

Conclusions

The important results provided by the VAR analysis of monetary policy transmission mechanism were:

• **Shock response function (impulse response):** under the considered recursive VAR approach (the Choleski identification) a monetary policy shock causes a response of the same sign from the inflation and nominal exchange rate, a positive response of price level, results of the GDP are counterintuitive. The free distribution of zero restrictions to identify shocks in the structural VAR model revealed the negative behaviour of GDP, consumer price index, reaction of nominal exchange rate, and neutral reaction of M2. Thus, in case of SVAR, the results of unexpected short-term interest rates translate:

- A GDP decline, that reaches a maximum after about a fourth quarter;
- Broader decrease of consumer price index, with a maximum level after about three quarters;
- Negative response or practical neutral reaction of M2, with a negligible decrease during the first quarter and a half from the short-term interest rate rise;
- Also, the exchange rate registers a decrease, that is equivalent to the appreciation of national currency, that reaches the maximum level after a two quarter;

In general, the responses of macroeconomic variables to monetary shock showed significant and logical results, but require a more in-depth and detailed statistical analysis that takes into account the institutional characteristics of the national economy, namely regime change of monetary policy. In subsequent papers promising to test different model specifications, the decomposition of the variance of variables, robustness tests, identifying causality between the variables in the system and introduction long-run restrictions in the model SVAR.

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ECONOMIC AND SOCIAL IMPACT OF E-GOVERNMENT

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The issue of the impact of e-Government and justifying of ICT expenditure in the public sector is an on-going concern of research. It is important both in terms of in-depth understanding of the phenomena that occur in public administration and in society as a whole and in terms of methodology in order to create tools and mechanisms for evaluating of projects. The study examines the issue of the implementation of e-Government in terms of costs and the effects that it produces.

Key words: *e-Government, interoperability, economic impact, social impact, public administration, ICT investments.*

Introduction

Information technology and communication have created new possibilities for communication and interaction between government, citizens and businesses. Technological developments have spurred the development of new types of relationships, increase efficiency and effectiveness of public sector activities.

The widely access to Internet changed the way government provides services to citizens. Today, governments are making efforts to accelerate the development of more complex e-Government services to

ensure not only better quality services but also to improve the efficiency and effectiveness of government and make government activities more transparent [1].

The digitization of public services and their online provision, normally, involving a large number of government agencies, institutions and organizations. The condition of the success of such services is the interoperability.

E-Government solutions of new generation are prepared for a high degree of maturity of e-Government models. For solutions at those stages interactive communication between government and citizens, transactional services and providing integrated services that require a high level of interoperability between different government agencies are characteristic [9, 10].

Are e-Government expenditures justified?

Public investments in information and communication technologies are of increasing magnitude. According to some estimates, the total ICT spending in the government sector, worldwide, will increase to 441 billion by 2018 [12]. With increasing costs for e-Government projects and the need to assess the impact of investments increases. The government is in a position to justify this expenditure and show in a convincing way that investment in e-government solutions is cost effective. On the other hand, government is often unable to prove it because there is well-founded enough economic models to measure the effects of e-Government.

The government does not operate with concepts such as income, profit, return of investments and application of traditional methodologies for estimating the return on investment is not characteristic for this system. However, such models to estimate the effects of e-Government are the subject of many studies and research.

The issue of e-Government evaluation is a growing current. Some scientific studies, for example, notes that much of the e-Government projects are projects failed or partially failed. These claims are contested by political, administrative or contractual positions, but other scientific research confirms this [3, 4, 5].

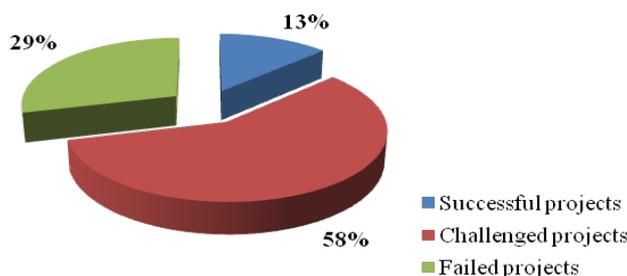


Figure 1. e-Government projects [5]

Recently a committee report on the Dutch government ICT Projects revealed that investments in ICT projects have not produced useful and valuable results expected and that a number of projects have suffered setbacks [5, 14].

The phenomenon is not unique. It is characteristic globally. Thus, the average percentage usage of e-Government services is now reaching the 40% threshold of the adult population. Similarly, the average usage in OECD countries does not exceed 45%. So, the low use leads to low value on public service delivery e-government services have consequently low.

The truth that emerges from such studies is that investments in e-Governance projects have not produced the desired effect, and the public money allocated for the realization of such projects have been wasted. The phenomenon is one that is observed worldwide. In particular, this statement refers to the situation of countries in transition. [3, 4, 6]. The explanation is that in these countries labour costs are low and the costs of IT products - large. In addition, the small number of transactions are carried out online is much too small to be economically efficient

Impact and assessment

In these circumstances, it is necessary to identify patterns of project impact assessment and e-Government initiatives. These models must take into account the overall level of e-Governance, type and number of electronic services online, the ease with which these services can be used, the quality and diversity, whether they contribute to the development of new services and facilities both inside and outside government. Such an approach to the problem on the impact of e-Government will certainly have an important contribution to improving the efficiency and effectiveness of public administration.

Evaluation of e-Government models occurs in several ways, including the economic and social perspective. By binding, all these models have declared righteous purpose to contribute to improving productivity in the public sector, develop better services, reduce costs, and increase the share of GDP generated by the public sector.

Evaluation methodologies aim to provide benchmarks for evaluating projects in a concrete socio-economic context the planned objectives achieved. E-Government projects must be evaluated by criteria which take into account the capacity to improve the quality of services provided to citizens and businesses. Evaluations will be made in a multidisciplinary approach, and economic and social components will play a leading role in the evaluation process.

E-Government solutions must be seen in a wider context of public administration reform as a strategic tool to modernize the government. Reforming public structures, remodelling business processes, improving the legal framework, enhance human resources skills, raising public sector culture – all this leads to better governance, which means the provision of public services better quality, better public finance management, improved policies in the public sector, in general, a greater public value.

Information interoperability and integration of different organizational structures in the public sector constitute the backbone of e-Government system. Commitment to achieving interoperability and integration of information in a system with a pronounced structural fragmentation is one of the biggest challenges of e-Government. [2].

An e-Government system is a system of citizen-centered public services that is based on interoperability between different systems and data. E-Government depends entirely on how integrated is operating model that will ensure the provision of services and the extent to which this integration is accompanied by transforming business processes.

For administrative purposes, the impact of e-Government is reflected in the increased quality of governance and the level of progress of public administration which means reducing corruption, civil responsibility, transparent rules and procedures, the possibility for citizens to use effective mechanisms for feedback and involved in the act of governance.

E-Government strategies and projects, tendering for operators, new citizen-oriented services, integrated services provided by various ways, investment in public administration infrastructure – these are designed to foster social development and progress. Optimization of activities and of business processes in the public administration is a way to achieve the transition from governance based on structure toward to the governance based on services.

One of the first assessments of the economic impact of e-Government is against the costs of public services. To obtain a public service, the citizen usually has more trips to the offices of the various agencies to obtain various certificates and other documents, to make payments etc.

The cost of access to public services has several components [8]:

- Cost of journeys to offices that provide services,
- Estimated wage losses due to time spent on these trips and waiting time in office,
- The total time elapsed in delivering the service,
- Amounts paid as fees for services but also various informal payments.

These costs, aggregated at the macro level, are conclusive indicators when it comes to assessing the economic impact of e-Government. They can represent a substantial share in the GDP [1]. Reported to certain per cent of these values could be presented as follows:

Country	GDP, US mil.	1% GDP	2% GDP	5% GDP
Czech Republic	192,032	1,920.32	3,840.64	9,601.60
Estonia	19,217	192.17	384.34	960.85
Germany	3,280,530	32,805.30	65,610.60	164,026.50
Latvia	24,010	240.10	480.20	1,200.50
Lithuania	36,306	363.06	726.12	1,815.30
Moldova	5,809	58.09	116.18	290.45
Romania	161,624	1,616.24	3,232.48	8,081.20
Ukraine	137,929	1,379.29	2,758.58	6,896.45
United States	14,586,736	145,867.36	291,734.72	729,336.80

Figure 2. GDP Table & interoperability impact – 2014

Data for calculation on Moldova are for a GDP of 2,232 USD per capita in 2014 [13]. Minimizing these costs is one of the declared objectives of e-government projects.

Mathematical models for e-Government indicators show that effective e-Government is dependent on the number and maturity of services. For example, interoperability indicator has a value greater with as many transactions are involved in the service [1].

The value of interoperability =

$$\sum_{i=1}^m \lambda^i \left(t! \frac{1}{(t-n)!n!} \right)$$

t – total number of interoperability transactions

m – the number of involved systems

n – the number of transactions in one process

λ – correlation factor

According to [1], the efficiency of public spending in e-Government is based on the maturity of applied models (figure 3). Direct economic effect of e-government models is achieved at a higher level of service development in an integrated and innovative, citizen-centric architecture.

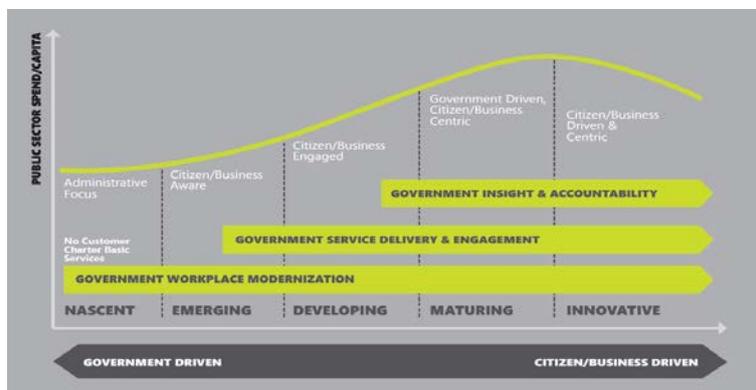


Figure 3. Government solution maturity curve [1]

The economic contribution of models of e-Government is crucial. E-Government acts on the economic environment as a catalyst for innovation. It not only provides the opportunity to deliver more efficient services, but also implement better governance both in terms of internal activities and those pertaining to relations with the external environment, help improve the quality and efficiency of bureaucracy and offers higher opportunities.

Addressing multiple aspects of e-Government models, interoperability in these models can help public administrations to understand more deeply and more fully the role of information and communication technologies as a catalyst and multiplier of development.

The idea underpinning the impact assessment of e-Government projects is that their implementation improves labour productivity in the public sector, enhances the quality of public services, reduces service costs and increases the public sector's contribution to gross domestic product – GDP [15].

Labour productivity in the public sector is a sum of direct and indirect effects [11]:

- Smith Effect – Effectiveness/Efficiency Effect (Market Enlargement);
- Ricardo Effect – The effect of substitution/integration between technology and personal;
- The effect of reorganizing the back office's;
- The effects of investment in innovation;
- Other macroeconomic effects.



Figure 4. Labour productivity in the public sector [15]

Electronic services in Moldova

The content of electronic services and their delivery in Moldova indicates that, at the moment, they are mostly departmental services with a low level of interoperability. Mostly, these are service requests for services. The maturity of service models is still hovering low level, on a scale of maturity. There are a number of interactive services, and some transactional services initiatives. Service integration phase will be achieved with the implementation of advanced models for interoperability. These activities are provided in a number of strategic documents in the field – the National Strategy “Moldova Digital 202” Strategic Program of technological modernization of governance (e-Transformation) etc.

E-Government solutions to be implemented must face interdepartmental interoperability needs. The regulatory framework must be developed to meet the requirements for data sharing, optimizing business-processes, and standardization and ensure methodological activities related to interoperability and information integration throughout public administration.

Conclusions

- Implementation of e-Government projects generates a comprehensive process of creating new values in public administration. The effects are manifold, both socially and economically.
- Electronic government means better government, transparency and democracy, improve social life of citizens by increasing the quality of public service delivery, better coordination and management of activities within government.
- ICT investments in the public sector have a positive impact on economic growth – labor productivity growth in the public administration, better tax collection, less fraud and corruption, boosting growth in emerging areas.
- eGovernment models create conditions for changes and reforms in the public sector.
- eGovernance acts as a catalyst for innovation in social and economic environment.
- To increase the efficiency of eGovernment projects should be implemented mechanisms and models for interoperability of systems and data. This will increase the level of integration and maturity of provided services.

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INFORMATION TECHNOLOGY DESIGN TO ENSURE TRANSPARENCY IN THE PROCESS OF ISSUING OF THE FUNCTIONING AUTHORIZATIONS IN TRADE

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In this work was analyzed information environment for developing web-based tools for insurance information transparency in the process of issuing of the functioning authorizations in trade. Based on this analysis were formulated terms of reference to the information system that comes to computerize the process of issuing of the functioning authorizations.

Key words: *web-based tools, information transparency, functioning authorizations.*

Introduction

In conditions of economic and technological changes, the access to information and decisional transparency represents a vital necessity for building a sustainable democratic society, based on operating principles focused on increasing quality of life. One of the primary factors that would help to eliminate the economic barriers and help to increase the credibility of the government sector is to ensure the free access to information and high quality, public services. The number increasing of the high quality public services, provided at a distance, must become the main concern of any state of law, which wants a sustainable and multidimensional development of governance process, and the increasing of this process as well. So, the popularization of public services can be achieved just with mandatory implication of civil society in all steps of development process, and also with implementation of a government interoperability regulation. Based on this strategy, it will be made the different connections between most of the public information tools. This will reduce the complexity of information solutions for public services, and will increase the rate of data and functionality that are reused.

Formulate the problem

Informatics assistance of multidimensional process on providing public services is an essential need in terms of unbalanced and vulnerable economic environment of the Republic of Moldova. Information and communication technologies using at all stages of interaction with the authorities and society, provides a high quality level of achievement of governance and have a good reaction to deviations in the providing public services. Effective implementation of information technologies for quality and in time provision of public services, offers many advantages and benefits for state and society. The transparency of activities in public sector, the promotion of a policy based on public information, the social implication on government process development, and the public services usage, creates an interactive environment of communication between society and authorities.

As a result of identified opportunities and analysis of information space, it has been argued the idea of designing a common platform *E-AUTORIZAȚIE*, intended for carrying out the activity one stop shop, which will release the operational authorization. *E-AUTORIZAȚIE* is an IT solution proposed for automate the receiving and the processing of requests for issuing the operational authorization. Its implementation will bring the immediate benefits for the activity of local and public authorities, involved in functioning authorization and operating license applicants [1].

E-AUTORIZAȚIE is a solution from Government to Government (G2G) ranging, Government to Business (G2B) and Government to Citizen (G2C) and its directed to ensure the transition from traditional ways of manual processing of paper documents to total digitization of officials work, who are involved in the process of providing operational authorization.