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The Influence of Context on Participatory E-Government Applications: A Comparison of E-government Adoption in Romania and South Korea

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Abstract: This article assesses how contextual factors influence participatory applications of e-government. While the pursuit of participatory e-government projects is increasingly advocated, little research to date has attempted to investigate whether such applications of e-government are feasible across all national contexts. In particular, this research will focus upon assessing how the political, economic, and social characteristics of a particular government's context influence the introduction of participatory applications of e-government. To explore the relationships between contextual factors and applications of e-government, we compare participatory e-government applications in Romania and South Korea. These nations were selected because they possess important similarities and differences related to their political, social, and economic contexts. As an attempt to fill this dearth in existing literature, the research question this study investigates is how certain contextual features serve to influence the adoption of participatory applications of e-government. Our findings suggest that the success of participatory e-government projects is to a large extent contingent upon political and economic contexts, while being less related to social contexts.

Keywords: e-government; electronic; digital

1. Introduction

Over the past few decades, the topic of e-government has emerged as a salient one in the field of public administration. Accordingly, a litany of research has sought to describe implications said to stem from governments' application of this new administrative tool. To date, such research efforts, and the implications they describe can be categorized into two veins. The first vein of research and implications can be considered internally oriented in that this vein explores the impact of e-government adoption on the internal processes of government and bureaucracy (Danziger and Andersen 2002, Brewer et al. 2006). The second vein of e-government research and implications can be considered externally oriented, as it is primarily interested in understanding how government's use of e-government impacts relationships with actors outside of the government, such as citizens (Gerdodimos 2005, Welch et al. 2005).

What is often illustrated by e-government adoption models is an (gradual) evolution of e-government application from internal and efficiency oriented, toward external and participation oriented (Chadwick and May 2003). However, a growing body of research is finding that the evolution of e-government applications tends to become progressively slower as governments move toward participatory applications of e-government (Brewer et al. 2006). This slowdown has been interpreted as a government aversion to increasing levels of citizen participation and a preference for efficiency oriented applications of e-government (Norris 2005). The internally oriented emphasis that has been

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argued to be common among e-government adoption strategies has come under criticism, with many in the academic community arguing that such applications of this new administrative tool simply serve to "reinforce existing administrative and political arrangements", rather than ushering in a new era of (more) democratic administration (Im et al. forthcoming). However, advocacy for externally oriented applications of e-government tends to be general, and does not go into much detail when explaining whether such applications of e-government are suitable for all contexts, or rather contingent upon certain social settings[1]. Such an oversight is significant for the reason that it is important to understand how different contextual features are conducive to certain applications of e-government, as building such an understanding is likely to contribute toward the long term success of e-government applications (Heeks 2005).

As an attempt to fill this important dearth in existing literature on the subject of e-government, the research question this study intends to investigate is how certain contextual features serve to influence the adoption of *participatory* applications of e-government. While ample research has investigated the extent to which certain contexts contribute toward the adoption of e-government in general, to the authors' knowledge little to no empirical research has attempted to describe how certain contexts may actually influence the adoption of specific applications of e-government (internally oriented versus externally oriented). In particular, this research will focus upon assessing how the political, economic, and social characteristics of a particular government's context influence the introduction of participatory applications of e-government. In doing so, this research will build upon existing descriptive models describing e-government adoption by attempting to identify the contextual features of a given society that find themselves particularly associated with participatory applications of e-government. Such research is particularly relevant for the reason that, despite growing calls for greater participatory applications of e-government, little research has attempted to understand what conditions should be present for such e-government applications to actually work.

In exploring the relationships between contextual factors and applications of e-government, this research will compare participatory e-government applications in Romania and South Korea. These two nations have been selected because they possess important similarities and differences related to their political, social, and economic contexts. In addition, both nations possess a similar timeline with regard to the evolutions of their democracies, which makes comparisons of participatory e-government application in these two nations particularly interesting. The projects that have been selected for comparison are the *government 4 citizens project* (G4C) launched by the South Korean government, and the *www.e-guvernare.ro portal* project (e-guvernare) launched by the Romanian government. Reasons for comparing these two projects, as well as explanations of these projects are provided in the case study section of this article.

2. Theoretical Framework

Despite a variety of valid definitions of e-government, for the purpose of this research we consider e-government as 'government's use of information and communications technology, such as the Internet, for purposes of internal management of information and public services, and as a means of mediating government interaction with citizens' through information provision and soliciting citizen involvement in administrative processes (UN and ASPA 2001). Highlighted by this definition of e-government are two distinct areas for e-government application[2]. The first area of application can be considered internal, and places an emphasis upon improving the efficiency with which existing administrative processes operate (Danziger and Andersen 2002). The second area of e-government

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[1] While prior research has explained that certain prerequisites exist with respect to e-government adoption, this research does not distinguish whether such adoption is internally or externally oriented. This research contends that this is an important distinction to make.

[2] This research, assumes that internal actors will exhibit a preference for internal applications of e-government, while external actors will exhibit a preference for externally oriented applications of e-government. This assumption is based in arguments found throughout existing literature that has discussed e-government adoption cycles (Chadwick and May 2003, Yildiz 2003).

application can be considered external, and places an emphasis upon improving using e-government as a means of incorporating greater levels citizen involvement in the administrative processes of government (Brewer et al. 2006). In particular it is the externally oriented applications of e-government that have been flagged by existing e-government literature as a topic of particular contention and debate (Yildiz 2007).

Traditionally, internal administrative processes of government have been rather isolated from external actors, which have led many, primarily non government actors, to argue for greater external transparency and accountability of public organizations (Halachmi 2005). Through increasing the extent to which citizens, as well as other non government actors are able to hold their government accountable to 'the will of the people', and access government related information, the overall quality of democracy is said to increase. Given the relationship said to exist between levels of bureaucratic external accountability and transparency, and the quality of democracy, advocates of externally oriented e-government applications are numerous and include international organizations such as the United Nations, politicians (Ahn and Bretschneider 2011), and civil society (Yang 2003).

At this point, the ensuing picture suggests that participatory applications of e-government are likely to play a major role in influencing the way in which internal actors manage the bureaucracy's relationships with its environment (Ahn and Bretschneider, 2011). Subsequently, it can be assumed that internal actors charged with crafting participatory e-government applications, such as the senior level managers, will seek to adopt this technology only if it allows the bureaucracy to achieve some degree of enhanced organizational stability or objectives (Ho and Ya Ni, 2004), while simultaneously placating demands made by external actors for greater external transparency and accountability.

Thus, what this discussion intends to highlight is a tension that presents itself between sources external to the government, which advocate participatory applications of e-government as a means of 'reigning in closed doors bureaucrats', and (internal) government actors who are cautious, if not resistant to opening up their organization to potentially destabilizing external forces. Thus, the form e-government applications take in practice are often said to be functions of pressures from inside and outside of government (Fountain, 2001). As such, contextual features of a government, through their influence on the way external and internal actors articulate their demands, are likely to play a formative role in shaping the way e-government is applied within a particular setting. Perhaps one of the best known frameworks for explaining the interplay between the contextual features and e-government applications is Fountain's "technological enactment framework" (2001). Through this framework, Fountain argues that various internal and external sources of pressure, which are shaped by various contextual features of the environment and organization is operating within, serve to influence the way in which a new technology is adopted; as Yildiz explains Fountain's framework, "technology is customized to the needs and the environment of a specific organization through the process of enacting" , where 'enacting' can be considered synonymous with application, and 'the needs' and 'the environment' pertain to the formative influence of the political, social, economic contexts. However, as some have noted, Fountain's "technological enactment framework often overemphasizes the importance of internal contextual features (i.e. inter-organizational politics), and therefore discounts the importance of the role that external contextual features play in influencing the way in which e-government is adopted (Norris, 2003). As internal, as well as external characteristics of the context in which e-government applications are pursued serve to influence the form e-government takes, it also stands to reason that *both* internal and external contextual features will play an important role in influencing the sustainability of one form of e-government policy over another (c.f. Norris 2003).

3. The Role of Context in Influencing the Success of E-Government Applications

An ample body of literature has explored the way in which certain features of an environment influence the sustainability of e-government programs (Garcia and Pardo, 2005). However, to date little to no research has attempted to understand how contextual features serve to influence the sustainability of *certain types* of applications of e-government, such as internal or external oriented.

As e-government matures in practice and in theory, a greater degree of diversity can be found in terms of the ways in which this maturing administrative tool can be, and is applied (see Im et al., forthcoming). Consequently, it is important for research to now specify which contextual factors influence the sustainability of *particular* applications of e-government applications, rather than at an aggregate and general level, as has been most common among previous bodies of literature on the subject. As there has been a limited amount of research that works toward achieving such objectives, this research attempts to determine contextual factors of particular relevance to participatory applications of e-government from among the factors found by existing literature to be of relevance to e-government in general. Of the numerous factors identified in the extant literature concerning the sustainability of e-government programs, three broad categories of such factors- *political, social,* and *economic-* are identified. This section has two intentions; (1) to discuss the theoretical and practical relevance for these categories of contextual factors in order to illustrate why their presence or absence matters with regard to influencing participatory applications of e-government, and (2) to identify similarities and differences concerning the presence of these factors in Romania and South Korea.

3.1 The Political, Economic, and Social Contexts of Romania and South Korea

Zanello and Maassen observe that adoption of information and communication technologies, such as e-government, within a given context is often seen as contingent upon the prevalence factors related to infrastructure, literacy, income, and perceived need (2011). Conversely, the authors also argue that a lack of resources, political interference, and poor policy design or implementation serve as major sources of failure (un sustainability) for ICT policies, such as e-government. Marked similarities and differences, with regard to the aforementioned factors, in Romania and South Korea make a comparison of participatory e-government application in these two nations particularly interesting.

3.2 Similarities

Romania and South Korea both began their democratic transitions in the late 1980s, with Romania's beginning in 1989, and South Korea's in 1987. Today, democracies in both nations are recognized as free and fully functional (Freedom House, 2011). The political systems adopted at the period of transition and, which remain to this day, bear resemblance to each other in that they both have adopted semi presidential political structures. Moreover, in both nations, the office of the president is typically viewed as more powerful than other branches of government, such as the legislative and judicial branches, as well as other positions in government, such as the prime minister. These similarities, which are related to the political structures in both nations, imply that internal sources of pressure charged with influencing e-government programs (i.e. resources or political interference) will be similar relative to other governments (c.f. Pollitt and Bouckaert, 2004). Furthermore, given the similar political structures of these nations, the way in which internal actors articulate their demands are also likely to be similar, thereby implying the likelihood that inter-organizational politics will play out in a similar fashion in both contexts (cf. Peters,1998). Finally, given the strength of the executive branch vis-à-vis other branches of central government, as well as the unitary system of government found in both nations, similar formal oversight (accountability) mechanisms will be present at central, regional, and local levels of government, which together serve to influence bureaucrats' use of discretion during the formative implementation stage of e-government applications (Walker et al., 2011).

In addition to similar political structures, a further similarity to remark upon concerns the influence of culture on citizens' predispositions toward political participation. Both Romania and South Korea, for most of the 20th century, were governed by authoritarian governments. In the case of Romania, the Romanian Communist Party, which came into power shortly after World War 2 and remained at the helm until 1989, pursued a series of policies that served to drastically increase the power of the state vis-à-vis non government actors, which in turn also triggered substantial reductions to levels of civic engagement (Fukuyama, 2001; Badescu and Sum, 2005). Research by Uslaner has found that, while Romania began its democratic transition in the early 1990s, due to such state centric policies pursued by the Romanian Communist Party, levels of civic engagement and citizen participation in government still remain low when compared to other western nations (2004). South Korea also has a long history of state centric political culture, which is largely influenced by Confucian Philosophy and

more *Koreanized* manifestations of Confucian principles, such as *sil-hak*, which likened the role of good government to that of a caring parent, and the role of the citizens to that of an obedient child (cf. Sen, 1997). This perspective on the relationship between citizens and their government has contributed toward traditionally low levels of civic engagement and citizen participation in government in South Korea[1]. These tendencies endured long into the twentieth century, in part thanks to a series of authoritative generals who autocratically governed the nation from the early 1960s to the late 1980s. Only in the mid 1990s, due to government actively funding various not for profit groups in order to deepen democratic reforms, did levels of civic engagement and citizen participation increase. However, when compared to levels of civic engagement and (non-voting) participation in western nations, South Korea remains relatively low.

A final similarity concerning social contexts of Romania and South Korea, which bears particular influence upon participatory e-government applications, is age. Previous research that has sought to uncover a relationship between age and political values typically reveals a significant divide between younger generations and older generations, viewing younger generations as more participative than older generations of citizens. Further, as democratic values in the societies of the two countries examined in this study are relatively recent in their proliferation, it is also likely that the prevalence of younger generations within the contexts of Romania and South Korea is likely to be conducive to more participatory applications of e-government, as younger citizens of these countries are likely to have been socialized in societies espousing democratic values. A final point related to the importance of the age structure of a society when assessing participatory e-government applications, is that this factor is commonly highly correlated to overall Internet use within a particular context (Lee, 2003). The median age in Romania and South Korea is nearly identical, with the median age in Romania estimated to be 38.7, while in South Korea 38.4 (CIA World Fact book, 2011). It should also be noted once again that, in consideration of the fact that both nations began their democratic transition at similar times, both populations are likely to have been socialized in relatively similar political environments.

3.3 Differences

While many of the similarities mentioned above can be conceived of as attributable to factors related to culture and age structures, differences primarily concern the economies and presence of IT infrastructure in the two nations. With respect to differences between Romania and South Korea, perhaps the most poignant concerns the economies of the two nations, with the South Korean economy estimated to be nearly three times as large as the Romanian economy. Subsequently, per capita gross domestic product is also very different between the two nations, with a South Korean citizen's being nearly three times that of their Romanian counterpart. This disparity bears significant implications to the purpose of this research for three reasons.

First, it suggests a substantial difference between the Romanian government's ability to fund e-government programs and the ability of the South Korean government. As resources are more scarce it is less likely that government will divert funds to entirely new projects, but rather focus available funds on existing processes in hopes of making them more efficient. Furthermore, as government fund are limited, their use is likely to stimulate greater debate.

Second, the difference in the size of the economies of Romania and South Korea also implies that citizens' ability to afford important prerequisites for e-government use, such as computers and Internet subscriptions, are also likely to differ (cf. Zanello and Maassen, 2011). To this end, external pressures (social) for participatory applications of e-government in Romania and South Korea are likely to differ in kind.

Third, between Romania there is a sharp difference with regard to broadband penetration. In Romania, broadband penetration, as of 2010, was estimated at 13.96 connections per one hundred citizens, whereas in South Korea this figure was substantially higher, at 36.63 subscriptions per one hundred

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[1] An additional factor that should also be noted concerns Japan's occupation of South Korea.

citizens (ITU, 2011). This difference primarily speaks to broader disparities between the two nations, regarding the prevalence of ICT infrastructure, as ICT infrastructure in Romania has consistently been evaluated as underdeveloped, while the ICT infrastructure of South Korea is often seen as highly developed (UNPAN, 2010). To this end, the prospect of enhancing participatory applications e-government in a context such as Romania, may be financially prohibitive, as pursuing such applications of e-government are likely to first require large investments into ICT infrastructure.

4. Case Study: A Comparison of participatory e-gov projects in Romania and South Korea

The cases chosen for comparison by this research are the *www.e-guvernare.ro* (e-guvernare) portal by the Romanian government and the *government 4 citizen project* (G4C) by the South Korean government. These programs were chosen for the following three reasons.

First, both programs exhibit an external orientation in that they intend to solicit greater citizen use of and participation in government services by making use of e-government. *Second,* both programs intend to introduce mechanisms to enhance external accountability and transparency to the public. *Third,* both programs also intended to include a service component, shifting services that at one time could only be obtained in person, to an online format, where citizens were able to obtain such services without leaving their home or office. The G4C project launched by the South Korean government is largely considered as a success while the e-guvernare project launched by the Romanian government is considered to have been unsuccessful (Popescu, 2010). Bearing in mind the theoretical discussion in the previous sections, as well as the similarities and differences of Romania and South Korea, a more detailed assessment of these two programs is made.

4.1 The 'E-Guvernare' Project of the Romanian Government

Launched in 2003, the intent of the e-guvernare project is to "reduce bureaucratic administrative barriers and simplify [citizen] access to [government] information and services" (www.e-guvernare.ro, 2011). Through this objective, policymakers hope to increase levels of external transparency and accountability of government processes in order to reduce levels of corruption (Ion, 2008). Taken together, these points constitute part of a broader reform agenda referred to as the "desk reform". The overarching objective of this reform agenda is to make use of participatory applications of e-government in order to enhance the degree to which government bureaucracy is efficient, increase the numbers of citizens who are able to interact with their government, and enhance the frequency with which citizens interact with their government (www.e-guvernare.ro, 2011). As such, the e-guvernare project's agenda possesses duel objectives of increasing citizen participation in administrative processes and also enhancing the efficiency with which government processes operate, implying both an internal and external orientation. The e-guvernare project falls under the supervision of the Agency of Information and Society Services (ASSI), which itself falls under the purview of the Ministry of Communications and Information Technology (MCTI).

Sources of support for the e-guvernare project were broad initially, and came from those within the Romanian government, as well as from those outside of it, such as citizens. Moreover, an important point to note is that the e-guvernare reform project was heavily influenced and supported by the European Union. However, while the program may have enjoyed a broad range of support, a key problem with regard to e-government in Romania in general, according to Zahan and Costake (2007) is that details of e-government reform bills were modified and amended frequently, a phenomenon which, while not unique to Romania, is often found to diminish the likelihood of success of e-government projects (Heeks, 2003). Building upon this point, it should also be noted that much of the legislation addressing e-government issues in Romania has come after the e-guvernare portal was launched (Silvestru et al., 2009). The points outlined above suggest that e-government projects in Romania are likely to either be subjected to a great deal of political dealing between ruling and opposition parties, or a tendency of the Romanian government to quickly implement e-government projects without a careful assessment of necessary prerequisites. Under both scenarios, a coherent

picture in terms of how the e-guvernare portal intends to achieve its ambitious agenda is missing, as is the presence of a well thought out plan. Generally, while the e-guvernare portal's objectives were ambitious this project is cited as a failure (Sandor, 2006). Among the potential reasons contributing to the lack of success experienced by the e-guvernare project, three factors in particular can be identified. Referring to the framework outlined in the literature review of this article, these three interrelated factors can be primarily attributed to the actions of internal, as well as external actors, and related to economic, political, and social features.

The first factor which may be attributed to the e-guvernare's lack of success concerns failed attempts to integrate back end and front end systems. Dana Popescu of the ASSI, one of the bodies responsible for the functioning of the e-guvernare project, explains, "*Taxpayers were given digital certificates issued by ASSI, which although they have taken, they could not use. The reality was that they did not have protocols with National Agency for Tax Administration, House of unemployment, etc... In fact at that time I was told that the system cannot handle work and data traffic over older servers by National Electronic System*" (2010). While measures were taken, such as the creation of the NES to enhance interoperability between the front end and back end systems, the above quotation by Popescu suggests that such attempts to enhance interoperability were negated due to a lack of interoperability of backend processes. Without first pursuing interoperability of backend processes among various agencies whose services were migrating online, it is of little surprise that interoperability between front end and back end processes faltered as well. As is illustrated by the following point, the lack of interoperability can ultimately be attributed to economic factors.

The second factor contributing to the lack of success experienced by the e-guvernare program can be attributed to a fundamental lack of infrastructure necessary to make such initiatives work. Sandor, citing a study on e-government readiness published by the Economist Intelligence Unit in 2006, has argued that the infrastructure necessary to support e-government initiatives is largely under developed (2007). Indeed, such themes are present throughout much of the literature assessing e-government in Romania (Sandor, 2006; Sivestru et al., 2009). Broadly, this absence of infrastructure, as was explained earlier can be considered as related to economic factors. Thus, the ensuing question is why such an ambitious e-government project would be pursued by the Romanian government in the absence of necessary economic factors, such as infrastructure.

The answer to the above question may be found in *the third factor* that we may attribute to this projects lack of success, which concerns politics. Given that Romania is a member of the European Union, the politics influencing e-government adoption involve two levels of actors; those at the EU level, and those at the domestic level. Recalling the benefits e-government adoption is said to have on consolidation of democracy, the European Union has been a firm advocate of participatory applications of e-government in new member states of Central and Eastern Europe (Rentea et al., 2008; Silvestru et al., 2009). In this case, as Romania is the recipient of various forms of European Union grants and support, domestic politicians and government officials (internal actors) are charged with the task of placating the demands of the European Union officials (external actors). Given the relationship between the internal and external actors, it appears likely from the above discussion that the decision to implement such an ambitious participatory application of e-government, without first ensuring the fulfillment of necessary prerequisites by Romanian politicians, could be attributable to their over eagerness to pacify the demands made by European Union officials, and ostensible lack of concern related to the success of the e-guvernare portal. This explanation finds support from the flurry of amendments and legislation that occurred *following* the implementation of the e-guvernare portal, suggesting that this major project was implemented without a great deal of planning. To this end, and within the framework of economic, political, and social categories of factors outlined earlier, what is suggested by the above discussion is that while *poor infrastructure*, which we consider an *economic factor* largely contributed to the lack of success of this project. Without sufficient infrastructure, the interoperability of front and end back end processes became a major issue. The decision to apparently *not account for necessary economic prerequisites* to achieve such an ambitious e-government project,

as well as the *absence of a coherent strategy*, *was a political one*, and likely related to Romanian officials' perceived need to fulfill the demands of European Union officials.

4.2 The G4C Project of the South Korean Government

"The G4C project arose from the need to provide a better set of services to the public, as well as increase administrative efficiency and transparency" (Ministry of Public Administration and Safety, 2011). Launched in 2000, the G4C project, like the e-guvernare project of Romania, intended to improve the efficiency with which government interacted with citizens, while at the same time soliciting greater citizen use of public services, suggesting both an internal and external orientation of the project. However, G4C project differs from the e-guvernare project in its overarching ambition, in that while the e-guvernare project was to serve as a component of an overarching reform agenda, the G4C project was pursued by the Korean government in an effort to enhance Korea's competitive capacity with respect to public service delivery (Ministry of Public Administration and Safety 2011).

While the G4C project was officially launched in 2000, the Ministry of Public Administration and Safety began preparations for such a project from the early 1990s, largely focusing upon the importance of developing infrastructure needed to sustain the delivery of services online. To this end, the Korean Ministry for Public Administration and Safety explains that before initiating the G4C project, which targeted improving the quantity and quality of citizen interaction with their government, great efforts were made internally to first assure that back end processes of different offices could support interacting with each other. Following the interoperability of back end processes, front end processes were progressively, albeit conservatively targeted. Implementation of the G4C was primarily left to the Ministry of Public Administration and Security.

The G4C project enjoyed sustained support by internal actors such as politicians and public officials, as well as external actors found throughout society. However, organization of the G4C project was mainly pursued by the state bureaucracy, largely independent from external actors and interference of politicians. To this end, a coherent long term strategy can be found with respect to the G4C project; for example the Ministry of Public Administration and Security outlines the developmental timeline of the G4C project in terms of 3 stages that span nearly 15 years, with citizen oriented processes only being pursued full heartedly in the last stage (Ministry of Public Administration and Security, 2011). Thus, while Romanian e-government project appear to be marked by a much hastier approach, the Korean approach appears to be relatively cautious and strategic. Today the G4C project is typically viewed as a great success. Among the factors attributing to the success of this project, three factors are identified as particularly important. Referring to the framework outlined earlier in the literature review of this article, these three interrelated factors can be primarily attributed to the actions of internal actors and related to economic and political factors.

The first factor related to the success of the G4C project is attributable to *a long term perspective* with respect to planning then implementing to the G4C project. While the G4C project came into the spotlight only over the past five years or so in South Korea, preparations for this project can be found as far back as 15 years ago. As such, this long term perspective exhibited by the South Korean government with respect to its implementation of the G4C project suggests that the *Korean government viewed the G4C project as an investment as opposed to a reform*. Indeed, the fact that the government saw the G4C project as a means of enhancing national competitiveness speaks to this fact in particular. Furthermore, an emphasis was placed upon identifying prerequisites perceived as necessary to the project and then establishing strategies for fulfilling such prerequisites. To this end, while little of the needed infrastructure for the implementation of such an ambitious e-government was present at the conception of the G4C project, the need to cultivate such infrastructure, as well as plans to develop it in order for its implementation were heavily emphasized in the strategy underlying the G4C project (Korean Ministry of Public Administration and Security, 2011).

The second factor attributable to the success of the G4C project is related to ensuring the interoperability of back end processes, before working towards furthering the interoperability of front end and back end processes. This factor is related to ensuring that needed infrastructure is present

before attempting to incorporate citizens into administrative processes, as well as to the careful establishment of a segmented strategy of implementation. Through emphasizing the development of adequate infrastructure, the Korean government was able to ensure that various areas of government possessed the tools needed to interact with each other, thereby establishing a foundation for the eventual creation of participatory applications of e-government, such as the G4C project.

The third factor which contributed toward the success of the G4C project is related to the political environment in which the G4C project was carried out in. As mentioned earlier, responsibility for the G4C project largely fell under the purview of the Ministry of Public Administration and Safety, which is answerable primarily to the office of the president, as well as the parliament. Interestingly, the Ministry of Public Administration and Security experienced very little interference from politicians in Parliament, but did experience significant adjustments as presidential administrations changed. This is relevant for two reasons. First, given the five year terms served by presidents in South Korea, this could imply that the G4C program, as well as the reforms aiming to improve its performance, exhibited relative continuity. Secondly, and also related to continuity, is that very few sources for adjustments to the G4C project were present, those being bureaucrats inside of the Ministry of Public Administration and Security, as well as the President. This continuity very likely contributed toward the ability to develop and execute long term initiatives.

Referring back to the framework of economic, political, and social categories of factors outlined earlier, the Korean case appears quite different from the Romanian case, despite the ostensible similarities between these two nations with respect to these three categories of factors. Concerning economic factors, while Romania attempted to implement a participative e-government project and develop infrastructure to support this project at the same time, Korean officials appear to have worked hard in ensuring that the G4C project was only made participative once necessary infrastructure was present. Moreover, in the process of ensuring the presence of infrastructure, the government was also able to enhance the interoperability of back end processes, thereby facilitating eventual citizen participation. Regarding political factors, the reason the government was not forced to rush into implementing a participative e-government project may be attributable to a more streamlined decision making process, thereby speaking to a relative absence of politics from the decision making process related to the G4C project in Korea.

5. Implications

Notably, contextual factors found to contribute to the success or failure of the e-guvernare and G4C projects are largely unrelated to the social category of factors. What the above comparison suggests is that for social factors to contribute to the success or failure of a participatory e-government project, consistency and long term perspectives are essential. While external social forces may play an indirect role in influencing the adoption of long term perspectives and consistency, the role of economic factors and political factors have much more of a direct influence upon the adoption of long term perspectives and consistency of participatory e-government applications. Subsequently, these two categories of factors are likely to play a decisive role in determining the outcomes of participatory applications of e-government, at least in the immediate term.

As was illustrated by the comparison above, *planning* plays an important role in influencing the success of participatory e-government applications in particular, and perhaps e-government more generally. In the case of the G4C project, planning and execution largely was left up to a single internal actor, The Ministry of Public Administration and Security. Conversely, in Romania planning and execution of the e-guvernare project was spread across various internal actors, thereby contributing to a lack of consistency, and also making the formulation of a single coherent vision for the project more difficult. Further complicating the picture was the involvement an external actor, the European Union, which possessed great influence over the planning and implementation of the project, and also served as a source of pressure on Romanian officials, who at the time were eagerly pursuing the prospect of accession to the European Union.

Also suggest by the comparison between the G4C and e-guvernare projects is that in order for infrastructure to be developed and interoperability enhanced, the development of infrastructure must be marked as an area of strategic importance by politicians, perhaps even more so in less economically developed contexts. As such, this point also implies that timelines for the implementation of participatory applications of e-government are best considered from a long term perspective; particularly in contexts where resources are scarce, such as Romania. As was the case in South Korea, participatory applications of e-government were signaled by politicians and bureaucrats as *a long term objective* and as such, politicians and bureaucrats in the Korean government first concerned themselves with satisfying associated necessary pre-requisites first, as opposed to simultaneously pursuing both objectives. Indeed, evidence of this point can be found from government documents dating back as far as 1995, a point in time at which South Korea's economy was considerably smaller than it is today (Ministry of Public Administration and Security, 2011). At this time, acknowledging limited resources, but also acknowledging the desire to use information and communications technology as a means of enhancing levels of citizen participation, the government pieced together what it viewed as a gradual, yet achievable plan. Often times, international organizations tend to push for rapid adoption of participatory applications of e-government in an effort to consolidate and enhance the quality of democracy. Such arguments are applied indiscriminately by international organizations to wealthy and poor nations alike (UNPAN, 2010). In the case of Romania, the European Union played an important if not decisive role in accelerating Romania's adoption of a participatory e-government program, when in fact such course of action appears to not only have been ineffective in achieving enhancements to democracy, but also resulted in the inefficient use of resources.

A final point that bears mentioning here and which again relates to political and economic factors concerns the way in which benefits associated with participatory applications of the e-government applications were framed by the actors involved. In the case of South Korea, the G4C project was argued by its founders to serve as a primary means of enhancing government competitiveness via enhanced provision of public services, which in turn would stimulate economic benefits. As such, the objective of the G4C was framed in narrow terms, and associated with set of tangible benefits, in addition to various intangible benefits. By contrast, the e-guvernare project framed its benefits in more ambiguous, less tangible terms, ranging from European Union accession, to enhanced democracy, to happier citizens. Subsequently, the way in which benefits associated with the e-guvernare project in Romania were more open to debate, and therefore frequent change. Consequently, maintaining a coherent vision for the project proved difficult. The point suggested here is that the way in which the benefits associated with participatory applications of e-government are framed are likely to have a major influence upon the political context the application is implemented in. To this end, vague sets of benefits may enhance the extent to which political debate occurs over such projects, whereas more concrete and specific benefits may be more difficult to debate and translate into greater consistency and simply the formulation of a long term plan.

6.   Conclusion

This research contributes to e-government research in two ways. First, this research has attempted to better understand conditions conducive toward the viability of participatory applications of e-government. At present, literature related to e-government has treated the concept of e-government as an aggregate concept, yet with the passing of time and the advancement of technology applications of e-government are becoming more diverse, thereby requiring scholars to focus their research upon particular applications of e-government in order to be useful. Moreover, given the widespread calls for greater participatory applications of e-government, comparative research addressing successful and less successful participatory applications of e-government is much needed. In comparing the cases of participatory e-government projects in Romania and South Korea this research suggests that long term planning, which is related to a nations political context, is fundamental to the success of this variety of e-government projects. From long term planning factors associated with the nation's economic context

can be better accommodated and necessary pre requisites met in a feasible fashion, thereby ensuring the viability of eventual citizen participation. Conversely, participatory applications are likely to be prone to failure if they are rushed. Moreover, the successful creation of such a long term plan is likely to be associated with the way in which benefits stemming from participatory applications of e-government are framed. To this end, the more concrete and unambiguous, the better.

The second contribution of this research to existing literature is that this research builds to the existing body of knowledge related to e-government in Romania, which is under researched in the English language. Moreover, this research compares e-government in Romania to that of South Korea, a nation well known for its e-government. Through such a comparison, it is possible to how differences and similarities between the two cases contribute toward to the successful adoption of participatory e-government applications within the two nations. The findings resulting from such a comparison are fairly intuitive and possess a universal nature, implying that they should also be easily generalizable to participatory applications of e-government throughout various contexts, ranging from wealth advanced nations to those with fewer resources.

7. References

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