THE BENCHMARKING OF THE GOVERNMENT TO EMPLOYEE (G2E) TECHNOLOGY DEVELOPMENT: THEORETICAL ASPECTS OF THE MODEL CONSTRUCTION

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Abstract

Purpose—To fill the gap in the currently very rare discussion on the important topic of e-government research—design, development and usage of information and communication technologies for human resource management in the public sector and to formulate theoretical benchmarks for development of the government to employee (G2E) model.

Design/methodology/approach—Literature analysis of mostly empirical research from the field of government to government (G2G), government to citizen (G2C) and business to employee (B2E) was made. With the help of analogy method possible elements of model were described.

Findings—Analysis of literature gave a clearer understanding of thre G2E model, it's possible stages and elements. Analogy methods helps to recognize which parts of other models can be adopted for the G2E model. The results of the review of literature on this theme and the given conclusions provide a strong background for the G2E research roadmap on the international as well as national level.

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Research limitations/implications—*Article is based on theoretical analysis of theoretical and empirical researches.*

Practical implications, originality/Value—*This article fills the gap in literature and prognoses future research directions.*

Keywords—*government to employee (G2E), government to government (G2G), government to citizen (G2C), business to employee (B2E), human resource management, public sector, e-government, benchmarking.*

Research type—*viewpoint.*

1. Introduction

The past two decade-long implementation of technologies in human resource management (further in the text HRM) is one of the widely analyzed questions in abroad scientific literature. Combination of technologies and human resource functions, its success and failure stories gives a lot of useful information for theoretics as well as practicians. As points out Hawking et al. (2004) these two elements drive the technology that helps organizations lower administration costs, improve employee communication and satisfaction, provide real time access to information while at the same time reducing processing time.

The use of technologies in HRM and mostly of the private sector it is known research field titled electronic human resource management (eHRM). Leading scientists from this field also analyse cases from the public sector. But there is not much literature about the organized research of the technologies adapted to public sector human resource management. The theoretical frameworks to start from are not clear especially in the countries where these processes and their research are only at the beginning stage.

As one of the starting points the Government to Employee framework from E-government theory was chosen. The literature search of Government to Employee articles showed that this topic is not yet widely analyzed. Leading authors (Heeks, Bailur 2007; Yildiz, 2007; Scholl, 2007) also declare e-government research as important, but not yet fully opened. For the expansion of the knowledge on the theoretical level, the method of analogy was chosen. The parallel analysis of literature on other frameworks as government to citizen and government to government gives a clearer understanding of the structure of the phenomenon, research directions and specialties.

All the time the public sector took examples and decisions tried and approved by the private sector, learning mostly from their success stories. Discussions if this is a right strategy are still vivid, but the authors of this article choose the same direction. Business to employee partnership from the theory of e-commerce was chosen as one of the theoretical analysis objects and gave useful insights.

2. Theoretical Background

The first question that arises is how to call these "government to" and B2E phenomena: is it a model, as is usual to call it in scientific literature by Lithuanian authors, or translated to Lithuanian language? Or is it a approach, initiative, effort, partnership, services group or a portal? As may be seen from further sub chapters, this leads to wider and more narrow, managerial and theoretical understandings of phenomenon.

As points out Dawes and Cook (2007), one of the leading researchers in e-government field, most of the digital government initiatives launched in the last decade have therefore taken a citizen-centric focus which encourages alignment of various systems, organizations, and processes toward a single external target—high quality citizen services, better performance when government comes into contact with business and for intergovernmental interactions as well. These efforts have been named "G2C" or government-to-citizen applications, "G2B" or government-to-business approach and the third approach, "G2G" or government-to-government connections. The importance of "government to" programs may be doubtful for daily usage when it applies to internal usage of government such as in financial management, but their importance is growing when it comprises the underlying fabric of most programs that serve citizens and businesses. "While the citizen may not need or want to know how government is organized, the structure of government, including its intergovernmental dimension, remains a fundamental factor in the design of programs, systems, and services," Sharon Dawes says. We can also add that, division to these three types important not only for above mentioned occasions for practicians, but as well for scientists, who may propose suggestions for development, the design of programs, systems, and services based on these theoretical insights.

In an article printed in 2005, a scientist wrote that "Although today's enterprise offers an ever-growing portfolio of applications and rich information sources, it has become increasingly difficult to navigate and ultimately find the right tool for the task at hand. It is common for executives and employees to spend inordinate amounts of time searching through a virtual jungle of data and applications to find the tool they need. That tool could be strategic information about a competitor to help close a multimillion-dollar deal. Or it might simply be the data needed to complete basic tasks and projects on time and within budget." (Sugianto et al , 2005) Also in the 2005 was mentioned that still exists this type researches literature gaps (Tojib et al, 2005). While doing this theoretical research we realized that the newest article from this field was the article on B2E model and it was dated in 2008 (Singh et al, 2008) and new input from technological side where these approaches also mentioned is by Tang et al, 2011. More important than a conception question, is the question whether any model based on these approaches is worth trying to construct? Is this a deserved literature gap or just a misunderstanding? Also what elements should be taken from other models to have as much as possible reality reflecting model showing the relations in the public sector organizations with their employees.

3. Research Methodology

In order to identify empirical studies with "government to" or "B2E" as main focus, was used a scholarly Internet search engine (scholar.google.com) and several online databases that are ordered by University of Twente.[1] They cover some of journals not only in the fields of human resource and general management but also in information systems, e-government, e-business. In total, 8 search terms were used: government to government, government to citizen, government to employee, business to employee, G2G, G2C, G2E and B2E. As access to some of the leading journals was not aloud, instead was used one master thesis, some selection of articles, conference proceedings to cover main theoretical aspects.

To identify an appropriate sample of published research evidence to include in our integrative synthesis, was started by searching for all published articles related to government and business partnership models in the past ten years (2001-2011). Using this procedure, 17 relevant studies were identified.

Due to small number of studies, was decided to analyze articles printed in Encyclopedia of Electronic Government as well. This amendment of the literature to be researched gave important knowledge.

The objectives of this research were:

To select e-government field articles containing information about two of the three main e

1. government field models titled as G2G, G2C and as well as about e-commerce model titled B2E.
2. To distinguish these concepts, perceptions, identify elements, summarize.
3. To give theoretical insights about the G2E model and its further development in the direction of the material on the basis of theoretical and empirical studies analyzed by the analogy method.

4. Results and Findings

4.1. Summarizing the concepts

The purpose of this subchapter is to give basic understandings of what are "government to" concepts given by scientists and how business to employee is defined.

Moon (2007) understands G2G in quite narrow sense and puts equal sign between portal and G2G. He notes that the explosion in the number of different portals was in the late 1990s and since then a number of terms are used to describe different types of portals. According to him a government portals can be categorized broadly into four types depending on the stakeholders and one of the types is G2G (Government to

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1   For more information please check <http://www.utwente.nl/ub/en/services/MAIN/search_sci_info.html>.

Government) that supports work flow between government sectors and assisting and collaborating work, to consumers.

A broader and management connected concept of G2G is given in overview done by Markellou et al. (2007). They say that "application of e-government is not a trivial or straightforward procedure. It demands strategy, management as well as the use of technological tools for planning, design, implementation, and evaluation. So there is given a purely technical understanding of G2G portal. The same position is taken by scientist Loukis (2007). He treats G2G as collaboration and mainly focuses on supporting the G2G collaboration at the operational level. Collaboration is understood as "dealing with the numerous technical and non-technical issues faced for achieving G2G operational interoperability at the IS and at the business process level, elaborating solutions for them and developing interoperability frameworks, and also evaluating their applicability in real-life situations." The next level for development is "providing electronic support of G2G collaboration at the strategic level for the design of public policies" (Loukis, 2007). In further studies and construction of the G2E model it is very important to find interconnections with electronic human resource management theories and their explanation of operational, relational and transformational electronic human resource management (Ruel et al, 2004).

Two explanations of the term G2C are available in scientific literature: it is either the e-government sector of service in which the government communicates with its citizens. Or sometimes the word consumer is used instead of citizen, because the citizen is treated as a consumer where transaction and satisfaction is important (Evans, Yen, 2007).

It is defined that with "G2C government seeks to develop easy to find, easy to use, one-stop points-of-service that make it easy for citizens to access high-quality government services" (Cartier, Belanger, 2004). As well as "with his service sector focuses on the ability of the government and citizen to communicate information to each other in an efficient electronic manner. One of the most popular benefits of G2C is the simple posting of forms and registrations that were previously available only to those who were willing to wait in line or await mail delivery. Another benefit is the ability to monitor performance such as public schools testing results" (Evans, Yen, 2007). Or "G2C is the communication link between a government and private individuals or residents. Such G2C communication most often refers to that which takes place through information communication technologies, but can also include direct mail and media campaigns" (Tang et al, 2011). In this, as well as in the number of other articles, G2C is not called a model, but described as an e-services group or portal type and main ways of communication mentioned.

Rahim (2006) describes business to employee (B2E) as systems that "are e-business applications that use an intra-business network allowing organizations to provide products/services to their employees. These systems have an impact on employee satisfaction and organizational performance." In another of his publications is available a description of B2E portals that approach e-business and it are about adoption of internet technologies for delivering a comprehensive package of electronic services

for employees of the company. According to him these types of portals "provide not only general corporate information for employees but also some applications aimed at assisting employees in performing many of their tasks without the intervention from administrative staff" (Sugianto, Rahim et al, 2005).[2]

Some authors declare, that G2E should be treated as part of G2G (Realini, 2002) or it should be titled as IEE (Internal Efficiency and Effectiveness) (Cartier, Belanger, 2004; Lee et al, 2005). Whereas in other scientific works may be found division of four types, including the main analysis of e-government in Lithuania (Rudzkiene et al, 2009). Concerning the G2E itself, some authors think an electronic government (e-government) can be viewed as a large distributed information system consisting of interconnected heterogeneous subsystems through which government agencies, citizens, and public and private sectors interact to facilitate exchange and sharing of huge volumes of information (Joshi et al, 2007). The purpose of this large scale information sharing and interoperation is an efficient flow of information and execution of the government's transactions to facilitate easy access to improved services. Among other key scenarios of system interactions in an e-government include is government to employee (G2E). G2E activities cover the interactions and information exchange between government institutions and its employees.

Tang et al (2011) describe G2E as the online interactions through instantaneous communication tools between government units and their employees with the purpose to offer employees the possibility of accessing information in regard to compensation and benefit policies, training and learning opportunities and civil rights. It also gives an effective way to provide e-learning to the employees, bring them together and to promote knowledge sharing among them.

In the literature also available is the definition of G2E as types of e-government **partnership** where G2E can be divided into three levels for each meaning (Fang, 2002):
- Information level dedicated to exchange information regarding performance, tasks, personnel data, and policy, ensure carrier management.
- Communication (online) level dedicated for exchange of information among different departments or persons, to facilitate decision making, negotiations, interactions regarding performance and works.
- Transaction level which purpose is to ensure interpersonal flow, exchange of personnel data, information, policy and solutions, facilitate participation online.

Golubeva and Merkuryeva (2006) define G2E as electronic services that represent some of the forms of **electronic administration**. They mark that the purpose of their development is to increase the efficiency of public agency internal performance. Automation of the government business processes is an essential part of contemporary e-government programs. Creation of integrated information systems in order to gather, transfer, process and store internal data provides foundations for further elaboration of government electronic services offered to external users—citizens and organizations.

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2   Ly Fie Sugianto, Mahbubur Rahim, Damminda Alahakoon. B2E Portal Adoption: A Conceptual Model. // Proceedings of the International Conference on Information and Automation, December 15-18, 2005, Colombo, Sri Lanka

According to them, the G2E services should attract attention of the reformers at the earliest stages of e-government development.

As G2E is not investigated wider, still lack of information and deeper understanding, there is demand of comparative theoretical analysis of other "government to" types and with the help of analogy some suggestions for G2E can be made (Markellou et al, 2007).

4.2. Elements of models and development stages

As mentioned in the subchapter above, there are several understandings of "government to" a phenomenons. As an example of IT and managerial combination Markellou et al. (2007) wrote about the transfer from traditional government to electronic and defined gradual levels of portal evolution. They identify two main paths titled the *obligatory upgrade* ("that indicates that when the starting level of an arrow is implemented, then the ending level of the arrow must be implemented as well") and the *optional upgrade (*That indicates that when the starting level of an arrow is implemented, then the ending level of the arrow may be implemented as well"). Further they group levels into three sets: "(a) the *obligatory levels* are the levels met during the obligatory upgrade path; (b) the *optional levels* are the end levels of an optional upgrade path; and (c) the *obligatory levels if certain path followed"* are the levels that must be implemented when certain optional upgrade paths are followed." According to them certain levels (1, 3, 4, 5) are proposed for G2G as purposes. The first level or electronic protocol "refers to the computerization of authority's documents with the passage from the conventional protocol (manuscript) to the electronic one (file)". Third level or intranet is described as a possibility for employees to use work related applications without additional installation on their workplace which they reach via single log in. The forth level is described as an application that "constitutes the input and output gate of documents and files that the organization manages in total. Its layout will provide the system ability of recording, monitoring, checking and informing the total of internal and external activities that are realized by the persons in charge of receipt and service of citizens, consequently the improvement of working conditions and the upgrade of provided services" and is called automated protocol. And the fifth—Unified Identification of Internal Users—level "deals with the study, design and implementation of single sign-on (a common login/password for all applications that require one), which will correspond to one single internal user" (Markellou, 2007). These levels can be used for the IT part of the G2E model as set of criteria to evaluate level of development of the portal and future improvement directions.

Managerial side of the process also requires stages and levels. They can be three as mentioned in work by Fang (2002) and was described in a previous subchapter. Or can be more. Another author (Georgescu, 2008) agrees that the implementation of IT solutions between and inside institution can be considered as G2G, but it is not only technical cooperation. "Intra and intergovernmental E-Government is and has to be much more than simply wires and computers. G2G Electronic Government has to be viewed as a coalition of many different aspects: from strategy to organization, from security to change

in culture. G2G has the difficult task of completely redesigning the way government works and the way employees cooperate" (Realini, 2004). In the article by Fan and Zhang (2007) the main inter, intra and environmental factors are mentioned and their influence described. As main intra organizational factors mentioned top management support, IT capabilities, process security, process traceability, operation cost. Most influencing the inter-organizational level are trust across institutions, social networks, inter-organizational capabilities. Legal/Policy framework refers to a regulatory framework which defines the scale, content, technology standards, performance evaluation of G2G information sharing and project-wide championship refers to the existence of a single person or organization that is committed to implementing and overseeing the G2G information sharing initiative at the higher level both they are described as environmental factors (Fan, Zhang, 2007). The terms "intergovernmental" and "G2G" are used in several ways. They can denote horizontal arrangements of inter-agency or inter-jurisdictional relations at the same level of government. Vertical G2G systems link multiple *levels* of government in a coherent service delivery or administrative environment. In practice, large intergovernmental systems may have both vertical and horizontal elements (Dawes, Cook, 2007).

Dawes and Cook (2007) wrote that many models have been developed to conceptualize intergovernmental relations. Model by Wright (1988) sets contrasts of different forms of authority relationships among levels of government. In the overlapping-authority model by Agranoff and McGuire (2004), the three levels of government are seen as interdependent, each having substantial areas of overlapping authority, some areas of autonomous authority, and limited power and influence that necessitate many forms of negotiation and bargaining. This model with its many mechanisms for negotiating and managing the interconnections is most widely accepted as a conceptual representation of modern intergovernmental relations. It conveys the idea that intergovernmental structures are managed networks of interdependent organizations and the example from practice shows that G2G can be organized in the same way (Dawes, Cook, 2007). Via these models should be discussed and evaluated importance of inter- and intra-relations in the terms of relations of employees at public sector: do they have relations only on one organization level or it is wider, intra-organization relations.

There were some studies done on e-public services in the field of G2C, based on which several stages for analysis of them were settled down and back office/front office definitions appear in the theory. Based on information given by Pappa and Stergioula (2006) and Huang with Bwoma (2003), development of G2C model is evaluated by stages titled as information provision, contracting, transaction and aftercare. Information level is the essential information about what the service is what-is-required, where-to-go or who to contact in order to receive additional information about the service. Contracting is possibility to download and submit application form to have a public service. Transaction is a possibility to handle a complete service via online. Aftercare describes the situation when is organized even citizens relationship management or complaints management (Pappa, Stergioula, 2006; Huang, Bwoma 2003). Lithuania's scientist in monograph E-Government guidelines of the Republic of Lithuania gives

five levels of e-public services defined due to the maturity level of the service itself (Rudzkiene et al, 2009). They divide information (information about the e-service is available online), one way interaction (only one of communicating sides goes online), two way interaction (both sides can communicate online, but the service itself cannot be accomplished online), transaction (all essential operations can be accomplished online) and personalization (institution reminds the user about the service etc.) levels. To the opinion of the authors, all these levels are very important for evaluation of G2E services and should be involved in the model.

As mentioned in the 4.1 sub-chapter, Lithuanian scientists divide four main e. government interaction models (Rudzkiene et al, 2009). According to them, G2C and G2B (government to business) are implemented via front office interactions with citizens and business while G2G and G2E models are implemented via internal interaction or back office. In practice, the front-end of joined-up service delivery can assume different forms that range from one-stop service desks and/or shops to online one-stop e-Government portals and specialized governmental sites. Two main levels of abstraction can be distinguished in a one-stop government environment: the front office and the back-office; traversing three main functionalities: communication, integration and storage/execution. The front office represents the point of one-stop access to public offerings (communication layer), while the back-office is where the actual information and services reside and are executed (Pappa, Stergioulas, 2006). According to Pappa and Stergioulas (2006), to realize the full potential of e-Government is not only to bring existing services online but it is also about interrelations with customers, employees and technical processes. For measurement of this, they divide three major aspects to back-office interoperability that they call "technical interoperability (referring to the technical issues of linking up computer systems, the definition of open interfaces and telecommunications), semantic interoperability (which is concerned with ensuring that the precise meaning of exchanged information is understandable by any other application not initially developed for this purpose) and organizational interoperability (which is concerned with modeling business processes, aligning information architectures with organizational goals and helping business processes to co-operate)" (Pappa, Stergioulas, 2006). To clarify the types and effects back office gives, it is important to analyze concrete cases of services in concrete organizations.

During the analysis of B2E literature was realized that main question there to answer is whether B2E is e-business a service to the employees, or organizational management. Most of the authors support organizational management that in most of the cases is an aspiration than reality. The same tendency may be seen in the literature of e-human resource management, where electronic human resource management systems (HRIS) tends to be reorganized to electronic human resource management (eHRM). The analysis of further B2E field literature may give useful insights to modeling of G2E.

First of all, scientists divide two broad categories of B2E systems that may be found in organizations "core HR systems supporting payroll, employee benefits, health information, notification of training and education opportunities, corporate announcement dissemination, among others" and "extended B2E systems which support

such activities as employee travel reservations, expenses reimbursement, credit union services, and online insurance policy management" (Rahim, 2006). The other authors concretize, that B2E portal integrates even four types of employee interactions. They title them zones and the first one is the employee-to-enterprise zone "which mostly covers traditional HR functions such as updating personal files and scheduling leaves", the second one is "employee-to-employee zone which facilitates collaboration among employees", the third is employee-to-task "where the portal offers tools and applications specific to each employee's job function" and final is employee-to-life where "portal links employees to a range of internal and external information, such as staff travel information, employee financial planning, or weather news." From these descriptions it is clear, that access of this portal gives possibilities for the employees not only perform their daily responsibilities but to do their administrative and other personal tasks as well (Tojib et al, 2006). Due to this can be mentioned that "the benefits of B2E e-business systems can be grouped into two broad categories: employee benefits (efficiency, productivity, collaboration, satisfaction, loyalty) and organizational benefits (cost reduction, improved organizational decisions, improved business processes)" (Rahim, 2006). The mentioned above categories and benefits are clearly management type. But adoption of them to public sector research should be done first by evaluating the specialness of this sector and the specifications of public servants functions.

Insight to the technological part of the process is given by Singh et al (2008), where certain IT aspects are mentioned. First of all it is stressed that communication among employees is organized electronically. Moreover, there is possibility to attend trainings or any education programs via intranet. Finally information dissemination is organized online regime. So the essential components are internet and intranet

4.3. Benchmarks for G2E

Concluding the information from previous chapters, there are two equally important parts of the process: technical and managerial. Elements of both parts depend on the purpose and repeats from model to model. To organize public sector research in the framework of G2E based on this approach necessary first is a thorough research of thr mission, purpose and objectives of concrete institution and services. These managerial part elements can be divided in three levels: micro (organizational level), meso (interaction between micro and macro levels) and macro (country or sector politics level).would give the possibility to do a deeper and more comprehensive analysis. Further analysis can be based via analogy with G2G researches, dividing intra and inter organizational levels, vertical and horizontal systems.

Golubeva and Merkuryeva (2006) mark the main actions and results to be received that would help to start the process:

1. Survey of civil servants with the purpose to estimate degree and directions of use for different services, and also to analyze the benefits and problems of ICT implementation.

2. Analysis of internal sources of information documenting the spread of ICT usage in the institutions activities, descriptions of organizational routines that require electronic operations.

3. Analysis of statistical data on IT penetration. The starting point should be general statement of ICT policy or strategy, supplemented with statistical indicators.

4. Interviewing the experts on more detailed information on ICT strategy can be obtained.

For the further development of intra and inter organizational levels, vertical and horizontal systems may be used not only for G2G, but very useful B2E model. Of course the purely business like processes should be identified and excluded. The starting point may be conceptual model by Singh, Rahim (et. al 2008), where for main contexts are divided: technology innovation, organizational, employees and environmental. This conceptual model is based on Technology-Organization-Environment (TEO) and Diffusion of Innovations (DOI) models. For the adoptions to needs of public sector, the strengths and weaknesses of these models should be revised additionally (Sugianto et al, 2005). Another weakness of this B2E portal adoption conceptual model is relatively little impact of managerial questions. To make the research based on G2E model more managerial and related to human resource management problems than to business administration model, should be revised possible influence of electronic human resource management theories and key elements adopted to G2E model.

Moreover, the proposed steps and models are about adoption of the portal, but further steps are excluded. The idea of further researches would be holistic and more further steps involving (questions of readiness, monitoring etc.) to expand G2E model.

5. Conclusions

1. Concerning the definition and concept of G2E we can conclude, that exists two views to "government to" or "B2E" phenomena that can be described as technical (authors subsume phenomena as IT sphere and mostly equate to portal) and more managerial than IT (authors that equate to group of services). Some of the authors combine both views and call these phenomena as initiative or partnership. Organizing public sector research in the framework of G2E based on this approach would give the possibility to do a deeper and more comprehensive analysis. It is also important to stress the oneness of the G2E model, as it defines the relations of employees of public sector, that is different from intergovernmental relations that are analyzed in G2G framework, or relations with customers or citizens analyzed in G2C framework.

2. In constructing the model of G2E there should be divided parts of IT and management. The managerial part can be divided into three levels: micro (organizational level), meso (level of interaction between micro and macro that should be concretized with future research) and macro (country or sector politics level). This two part division and three levels comes from many scientists opinion, that adoption, implementation

and monitoring of this type portals and services are influenced by technical, employee, environmental and organizational factors and efficiency of the system should be measured based on employee and organizational benefits. Further analysis can be based via analogy with G2G researches, dividing intra and inter organizational levels, vertical and horizontal systems.

3. The analysis of thr micro level can be based on G2C researches to clarify the possibilities of adoption of multi-criteria measure of "e-government readiness" for G2E services (criteria of information publishing, two-way communication, transaction and integration to be successful), back office/front office concepts, make criteria for classification of services and portals.

4. To make research based on G2E model more managerial and related to human resource management problems than to public administration model, should be revised possible influence of electronic human resource management theories and key elements adopted to G2E model. As for now, G2G and G2C models do not give this impact. The same way analyses of B2E models are more technically oriented and miss important HRM aspects.

Literature

Monographs and compendiums of articles

Dawes S. S., Cook M. E. 2007. Intergovernmental Digital Government through G2G Relationship and Applications// Encyclopedia of Digital Government. Vol. 5. Ed. Ari-Veikko Anttiroiko and Matti Mälkiä. P. 1114-1119.

Evans D., Yen D.C. 2007. American e-government service sectors and applications // Encyclopedia of Digital Government. Vol. 1. Ed. Ari-Veikko Anttiroiko and Matti Mälkiä. P. 49-55.

Georgescu, M. 2008. *The government in the digital age*: *myths, realities and promises*. Social Science Research Network - SSRN. <http://ssrn.com/abstract=906587>. [accessed 201-08-31]

Hamilton B.A. 2002. E-Government und der moderne Staat. Einstieg, Strategie und Umsetzung. F.A.Z Institut f˙ur Management-, Markt-, und Medieninformationen, Frankfurt am Main.

Joshi B. D.J., Joshi R.S., Chandran S.M. 2007. Information Security Issues and Challenges. // Encyclopedia of Digital Government. Vol. 7. Ed. Ari-Veikko Anttiroiko and Matti Mälkiä.

Loukis E. 2007. Electronic Government-to-Government Collaboration. // Encyclopedia of Digital Government. Vol. 3. Ed. Ari-Veikko Anttiroiko and Matti Mälkiä.

Markellou P., Panayiotaki A., Tsakalidis A. 2007. *Level-Based Development of E-Government Servines //* Encyclopedia of Digital Government. Vol..1. Ed. Ari-Veikko Anttiroiko and Matti Mälkiä.

Moon J. 2007. Assisting Users Seeking Medical Information through Government Portals. // Encyclopedia of Digital Government. Vol. 1. Ed. Ari-Veikko Anttiroiko and Matti Mälkia. P. 102-110.

Realini A.F. 2004. G2G E-Government: The Big Challenge for Europe. Master's Thesis. University of Zurich.

Rudzkienė V. et al. 2009. Lietuvos e.valdžios gairės:ateities įžvalgų tyrimas. Vilnius.

Ruel H. Bondarouk. T. Looise J. K. 2004. E-HRM: Innovation or Irritation? Utrecht. P. 27-29.

Wright D. 1988. Understanding intergovernmental relations. New York.

Conference proceedings

Cartier L., Belanger F. 2004. Citizen Adoption of Electronic Government Initiatives.// Proceedings of the 37th Hawaii International Conference on System Sciences.

Fan J., Zhang P. 2007. A Conceptual Model for G2G Information Sharing in E-Government Environment.// The Sixth Wuhan International Conference on E-Business.

Hawking P., Stein A., Foster S. 2004. e-HR and Employee Self Service: A Case Study of a Victorian Public Sector Organisation. Issues in Informing Science and Information Technology, proceedings. P.1017-1026

Huang Z., Bwoma P.O. 2003. An overview of critical issues of e-government. International Association for Computer Information Systems (*IACIS*).

Pappa D., Stergioulas L.K. 2006. G2C and G2G: Emerging Principles and Architectures in E-Government and E-Participation. *e*Government Workshop '06 (*e*GOV06) September 11, Brunel University, West London, UB8 3PH.

Rahim M.M. 2006. Understanding Adoption and Impact of B2E E-Business Systems: Lessons Learned from the Experience of an Australian University. CollECTeR LatAm Conference (Collaborative Electronic Commerce Technology and Research), Australia.

Singh M., Waddell D., Rahim M.M. 2008. Business to Employee (B2E) E-Business Model: a Service to Employees or Organisational Management? // 10th WSEAS Int. Conf. on Mathematical Methods and Computational Techniques in Electrical Engineering (MMACTEE'08), Sofia, Bulgaria, May 2-4.

Sugianto L.F., Rahim M.M., Alahakoon D. 2005. B2E Portal Adoption: A Conceptual Model. // Proceedings of the International Conference on Information and Automation, December 15-18, Colombo, Sri Lanka.

Tang H. et all. 2011. Using Association Rules Mining to Provide Personalized Information in E-government. International Conference E -Business and E -Government (ICEE) in China.

Tojib D.R., et all. 2005. A New Framework for B2E Portal Development // IEEE '05. Proceedings. The IEEE - International Conference on e-Technology, e-Commerce and e-Service. P.711–714.

Tojib, et all. 2006. A Conceptual Model For B2e Portal User Satisfaction // Proceedings of the Business And Information conference. Volume 3, Issue 1.

Articles from scientific journals

Agranoff R., McGuire M. 2004. Another look at bargaining and negotiating in intergovernmental management // Journal of Public Administration Research and Theory, 14 (4). P. 495-512.

Golubeva A., Merkuryeva I. 2006. Demand for online government services: Case studies from St. Petersburg. Information Polity 11. P. 241–254

Heeks R., Bailur S. 2007. Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice. Government Information Quarterly 24. P. 243-265.

Fang Z. 2002. E-Government in Digital Era: Concept, Practice, and Development. International Journal of The Computer, The Internet and Management, Vol. 10, No. 2. P. 1-22

Lee M.S., Tan X., Trimi S. 2005. Current practices of leading e-government countries. Communications of the ACM, October. Vol. 48, No. 10. P. 99-104.

Scholl J.H. 2007. Central research questions in e-government, or which trajectory should the study domain? Transforming Government: People, Process and Policy. Vol. 1. 67-88.

Yildiz M. 2007. E-government research: Reviewing the literature, limitations, and ways forward. Government Information Quarterly 24. P. 646-665.

GAIRĖS VALDŽIOS PILIEČIUI (G2E) TECHNOLOGIJŲ VYSTYMUI: TEORINIAI MODELIO KONSTRAVIMO ASPEKTAI

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Santrauka*. Pastaruosius du dešimtmečius technologijų taikymas žmogiškųjų išteklių valdymo (toliau ŽIV) procesams ir jų tyrimai yra vienas iš plačiai analizuojamų klausimų užsienio mokslinėje literatūroje. Technologijų taikymas ŽIV funkcijoms efektyviau įgyvendinti, sėkmės ir nesėkmės atvejų analizė suteikia daug naudingos informacijos tiek akademikams, tiek ir praktikams. Mokslinėje literatūroje teigiama, kad IT įdiegimas šiuose procesuose padeda organizacijai sumažinti administracines išlaidas, pagerinti darbuotojų bendravimą, suteikia nuolatinę prieigą prie informacijos. Tačiau daugiausia analizuojama privataus sektoriaus atvejai. Kaip turėtų būti organizuotas viešojo sektoriaus žmogiškųjų išteklių valdymo technologijų diegimas, monitoringas ir kuriami modeliai, atliktų tyrimų nėra daug.*

Kaip pradinis išeities taškas šiai analizei buvo pasirinktas vienas iš elektroninės valdžios disciplinos modelių – valdžia darbuotojui. Straipsnių šia tema paieška parodė, kad ši tema dar nėra plačiai analizuojama. Plėsti žinias teoriniu lygmeniu buvo panaudotas analogijos metodas. Žinios apie koncepcijas, sampratas, stadijas, galimus elementus buvo perimtos iš valdžios piliečiui (G2C) bei valdžios valdžiai (G2G) modelių ir elektroninės komercijos elemento – verslo darbuotojui (B2E) modelio.

Baigtas teorinis tyrimas parodė, kad apibrėžiant valdžią darbuotojui (G2E) galima daryti išvadą, kad egzistuoja techninis (kaip portalas) ir vadybinis (kaip paslaugų grupė) požiūriai. Kai kurie autoriai linkę derinti abu požiūrius ir vadina tai ne modeliu, o apibūdina kaip partnerystę ar iniciatyvą. Vadovaujantis šiuo požiūriu viešojo sektoriaus mokslinio tyrimo organizavimas valdžios darbuotojui sistemoje suteiktų galimybę daryti išsamesnę analizę. Vadybinis elementas galėtų būti skirstomas į tris lygius: mikrolygis (organizacijos), mezolygis (sąveikos tarp mikro- ir makrolygio, kuris turi būti sukonkretintas) ir makrolygis (šalies ar sektorių politikos). Šis dviejų dalių pasidalijimas ir trijų lygių skaidymas kyla iš daugelio mokslininkų nuomonės, kad šio tipo portalų ir paslaugų grupių tyrimai turi remtis techninių, darbuotojų, aplinkos ir organizacinių veiksnių analize, o sistemos veiksmingumas turėtų būti įvertinamas atsižvelgiant į darbuotojo ir organizacinę naudą. Tolesnė analizė gali būti grindžiama per analogiją su G2G tyrimu, dalijant vidinius ir tarporganizacinius lygius, vertikalias ir horizontalias sistemas. Mikrolygiu analizė gali būti grindžiama G2C tyrimuose naudojamais daugiakriteriniais vertinimais, paslaugų lygio brandos matavimais. Norint atlikti tyrimus, paremtus G2E modeliu, jis turėtų būti papildomas žmogiškųjų išteklių valdymo bei viešojo administravimo problemų sprendimui skirtais modeliais ar bent jau patikslintas šių modelių kontekste.

Raktažodžiai*: valdžia darbuotojui (G2E), valdžia valdžiai (G2G), valdžia piliečiui (G2C), verslas darbuotojui (B2E), žmogiškųjų išteklių valdymas, viešasis sektorius, gairės, e. valdžia.*