
Innovations	Increasing the state funding for research and development; enforcement of intellectual property rights.

Note. Compiled by the authors.

As mentioned above, the second strategic objective of «electronic government» system's functioning is to reduce administrative barriers for business. Specificity of the public sector's work is that most of business interactions with government are determined by legal, regulatory rules, which they are forced to obey and which do not allow freedom of choice: registration, licensing, reporting, payments and other.

Laws and instructions are usually developed for the maintaining social and economic progress: improving the national welfare, providing the protection of consumers' rights, development the competition in the market, improving the quality of environment. However, frequently it embodies into the set of obligations for the citizens and businesses, which require approval, substantially limiting the free choice and, in most cases, cause considerable costs. Thus, excessive or poorly adapted to the specific conditions government regulation hinders economic performance and competitiveness growth.

One of the possible ways to solve this problem can be operations on formation more favorable regulation and legislation, which takes into account the need for assessments the impact of received instructions on the business.

Government intervention should be carefully analyzed in order to determine the additional costs of compliance with the prescribed conditions and obligations that would be required from the business sector. At the same time it should be guaranteed that such interference, as a whole, will be effective.

Today there are many strategies that the government can use to implement these conditions: a pooled analysis of profitability, assessment the impact of regulatory, deregulation, the introduction of standards for

regulation and other procedures. Use of ICT can be a key factor for their implementation, as it will provide the tools of information management, aimed at supporting the decision-making processes and the establishment of mechanisms to assess the impact of regulation.

It should be noted, that regardless of the quality of processes for creating rules, «electronic government» allows to reduce the costs of implementing the regulatory and administrative requirements by business and citizens through the use of online methods of interaction with the government, and thus it has a positive impact on the performance of the commercial sector, and respectively, on the level of competitiveness of the country.

Successful operation of «e-government» refers to the electronic access and simplifying the procedures for obtaining permits, licenses, reporting and payments that can help businesses and individuals to significantly reduce the time and cost, due to the following five factors:

- Providing easily accessible and easy to use means of information services;
- Simplification and optimization of the reporting requirements;
- Reducing the number of forms;
- Facilitation of transactions (making payments, obtaining permits);
- Assistance to citizens and businesses in finding the necessary regulatory instructions for specific cases and in the understanding of how they should be performed.

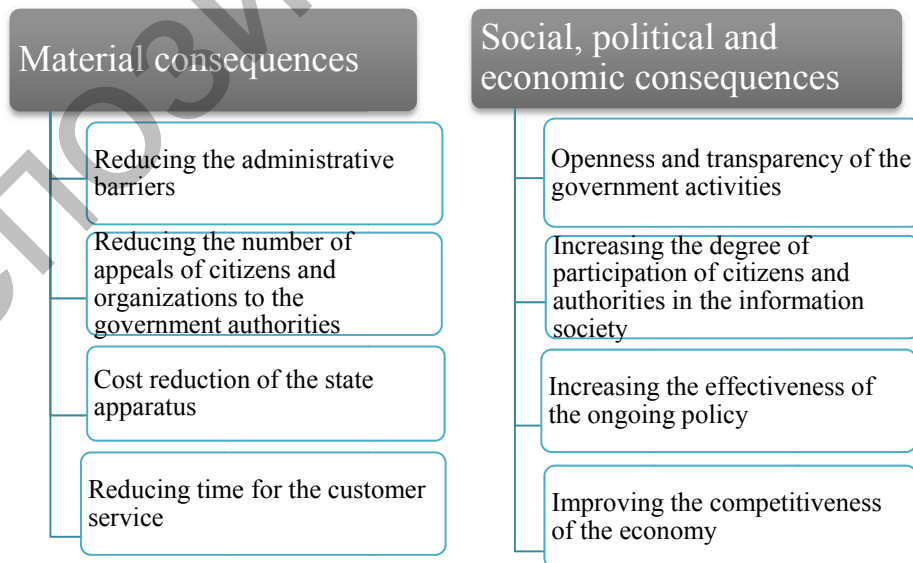
Thus, the «electronic government» system is the basis for constructing a strategy for sustainable development of any country.

Kazakhstan, which plans to entry into the 50 most competitive states, should provide an appropriate level of the information exchange through «e-government» system.

Successful operation of «electronic government» for Kazakhstan implies the complex of material, social, political and economic consequences, directly or indirectly affecting the level of competitiveness (Figure 1).

Analysis of the strategic objectives, established by the Head of Kazakhstan, as well as measures taken by the Government on their implementation, shows that the country has carried out serious work on «e-government» system.

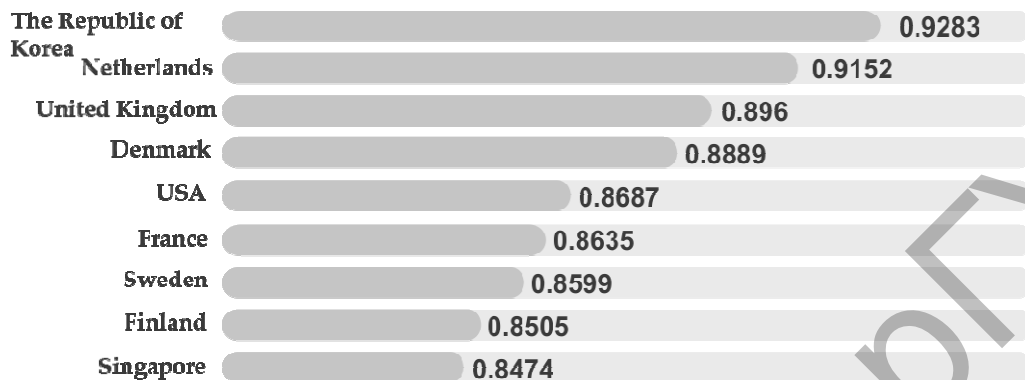
However, there are a number of problems such as the digital divide, a low level of computer literacy, lack of the information about the availability of the public services in electronic format, etc. that greatly restrains the development of the «electronic government» in Kazakhstan. In this regard, there is the need for the formation of the organizational-economic mechanism to develop the «e-government» that would take into account the productive cooperation between the state, private sector, non-profit organizations and public institutions.



Note. Compiled by the authors.

Figure 1. Benefits from the introduction of «electronic government»

According to the rating of «e — government» of the UN in 2012, the Republic of Korea is the world leader with an index of 0.9283 (the weighted index with three main components: the scale and quality of online services, the level of ICT development and human capital), in second place — Netherlands (0.9125), the third — United Kingdom (0.8960) and Denmark (0.8889) (Figure 2) [4].



Note. Source [4] was used.

Figure 2. World ranking of countries in the development of «e-government» system

Occupying the seventh line in the ranking within the Asian region and the first one in Central Asia (Figure 3), the Republic of Kazakhstan is not included into the list of 20 leading countries of the «electronic government», thus taking only 38th place (with an index of 0.6864) member — countries forming the system.



Note. Source [4] was used.

Figure 3. Ranking of Central Asia countries in the field of «e-government» development

Nevertheless, compared with 2010, Kazakhstan went up by 8 positions, moving from 46th place world ranking to 38th (Table 2).

Table 2

The achievements of Kazakhstan in the «e-government» development in 2008–2012

UN World ranking (192 countries)	2008	2010	2012
Human Capital Index	7	16	25
Index of Online Services	58	95	14
ICT — Infrastructure index	111	96	77
E — Participation index	98	18	2

Note. Source [5] was used.

According to the number of public programs aimed at the development of «e-government» in Kazakhstan, the Government is aware of high importance of the development of this system as a tool for improving the competitiveness of the economy.

According to the WEF Global Competitiveness Index 2012–2013, Kazakhstan demonstrates the improvement in «Institutes» component, which was a result of government agencies' active work in the providing adequate and effective activity.

The improvement was also achieved through the active introduction of «electronic government», which is a competitive advantage compared with other countries. In this component of competitiveness Kazakhstan is among 45 % of leading countries in the world (66th place).

In this area, in the new indicator «Government services to improve business performance» in Global competitiveness index WEF Kazakhstan ranked 13th, that is also influenced by the development of «e-government», including by operation of individual projects such as an information system e-licensing, e-notary [6].

According to the WEF Global Competitiveness Index 2012–2013, among the barriers for improving competitiveness were identified the following problematic factors of doing business in Kazakhstan: low qualified employees, corruption and opacity of financial markets, the tax regime, access to financing, inefficient government bureaucracy. The system of «electronic government», according to the analysis, designed to influence on these factors [2].

Also in the framework of «electronic government» functions such project as e-learning, which aims to improve the quality of educational services and access to education, which is one of the key indicators of national competitiveness.

Since January 1, 2010 was made 100 % transition of government procurement through the price proposals request into an electronic format, that is intended to ensure transparency in public procurement.

Also in the Republic of Kazakhstan operates «e-health» project, the purpose of which development is to raise the quality and accessibility of health services, the availability of services, provided by the health care system of the Republic, public awareness about the state of their health, the use of modern ICT in planning treatment and preventive measures, taking into account the capacity of health institutions.

In the «technological development» component in 2012 Kazakhstan improved its position moved from 87th place to 55th in the WEF Global Competitiveness Index 2012–2013 [6]. To improve the competitiveness of the country for these indicators it is nearing completion of implementation of the program for the development of information and communication technologies in the Republic of Kazakhstan for 2010–2014, the base of which was the Program of Forced Industrial-Innovative Development of the Republic of Kazakhstan for 2010 — 2014 years [7].

The main objective of «Information Kazakhstan 2020» program was also identified to develop «e-government» system as a tool for informatization of Kazakhstan. By 2017, the index of Kazakhstan's «electronic government» should be among the 30 leading countries; by the end of the program (2020) — among the first 25 countries [8].

As the analysis shows, that the benefits from the development of «electronic government» projects for the government, citizens, business sector are obvious. The system is advantageous, at least, by two factors. Foremost, it is a financial component. By introducing this system for the last three years, the state has already received economic effect of \$42 billion tenge, with total funding of 46 billion tenge. Thus, the government is spending money to receive an indirect economic effect. And, of course, this figure will increase.

Secondly, it is the fight against corruption. In Kazakhstan, the issue remains relevant because today there is a problem with administrative corruption, when citizens and business — structures have repeatedly confronted with officials, as a result, it is inefficient bureaucratic organization. In this context, a system of «electronic government» is designed to reduce such contacts to the minimum.

Understanding these mechanisms establishes a direct correlation between «e-government» and the competitiveness of the economy. With the introduction of online tools in such areas as obtaining permits, licenses and reporting, public sector have a real opportunity to significantly reduce the regulatory burden for businesses, which, in turn, contributes to the growth of competitiveness of the economy.

Being aware of the need to develop «e-government» system, the Government of the Republic of Kazakhstan neutralizes existing barriers of system development. In conditions of the successful implementation of the programs of creation the information society, Kazakhstan has all the chances to enter into the top 20 countries in the development of «e-government» in the world.

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А.Т.Тлеубердинова, Е.Б.Брицкая

«Электронды үкімет» жүйесі мемлекеттің бәсекеқабілеттілігін арттыру құралы ретінде

Мақалада «құлттық бәсекеге қабілеттілік» түсінігі жан-жақты ашылған, «электронды үкіметтің» дамуының барлық құрамы бойынша мемлекеттің бәсекеге қабілеттілік деңгейіне әсері қарастырылған. Қазақстан Республикасындағы ақпараттық қоғамның қалыптасу саясатына «электрондық үкімет» жобасының даму жолымен талдау жасалған, ол басқару органдарының қызметін оңтайландыруға, мемлекеттің барлық мүдделі институттары мен тұрғындардың ақпарат алмасуын жеделдетуге ықпал етеді. ҚР «электрондық үкіметтің» қазіргі жағдайы дамудың әлемдік рейтингі, бәсекеге қабілеттіліктің деңгейі, сонымен қатар жүйе дамуының әсерін бағалауы есепке алына отырып талданған.

А.Т.Тлеубердинова, Е.Б.Брицкая

Система «электронного правительства» как инструмент повышения конкурентоспособности государства

В статье раскрыто понятие национальной конкурентоспособности, выявлены механизмы влияния развития «электронного правительства» на уровень конкурентоспособности государства по всем составляющим. Произведен анализ политики формирования информационного общества в Республике Казахстан путем развития проектов «электронного правительства», что способствует оптимизации деятельности органов управления, ускорению взаимного обмена информацией всех заинтересованных институтов страны и населения. Показано текущее состояние «электронного правительства» РК с учетом занимаемых позиций в мировых рейтингах развития, оценки влияния развития системы на уровень конкурентоспособности.

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