

7. E-Government Development Strategies in the Eastern Partnership Countries

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Abstract:

The article aims to outline the role of e-democracy within the setting of the Eastern Partnership program. The article provides the comparative review of E-Government progress in six EaP countries in 2009 – 2016. The E-Government sensitive data of international ratings is analyzed with the special focus on participative aspects. The existing differences of E-Government strategies between the Eastern Partnerships countries are analyzed with the special focus on e-participate. The e-participate differences in the development of the countries are pointed out in terms of e-democracy development. The cognitive model of integrating e-democracy components into the socio-technical system of e-government is proposed.

Keywords:

e-government; e-participate; human capital; online service; digital democracy

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E-Government Development Strategies in the Eastern Partnership Countries

Introduction:

The E-Government program of the Eastern Partnership is considered as a peculiar catalyst for the integration of the European values in six countries (Azerbaijan, Armenia, Belarus, Georgia, Moldova and Ukraine). Today, the E-Government segment becomes significant under the conditions on sharing democracy values through creating synergies between public, private and civil society actors, and implementing the sustainable development principles. That is why it is important to identify the e-democracy potential of countries-partners for the promotion of E-Government processes.

At the same time, today the analysis of the e-government components of the EaP that allows outlining the initiatives of countries-partners in terms of approximation of them to European norms and standards is not yet presented. Such an analysis will deepen understanding the e-government content Eastern Partnership, and make the discussion about the e-democracy transformations in the EU neighboring countries more visible. Moreover, it is necessary to ensure the e-democracy integration not only at the conceptual level of the program but also at the practical level of EaP projects.

This article aims at identifying the e-democracy content through the analyze of e-government development of EaP countries. To attain such objective, the comparative review of the e-government progress in six countries of the Eastern Partnership in 2009 – 2016 is provided. Then the cognitive model of integrating e-democracy components into the socio-technical system of e-government is developed.

The researchers have noticed that the EaP has brought a renewed political attention to the questions of transparency and good governance (Tallo *et al.*, 2013). Although, the idea of the democracy as the determinate factor in a country progress is not a recent one. In particular, the “Socrates discourse in a local e-government setting” is actualized. It is also noted that the e-revolution transforms society (Maarten, 2016 : 2). The interest to some e-governmental factors belonging to the national-building system has been present in the works of many researchers (Hawkes, 2001). At the same time, the analysis of recent researches and publications has shown that the applied comparative focus of the EaP is not sufficiently outlined (Fesenko, 2012; Łapczyński, 2009). In such methodological perspective, Talmachiu (2015) notices significant differences between prevailing cultural values in the two categories of European states: more advanced Western European countries and Eastern European countries lagging behind. The author included in the study the development indices for the 21 European

countries and those of some cultural variables: trust, social capital, materialist/post-materialist index and some values (Talmachiu, 2015 : 339).

The guide the methodology of project and program management, P2M (Ohara, 2005) is used to understand the progress of each EaP country. P2M recognizes the importance of integration and the complex relationships between projects and their environment; and allows assessing the level of the program mission and values achievement (Sian and Yih, 2012 : 28).

For today, the theoretical question about the specifics of the development of e-democracy in the countries of the Eastern European partnership remains unresolved.

E-Government as an indicator of the EU-Eastern Partnership Programme

The partner countries have important tasks: to improve the level of public services, government transparency, trust of citizens, to make more effective a top-level governance. Nowadays growing difference in government achievements among the countries EaP, despite similar post-Soviet socio-economic and political conditions of state building in 1991, is noted. According to the United Nations E-Government Development Index (EGDI), the countries' dynamics looks like the following (Figure 1).

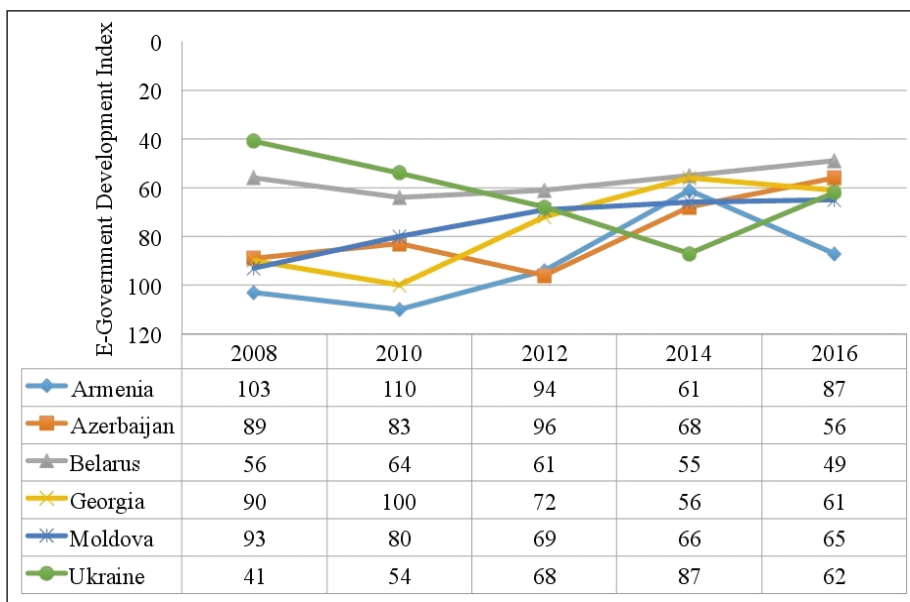


Figure 1: Ranks infographics of E-Government Development Index for countries of EaP, 2008-2016

It is also important that the countries of Eastern European partnership have a gap with the level of E-Government development in the European region. Regional E-GDI for Europe is 0.721, while in Armenia – 0.5179, Azerbaijan – 0.6274, Belarus – 0.6625, Georgia – 0.6108, Republic of Moldova – 0.5995, Ukraine – 0.6076 (UN, 154-159). To further the progress of the partner countries in the way of electronic governance, it is required to examine in detail their E-GDI components: scope and quality of online services (Online Service Index, OSI), status of the development of telecommunication infrastructure (Telecommunication Infrastructure Index, TII) and inherent human capital (Human Capital Index, HCI) (Table 1).

Table 1: E-Government Development sub-indexes for countries of EaP and Europe region, 2016

The countries of EaP	Online Service Index	Telecommunication Infrastructure Index	Human Capital Index
Armenia	0.4275	0.3922	0.7338
Azerbaijan	0.6812	0.4852	0.7158
Belarus	0.4855	0.6304	0.8716
Georgia	0.6377	0.4184	0.7763
Moldova	0.5942	0.4850	0.7191
Ukraine	0.5870	0.3968	0.8390
Europe	0.6926	0.6438	0.8360

The fundamental pillar in supporting human capital has recognized the education. The Human Capital Index (HCI) consists of four components, namely: adult literacy rate; the combined primary, secondary and tertiary gross enrolment ratio; expected years of schooling; and average years of schooling. As of 2016, countries of the EeP demonstrated the high level of human capital: indices of Belarus and Ukraine correspond to the indicator of the European region; others have a slight gap of about 10-15%. However, there are significantly larger gaps in TIIs (about 15-25%), except for Belarus. As for OSI, Azerbaijan has only a high level, correlating to the Europe rank. At the same time, Republic of Moldova develops online service at the worst rates and has a level “Lower Middle Income”.

It should also be noted, with the considerable increases in connectivity, use, the creation of online and mobile services, new tools have emerged to improve democracy. Governments are increasingly utilizing digital technologies to deliver advanced electronic and mobile services aimed at bringing benefits to all people. A major trend is an increase in mobile technologies and applications for the most vulnerable (youth, women, immigrants, older persons and persons with disabilities), and to bridge the digital divides between people (UN, 2016: 97-98). As an example of the analysis of online services for women, the author’s case for the countries of the New Silk Road (Azerbaijan, Georgia,

China, Kazakhstan and Ukraine) is offered (Fesenko *et al.*, 2017). It presents a gender-sensitive analysis of the services of the national railway companies through an express review of their official sites.

In general, most EaP countries are characterized mainly by online efforts that have not yet led to qualitative social change. It is still dominated by narrow orientation on online services, but not horizontal communications «state-citizens» development. Further progress in promoting democracy in the partner countries will become possible primarily by forming their corresponding content “e-democracy maturity of governance system”. Governments are advised to move from a government-centered approach to a citizen-centered approach and support independent civil society platforms and a network of civil society organizations (Hawkes, 2001: 7-8). In addition, it is necessary to emphasize the importance of reconsidering the role of public administration, when the term “government” is used along with the term “governance”.

As interdependence between online service and democracy culture can be traced, this should be considered in conducting monitoring EaP program. It is proposed to evaluate the level of e-government development such as:

- unilateral communication between the government and citizens or ordinary bilateral;
- transactional communication;
- interactivity, when the government creates the environment for the active participation of citizens in decision-making.

E- Participative as a component democracy culture of the EaP countries

Ensuring the right to participate in political, economic, cultural life requires that the cultural dimensions of all policies were taken into account. The e-governance must include opportunities for citizens to participate in strategic planning of priorities and key actions, as well as their evaluation. E-Governance should also be supported by coordination mechanisms across different departments with responsibilities in cultural areas, as well as multi-level governance frameworks that help facilitate coordination among local, regional (where applicable), and national governments. Nowadays citizens expect to be directly involved in designing government programs and services through various participatory tools, including e-participation.

The e-participation index (EPI) is derived as a supplementary index to the UN e-Government Survey. It extends the dimension of the Survey by focusing on the use of online services to facilitate the provision of information by governments to citizens (“e-information sharing”), interaction with stakeholders (“e-consultation”) and engagement in decision-making processes (“e-decision making”).

A country's EPI included the availability of information on the citizens' rights to access government information, providing outcome on feedback received from citizens concerning the improvement of its online services, providing the tools in order to obtain public opinion for public policy deliberation through social media, online polls, petition tools, voting tools, online-bulletin boards and online discussion forums. It is remarkable that all countries of EaP have "upper middle income", except for Ukraine, which has advanced a level above the average European region (Figure 2).

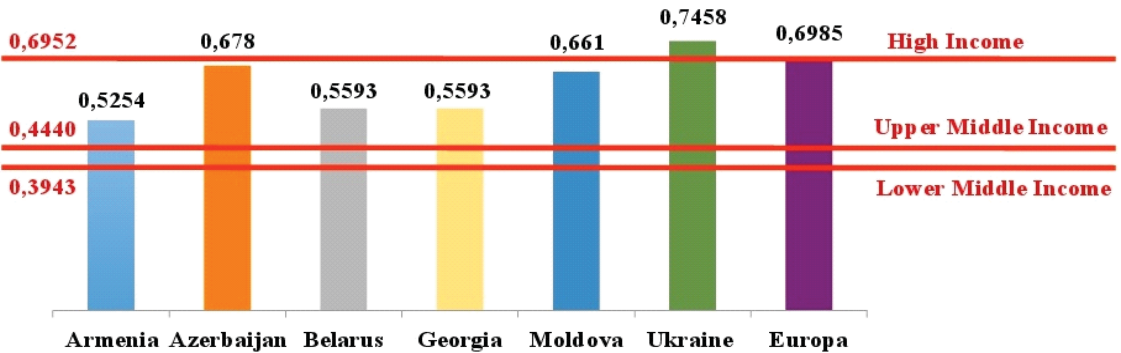


Figure 2: E-Participation Index for countries of EaP, 2016

In general, to start advancing in e-participation requires progress in e-information at stage 1 – e-information (enabling participation by providing citizens with public information and access to information without or upon demand). Therefore, the insufficient development of this stage (“upper middle income”) is a serious problem for all EaP countries, except for Azerbaijan, which has almost advanced the high level (Figure 3).

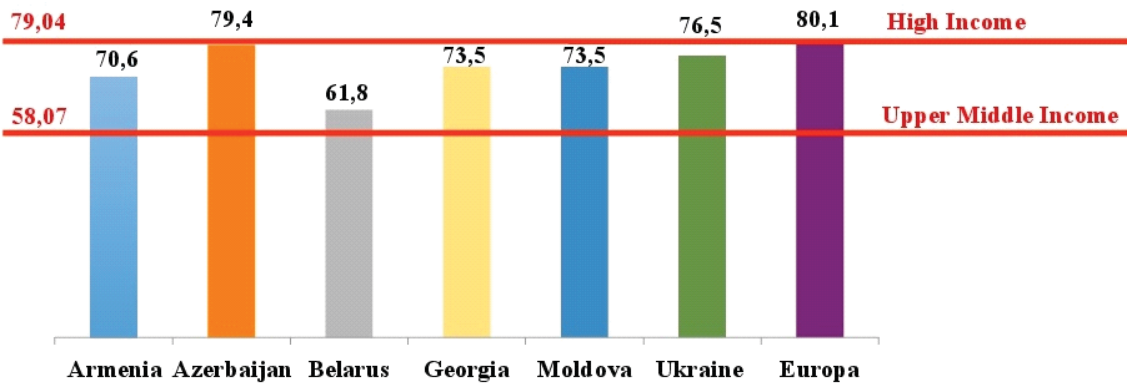


Figure 3: E-Participation Index: Stage 1(%), 2016

Stage 2 characterizes e-participation in terms of “e-engaging via consulting” with citizens to enable deeper contributions and to support deliberative debate on policy issues. Public consultations, in the form of online deliberations, are a popular way of coordinating the formation of opinion among citizens for further decision-making processes by the government. It is noteworthy that all EaP countries (except Armenia and Georgia) have a higher level of development stage 2 than the average European rank (Figure 4).

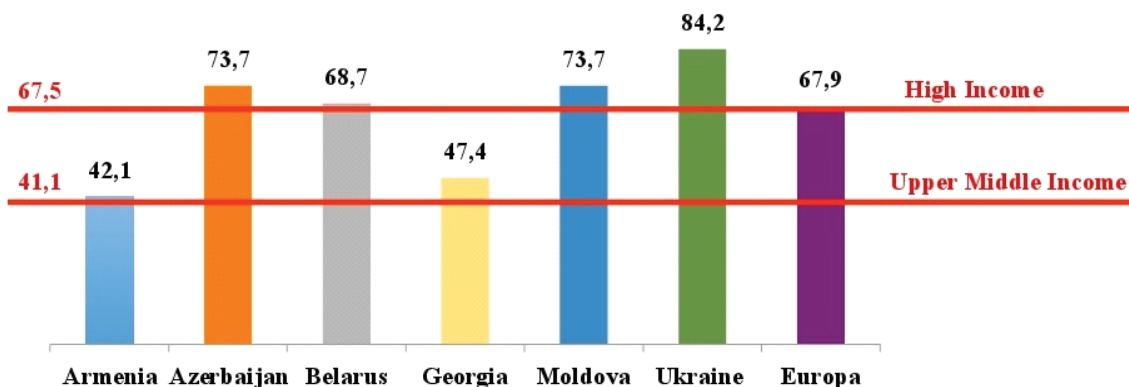


Figure 4: E-Participation Index: Stage 2(%), 2016

Figure 5 reflects country efforts to advance the stage 3 “e-decision-making”. It is developing only in Ukraine and Moldova. But other four countries have a zero indicator of the empowerment of citizens through the joint design of policy options. It should be noted that one of the difficulties in launching open government data initiatives may lie in low public interest. In particular, Moldova is facing with such a problem. Its citizens are not demanding disclosure of government data, in contrast with most other countries where government data was released under strong public pressure. Officials in Moldova

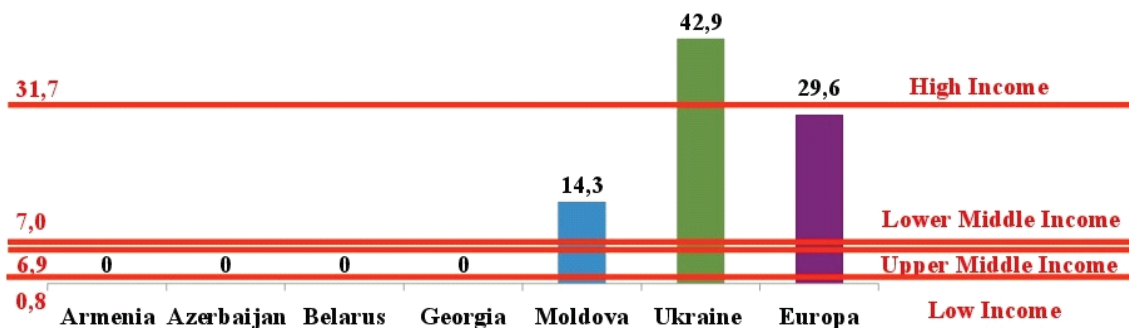


Figure 5: E-Participation Index: Stage 3(%), 2016

supporting an open data initiative have held events to generate interest and awareness around the issue, in addition to training sessions on data journalism and app development using open data (UN, 2014: 327 - 241). In this contest, the result of Ukraine is much more remarkable, considerably exceeding the European level.

This data provides important insights into possible forward-looking strategies that could help close the existing gaps. The presenting data show that the widest gaps are between e-consultation and e-decision-making. Advancing e-participation, in general, will increasingly depend on progress made in devising participatory and democratic decision-making institutional frameworks and processes (UN, 2014: 76).

Taking into account the importance civil society development, should not be limited traditional forms of public participation (whether through face-to-face meetings, paper-based communications, telephone calls, and physical bulletin boards, among other offline modalities). Indeed e-participation expands a government’s toolbox for reaching out to and engaging with its people, but it does not replace (Maarten, 2016). Rather governments should deploy the optimal mix of online and offline modalities within their jurisdictions to reach the various social groups among its population. As a result, e-democracy could be a tool for measuring the level of existing synergies between public, private and civil society actors for the EaP projects.

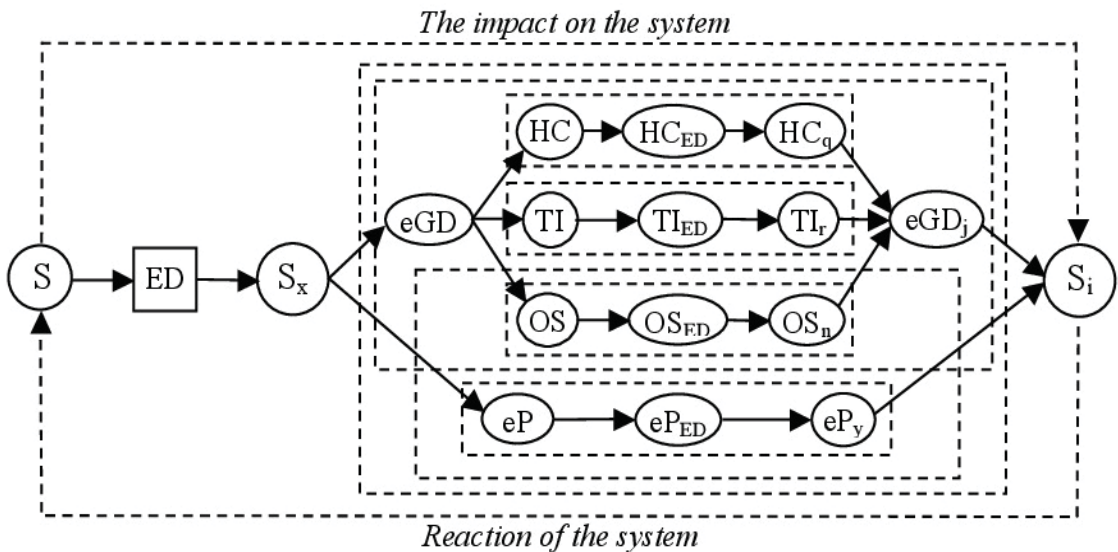


Figure 6: The cognitive cause-effect model of integrating e-democracy components into the socio-technical system of e-government

Cognitive model for integrating e-democracy content into the management system of the EAP program

The cognitive model of integration of the e-democratic components in the (socio-technical) e-governance system allows establishing the “state as is” and to select/plan the actions necessary for the transition of the system to a higher level (Figure 6).

In figure 6 S – the complex socio-technical system of the EaP program management;

S_x – the complex socio-technical system of the EaP program management that is in x state of the e-democracy;

S_i – the complex socio-technical system of the EaP program management, in which the transformations of the e-democratic context occurred during i period;

ED – the E-democracy as the content of the EaP program management system;

eGD – the state/level of the e-government development;

eGD_j – the assessment of the state/level of the e-government development, $eGD_j = (HC_q + TI_r + OS_n) \rightarrow 1$;

HC – the state/level of the Human Capital development;

HC_{ED} – the Human Capital ability to the e-democracy;

HC_q – the assessment of the Human Capital ability to the e-democracy;

TI – the state/level of the development of the telecommunications infrastructure;

TI_{ED} – the technical capabilities of the Telecommunication Infrastructure to support e-democracy;

TI_r – the assessment of technical capabilities of the Telecommunication Infrastructure to support e-democracy;

OS – the state/level of the development of the Online Service;

OS_{ED} – the range/content of the Online Service;

OS_n – the assessment of the range/content of the Online Service;

eP – the state/level of the E-Participation;

eP_{ED} – the range/content of the E-Participation;

eP_y – the assessment of the range/content of the E-Participation, $eP_y = \sum_{t=1}^3 eP_{yt} \rightarrow 1$, where t – E-Participation stages (“e-information”, “e-consultation”, “decision-making”), $t = \overline{1;3}$.

The objective function describing the level of the e-democracy acquires the form (1),(3):

$$\Delta ED = \sum_{j=1}^{j'} \sum_{y=1}^{y'} (eGD_j + eP_y) \rightarrow opt, \quad (1)$$

$$eGD = \{eGD_1, eGD_2, \dots, eGD_j\}, j = \overline{1; j'}, \quad (2)$$

$$eP = \{eP_1, eP_2, \dots, eP_y\}, y = \overline{1; y'}, \quad (3)$$

where j – the quantitative assessment of the state/level of the E-Government Development; y – the quantitative assessment of the content of the E-Participation.

The optimal level of integration of the e-democracy into the the EaP program management system is determined by:

$$opt \approx \frac{\partial S_{x+1}}{\partial S_x}, \quad (4)$$

where S_{x+1} – the socio-technical system of the EaP program management, which moved to the next level ($x+1$) of the e-democracy.

The e-democracy component needs on the contextual model to identify and evaluate the necessary components and transformations. For the development of a contextual model for e-democracy, tow indexes were used: EGDI and E-PI. Regarding EGD, the dimensions are divided: technology infrastructure Context, human capital Context, on-line service. This model also characterizes e-participation along three different levels: informing, consulting, supporting active participation (decision-making). The model is demonstrated, firstly, that different approaches exist to implement e-democracy; secondly, that such approaches depend on different contexts and circumstances; and thirdly, that while analytically it is important to policy-making e-tools are effectively embedded in program EaP. The success of the deployment of e-democracy components depends on whether governments enforce the actual use of e-participation tools by undertaking adequate measures to institutionalize civic engagement in EaP countries. Countries wishing to improve e-participation practices have a clear vision of the purpose and what public participation tools are best suited to achieve expected results.

The model for measuring the components of e-democracy in the EaPe program management system makes it possible to develop recommendations for further progress both at the level of the individual government and in general of the Eastern Partnership countries. It will also allow establishing a basic level of “electronic democratic maturity”, to identify areas/spheres and opportunities for improving the efficiency of e-governance project management. The proposed assessment tool can be used to measure the level/state of e-democracy for both the partner’s partner and the whole EaP Consortium.

Conclusions:

The E-Government potential of countries-partners is presented in focus of its influence on the technological and organizational maturity to implement the main projects of the EaP. For evaluation of E-Government progress in six countries of the Eastern Partnership in 2009 – 2016 is used the data of international ratings (E-Government Development Index, E-Participation Index). It was noted that e-government and e-participative development levels (e-information, e-consultation, e- decision-making) co-exist and overlap, forming numerous interactions between governments and people related to the prevailing socio-cultural and regulatory contexts of each country.

There are significant differences in prospects of democracy development among the EaP countries. Their opportunities to progress are limited their level of online service, telecommunication infrastructure, and e-participation. The evaluation of E-Participation segment of the Eastern partnership is showed the range of differences in countries' positions; in particular Ukraine advanced a level above the average European region. It is remarkable that all countries of EaP have “upper middle income”.

The existing E-Government differences between the countries should be the object the special monitoring within the Program of Eastern Partnership. Focusing on them indicators, it is possible to create synergies between public, private and civil society actors, and improve implementing e-democracy. The cognitive model of integrating e-democracy components into the socio-technical system of e-government is proposed. The application of this model allows to identify the level of “maturity of e-democracy” in the state of “as there is now”, and develop strategies for managing transitions to the higher system level.

This analysis will provide a better understanding of the context conditions for e-democracy, and in consequence it will benefit EaP strategies. The future work will concentrate on finding significant relations between contextual factors and successful deployment of e-participative in the EaP countries.

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