

THE OPERATIONALIZATION OF E-GOVERNANCE PLATFORMS IN  
EUROPE: THE GAP BETWEEN DEVELOPED AND DEVELOPING  
COUNTRIES

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**Abstract**

*In the last decade, the phenomenon of e-government in Europe has become a viable alternative in the provision of public services. Despite high interest for the assimilation approach and the operationalization of e-governance platforms, Europe is still fragmented in two categories of states. On the one hand, the developed countries are in the e-governance stage which has reached its maturity (single points of for services delivery and orientation toward citizens). On the other hand, there the transition economies which are still in the stage of recognition of the potential benefits of this new system. Based on global and European studies provided by authorized bodies, this paper aims to present Romania's position in relation to the rest of the Europe in terms of the development of online public services.*

**Keywords:** e-government, online public services, operalization of e-governance platforms

**1. Introduction**

Currently, most European countries have embraced e-government platforms, but many of them, especially developing countries focus on mere presence in the online environment (front office stage) with a very low impact of efficiency (Irani, Love and Jones 2008) and cost indicators (Weerakkody and Dhillon 2008). In fact, in this phase, the changes that occur are imposed by internal and external integration of new information and communication technologies, which implies further substantiation and implementation of complex programs of innovation (Beynon-Davies and Martin, 2004) and radical changes in administrative procedures regarding political, fiscal, social, strategic and organizational issues (Weerakkody, Janssen and Dwivedi 2011).

## **2. Impact factors in the operationalization of e-governance platforms**

Literature and specialty practice provide numerous studies that try to identify the reasons that led to poor uptake and implementation of e-government platforms in emerging economies.

One such study was conducted by Rabaiah and Vandijck in 2009 and revealed as the main factor for the poor development of electronic governance the lack of a strategic framework (Rabaiah and Vandijck 2009). The same idea has also been highlighted in research by Zara and Ghapanchi (2008) and United Nations (2010), stating that despite the efforts made by governments in developing countries, the progress in the provision of electronic services is insignificant.

Other studies considered the management style as an obstacle to the progress of platforms of e-government in the developing countries (Roztock and Weistroffer 2008; Kuhlenbruck, Meyer and KE Hitt, MA, 2003). This consideration appears as valid, given the fact that for most of the Central and Eastern European countries, the remains of centralized government had a significant impact in terms of the capacity to reconstruct the economy on the principles of knowledge society.

Poor operationalization of e-governance platforms in the developing states is also caused by the low interest for innovation and research approaches. Studies between 2005-2007, on developing states, show that another factor that has hindered the progress in the operationalization of e-governance is the poor orientation of research towards the new information and communication technologies (Arogyaswamy and Koziol 2005), in favour of traditional areas like chemistry and physics.

Some studies also reveal, as deterrent factors in the progress of e-government, the wrong use of ICT strategic models implemented by developed countries and the lack of a coherent policy framework. In this regard mention must be made of a study by Roztock and Weistroffer in 2007 which shows that the strategic models and tools related to the process of e-government in the developed countries cannot be applied to transition countries (Roztock, Weistroffer, Monar and Nasirin 2007). Despite its value, the results of this study have been seriously questioned in the specialty literature. On the one hand, we can find theories that deny the veracity of this information. These theories sustain the universality of information and communication technologies and their adaptability to any economy, regardless of the level of development (Weerakkody and Dhillon 2008). On the other hand, we can find a study by Carter and Weerakkody (2008) which states the impossibility of ignoring differences in economic,

cultural and political areas, between the developed and developing countries, as well as the barriers posed by the digital gap.

The author who provides a compromise solution for these debates is Hovelja (2008). He proposes for the governments of developing countries a two dimensions approach for the implementation of e-government platforms: first, the diagnosis of the current situation from the perspective of private factors influencing the uptake and operationalization of e-governance platforms (to identify specific coordinates of their system); second, rigorous selectivity to deploy ICT solutions in order to avoid possible inoperability situations.

Regardless of their perspective, the above mentioned studies converge towards a common point, namely the need for a coherent strategy and a unitary vision regarding e-government processes. In this sense, specialized literature and practice provides various stages of the action to be followed towards implementing e-government in the developing countries:

- Lowery (2001) proposes a four stages action plan: 1. a clear definition of e-government to provide pertinent information regarding the areas of interest and potential categories of stakeholders 2. one understandable vision that express in a succinct way the concept and action plan for e-government 3. pinpointing specific targets that can be easily quantified and observed 4. identifying the policies and procedures that support the process of e-government.
- Starting from the various e-government models used in developed countries, Holmes (2001) suggests five steps to operationalize the plan, namely: 1. transfer all information and public services in the online environment 2. enabling stakeholder access to information and electronic services 3. continuous improvement of electronic service delivery capacity in terms of organizational structure, 4. operationalization of interoperable teams 5. eliminating barriers in making use of e-government platforms.

### **3. Romania's position in terms of development of e-government platforms**

Beyond the above considerations, the differences between developed and developing economies in terms of operationalization of e-government platforms can be highlighted through statistical indicators. According to the latest available data supplied by the United Nations in the year 2012, the regional scores on the development of e-government platforms worldwide revealed the dominance of Europe (Figure 1.1), with

an index of development of e-governance of 0.7188, followed by the USA (0.5403) and Asia (0.4992).

The index of development of e-government platforms used by the United Nations is a composite indicator that quantifies the government's willingness and ability to use information and communication technologies for the provision of electronic services. The index is based on a comprehensive analysis of the presence in the online environment of the 193 countries, assessing the technical characteristics of portals, the policies and strategies applied to both global e-government at the national level and in different sectors of public interest.

Mathematically, this indicator is a weighted average of three normalized scores, based on the most important dimensions of e-government, namely: the scope and quality of online services, the state of development of the telecommunications infrastructure and human capital development. These three indicators are, in turn, compounds indexes.

The index for the first indicator - electronic services - is a weighted average of the opinions regarding online services in relation to the four stages of implementing e-government platforms (the presence in the online environment - the dissemination of information; interaction stage - information and downloaded documents, transaction stage - filling online forms, online payment etc., stage of integration - intra and inter-organizational services, active participation of citizens).

The index of the second indicator - the development of communications infrastructure - is a weighted average composed of five indicators: the number of internet users per 100 people, number of fixed telephone lines per 100 inhabitants, number of mobile telephone subscribers per 100 people, number of fixed Internet subscriptions per 100 people, number of wireless Internet subscribers per 100 people.

The index of the third indicator - human capital - is a weighted average composed of two indicators: adult literacy rate and gross primary, secondary and tertiary enrollment rate.

In addition to these three indicators there are other 2 categories:

- E-participation index (utilization of electronic services) which in turn consists of e-information (utilization of on-line information), e-consultation (interaction with stakeholders), e-decision (involving interested parties in governance).
- Environment Index.

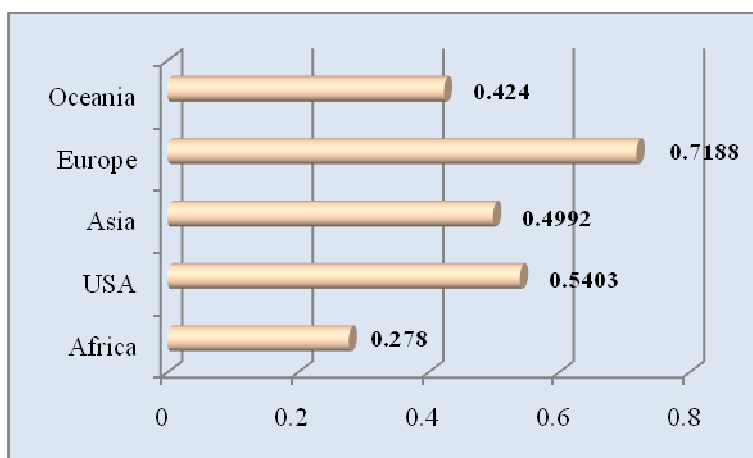


Figure 1.1. Indexes of e-government development in global regions  
 Source: United Nations - *E-government Survey 2012. E-government for the people*,  
 Department of Economic and Social Affairs, New York, 2012

Regarding the development level of e-government in the European regions, Western Europe occupies a dominant position (index 0.8142), closely followed by the Northern countries with 0.8046 (Figure No. 1.2.). Despite this ranking, as shown in Figure No. 1.3., the most accelerated growth of e-governance development in the period 2010-2012 was recorded by countries of the South (+18.11%), followed by Eastern countries (+16.22%) . This trend indicates both interest and efforts of the Eastern countries to accelerate the implementation of e-governance.

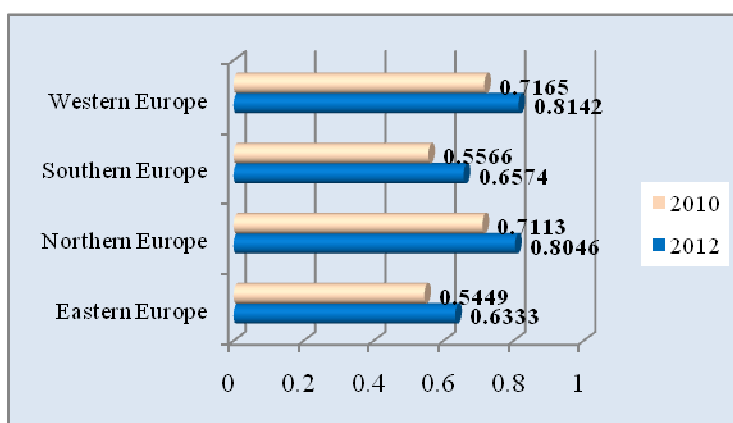


Figure 1.2. Indexes of e-government development in European regions

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Source: United Nations - *E-government Survey 2012. E-government for the people*,  
 Department of Economic and Social Affairs, New York, 2012

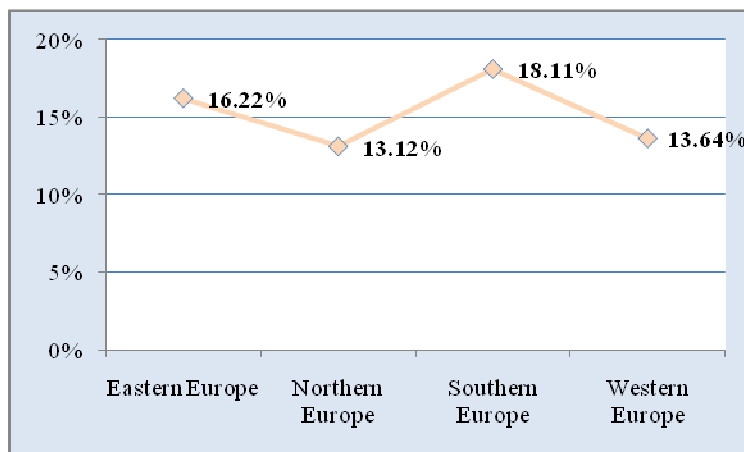


Figure 1.3. The dynamics of the development process of e-government by region  
 (2012/2010)

Source: United Nations - *E-government Survey 2012. E-government for the people*,  
 Department of Economic and Social Affairs, New York, 2012

At a European level, according to the index value of e-government development recorded in 2012, the level of maturity has been reached by the following countries: Netherlands, UK, Denmark, France, Sweden, Norway, Finland, Liechtenstein, Switzerland and Germany (Figure 1.4). Moreover, according to data from the United Nations, the Netherlands, UK and Denmark occupy positions 2, 3 and 4 in the world ranking.

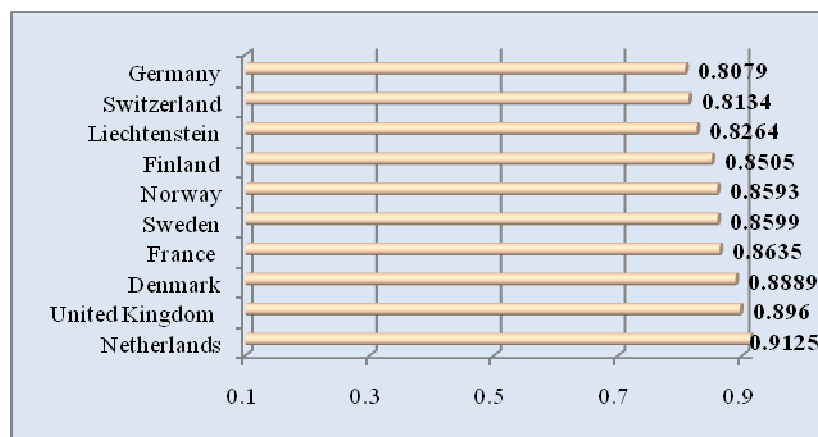


Figure 1.4. Top 10 Indexes of the development of e-government in Europe

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Source: United Nations - *E-government Survey 2012. E-government for the people*,  
Department of Economic and Social Affairs, New York, 2012

From the perspective of the dynamics of the development of e-government (Figure 1.5), the highest increases were registered in Liechtenstein (+23.45%) and Finland (22.08%). From 2010 on, significant changes have taken place in countries like the UK and Finland.

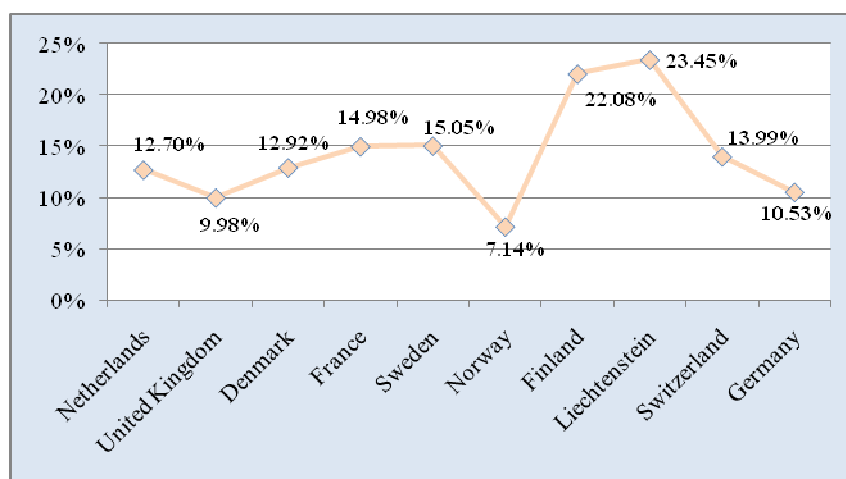


Figure 1.5. The dynamics of the development process of e-government in the top 10 countries in Europe (2012/2010)

Source: United Nations - *E-government Survey 2012. E-government for the people*,  
Department of Economic and Social Affairs, New York, 2012

Compared with other European countries placed in top 10, economically developed and in terms of implementation of e-government platforms, the economies in transition, located mainly in Eastern Europe, occupy a modest position in European and world ranking. In 2012, as it can be seen in Figure 1.6., in Eastern Europe the best position was occupied by Russia (index of 0.7345), closely followed by Hungary (index of 0.7201).

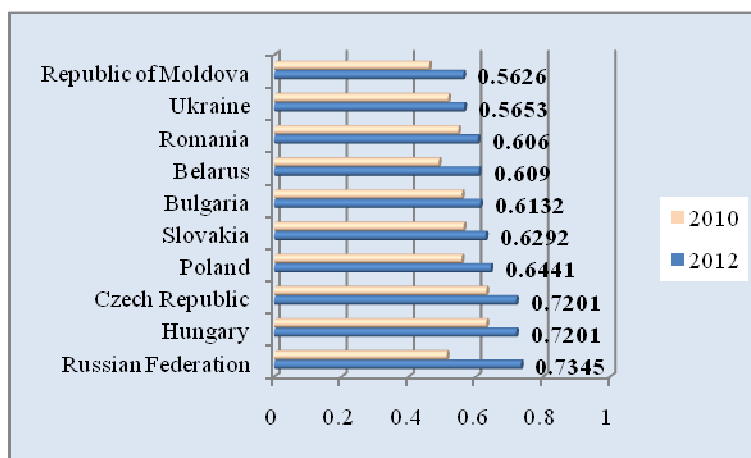


Figure 1.6. Indexes of e-government development in Eastern Europe  
Source: United Nations - *E-government Survey 2012. E-government for the people*,  
Department of Economic and Social Affairs, New York, 2012

In the light of new developments, between 2010-2012, most East European countries have registered improvements in the development for e-governance. In fact, as shown in Figure 1.7., increases have been substantial, Russia being in top (+43.01%) winning 32 places in world ranking positions (from position 59 in 2010 to position 27 in 2012). Significant increases have been also recorded by Belarus (24 295) and Moldova (+22.01%).

With the development of e-government index of 0.6060, Romania occupied in 2012 the 8th place in the ranking of Eastern European countries and the position 62 in the world rankings, fifteen places down, as compared with 2010, when Romania was ranked 47.

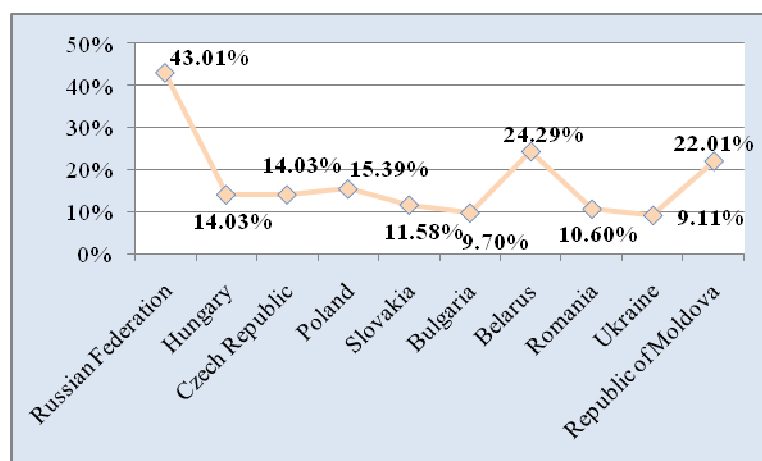




Figure 1.7. The dynamics of the development process of e-government in the states of Eastern Europe (2012/2010)

Source: United Nations - *E-government Survey 2012. E-government for the people*, Department of Economic and Social Affairs, New York, 2012

To highlight the existing gap in terms of e-government among developing and developed states we will present an analysis of the main areas of differentiation. In this regard, two countries were considered in the analysis: the United Kingdom, developed country, ranked 3 in the world ranking of e-government development, and Romania, developing state, the occupant of the 62nd position.

For the major components of the index of development of e-government, as shown in Figure 1.8, the major differences come from the implementation capacity of online services and the development of infrastructure necessary for the operation of e-government platforms. In fact, these differences come to back up those theories claiming that the development of a country is one of the decisive factors of the process of assimilation and operationalization of e-governance. On the other hand, the small difference between the 2 countries in terms of human capital components reveals the significant investments made in human resources in developing countries through the European support programs.

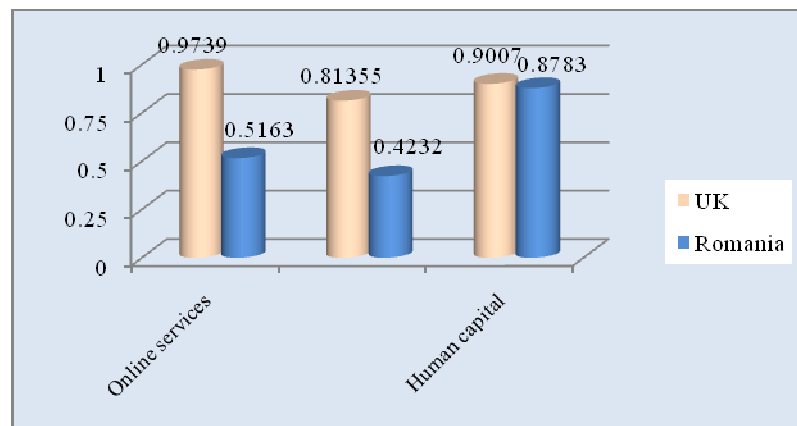


Figure 1.8. Comparisons between United Kingdom and Romania on major components of the index in terms of e-government development

Source: United Nations - *E-government Survey 2012. E-government for the people*, Department of Economic and Social Affairs, New York, 2012

The assimilation and operationalization of the concept of e-governance, measured by the stages of development of online services, as

shown in Figure 1.9, proves the degree of maturity reached by the United Kingdom, and that of the increase in Romania's case.

Great Britain is in the stage of radical transformation, which involves reconfiguring internal structures and rethinking traditional processes for full integration of e-government platforms (stage IV - intra and inter-organizational integration phase). This step involves the adoption of new ICT systems.

On the other hand, Romania is in the phase of minor transformations involving: the presence in the online environment in order to improve the process of informing stakeholders, an average level of interaction in order to improve communication with stakeholders; low presence of transaction. From the perspective of the stages model of e-government development, Romania is still in the interaction phase, without to be fully integrated (64%).

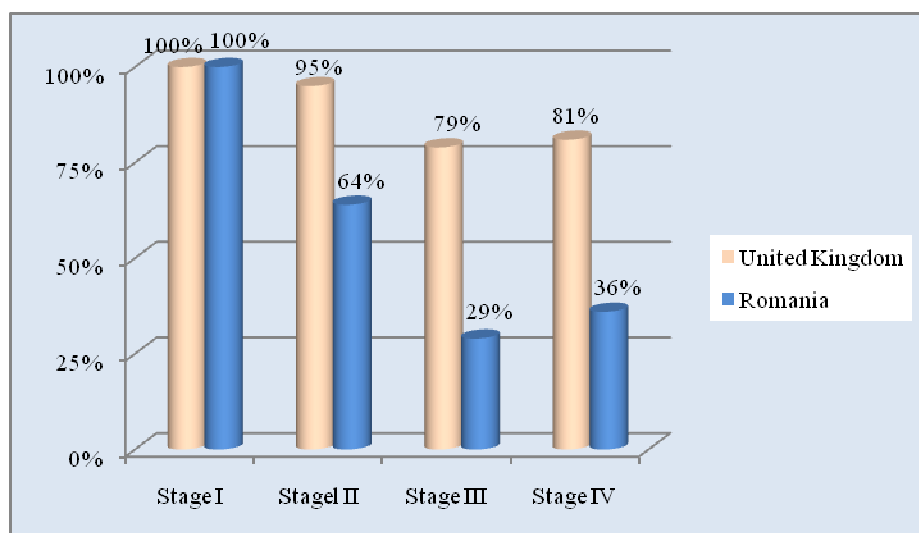


Figure 1.9. Comparisons between United Kingdom and Romania in terms of online services component

Source: United Nations - *E-government Survey 2012. E-government for the people*, Department of Economic and Social Affairs, New York, 2012

An examination of Figure 1.9 reveals the following aspects:

- both UK and Romania have fully operationalized the first phase of e-government - information phase (presence in the online environment);

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- If in the United Kingdom, 95% of institutions have assimilated the interaction phase, in Romania there are still many entities whose platform does not allow interaction with stakeholders. In fact, their platform is only a simple information portal;
- 75% of UK public institutions portals allow services and conducting transactions in online environment while in Romania only 29% of public platforms allow bi-directional interaction;
- intra and inter-organizational integration is operationalized in a proportion of 81% in the UK and 36% in Romania.

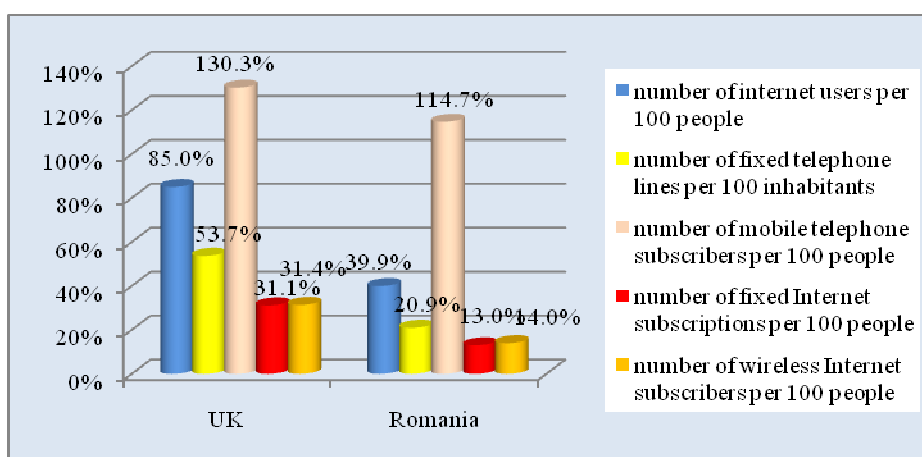


Figure 1.10. Comparisons between United Kingdom and Romania in terms of telecommunications infrastructure component

Source: United Nations - *E-government Survey 2012. E-government for the people*, Department of Economic and Social Affairs, New York, 2012

In terms of coordinates that facilitate operationalization of e-governance platforms, and thus stakeholder access to them, there are significant discrepancies between the UK and Romania. As shown in Figure 1.10, the penetration of Internet access (number of connections per 100 inhabitants) reached in the UK the ceiling of 85%, while in Romania was only 39.9%. The only indicator for which there are low differences between the two states is penetration rate of mobile access (number of mobile phone subscriptions per 100 inhabitants); about 130.3% in the UK and 114.7% in Romania.

In 2012 in Romania, it may be observed the population's orientation toward wireless Internet access networks (14%) at the expense of fixed (13%).

### **Conclusions**

At the end of our analysis, we can conclude that the process of assimilation and operationalization of the concept of e-government is extremely complex, being under the impact of a wide range of influencing factors.

Each of the governments operationalizes the e-government with different goals and objectives, the development of these platforms going at some unique levels of service maturity. In fact, each of these involves the operationalization of a single model, different levels of technological sophistication, and various orientations toward stakeholders, different types of interaction, specific safety requirements and obviously private redesign processes. These levels describe in fact a sequential approach to development and maturation of online services.

While Romania has made significant progress in the operationalization of e-governance platforms, arguments in this sense is both structural and legislative changes made and good practice indicators registered global and in Europe, its path towards a maturity of online public services is a long one.

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