E-government implementation strategies in developed and transition economies: A comparative study

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ABSTRACT

In the last decade, electronic government in Europe has emerged and established itself as a viable alternative channel for public service delivery. While e-government has now matured in most developed European countries, transition economies in Europe, have only recently begun to recognise its potential benefits and incorporated e-government as part of their national strategy. Although time may result in the amplification of e-government experience for transition economy countries, lessons drawn from developed countries indicate that political, fiscal, social, strategic and organisational issues need to be addressed when formulating plans for deploying e-government. Using case study research, this paper examines strategies adopted by the UK and Slovakia in the context of e-government implementation. Particularly, the paper examines how the perspectives on e-government vision, strategy, focus and related organisational change influence the implementation and diffusion of e-government in developed and transition economies in Europe.

1. Introduction

The Internet has offered the opportunity to all public sector organisations, including Local Government Councils (LGC[1]), to modernise and achieve citizen-centred services through cohesive policies and programmes that join-up service delivery across local government (Newman, Raine, & Skelcher, 2001; Weerakkody & Dhillon, 2008). Although many countries have now successfully implemented e-government, in most countries the focus of e-government has been to e-enable existing front office processes in their current state without significant improvements or efficiency gains (Irani, Elliman, & Jackson, 2007; Weerakkody & Dhillon, 2008). Consequently, many of these governments are now embarking on the transformation of their internal inter departmental and external inter organisational business activities through utilising various ICTs. In Europe, the governments in developed economy countries (DECs) are pursuing a far-reaching and ambitious programme of innovation and radical change in the public sector aimed at transforming services (Beynon-Davies & Martin, 2004; Weerakkody, Janssen, & Dwivedi, 2011). On the other hand, transition economy countries (TECs) such as Slovakia in Eastern Europe have started somewhat less ambitious initiatives to improve public services that are very much focused on ICT enabled incremental change as part of their national agenda for public sector transformation (Ministry of Finance of the Slovak Republic, 2008). Irrespective of the nature of these programmes, the changes are branded under the umbrella of e-government. The incentives for implementing these changes have been motivated by the desire to improve efficiency and to reduce costs and wastage for government and introduce citizens' centric public services at local level that are transparent and accessible. Yet, very few LGCs throughout Europe have realised these objectives.

While majority of the studies that have been conducted to understand the reasons for such a lack of success have been largely focused on developed European countries, there has been limited research focused on understanding the impact of e-government in TEs. As part of their study, Rabaiah and Vandijck (2009) examined the e-government strategies of the European Union countries and concluded that most of these strategies lacked a strategic framework. This lack of e-government frameworks was also highlighted by Zarei and Ghapanchi (2008). This research gap is particularly critical given evidence that TECs in Europe have been lagging in electronic service delivery despite over a decade of implementation efforts (UN, 2010). In addition, according to the United Nations e-government development rankings, TECs in Europe have made very little progress in their e-government implementation efforts (Ibid).

Given the aforementioned context, this paper aims to provide a comparative study of the strategies for e-government development and implementation between the UK (DEC) and Slovakia (TEC) to: (a) better understand the challenges that both transition and developed economies face in their efforts to implement and

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[1] Local Government Council in the UK is equivalent to a Municipality in Slovakia.

diffuse e-government, and (b) identify lessons that will enable TECs to develop appropriate strategies for e-government implementation and diffusion. In this respect this paper will aim to examine e-government implementation strategies in the UK and Slovakia and draw lessons on how national strategies are interpreted at local level during implementation in the two different economies in Europe.

In order to realise the above aim, the paper is structured as follows. The next section offers a literature perspective of ICT implementation and use in TECs. Section three then provides a background to the formulation of effective strategies for e-government through the literature offering an overview of e-government development and implementation in both the UK and Slovakia. Section four presents an outline of the research strategy adopted for this study. Next, a comparative case study presents the results of empirical findings of e-government implementation and diffusion strategies in the UK and Slovakia. This leads to a discussion in the next section that synthesises the literature with empirical findings comparing. Finally, the paper concludes by presenting the key contributions that can be drawn from the study and offering pointers towards future research.

2. E-government implementation and exploitation in developed and transition economy countries: a literature perspective

Management styles in transition economies differ substantially from those in developed economies as the planning and control in transition economy countries were usually dominated by state-owned firms in the past with only a marginal private business sector (Roztocki & Weistroffer, 2008). In fact, Kuhlenbruck, Meyer, and Hitt (2003), argue that the collapse of many formerly state-owned organisations in Central and Eastern Europe's TEs may be attributed to failed organisational learning and the lack of effective IT support.

In most developed European economies, e-government implementation has advanced significantly in terms of the complexity (i.e. single point of access for all services) and user centricity (i.e. the level of personalisation) of the services offered. Further, countries such as the UK have now moved their focus from e-government (i.e. e-enabling customer facing processes) to radically reengineering their internal operations to further transform the way services are delivered to citizens and reduce costs for the public organisations delivering the services (Beynon-Davies & Martin, 2004; Daniel and Ward, 2006; Weerakkody et al., 2011). Consequently, this has seen e-government implementation efforts in developed European countries move from cataloguing basic government information in the late 1990s to providing more interactive and citizen centric services to citizens. However, prior research shows that there are considerable governance, organisation, business process and technology barriers that need to be overcome when ambitious national strategies for e-government are interpreted into implementation plans and projects at local government level (Van Veenstra, Klievink, & Janssen, 2011; Weerakkody et al., 2011). In this respect, it can be argued that e-government implementation efforts in DECs in Europe offer many lessons for TECs who are still comparatively at the early stages of e-government implementation.

While there is an abundance of literature on the implementation and adoption of e-government in developed economies, there is comparatively very little research on transition economies. Researchers such as Roztocki, Weistroffer, Monar, and Nasirin (2007) and Arogyaswamy and Koziol (2005) attribute this to that fact that most past research activities in transition economy countries, particularly in Eastern Europe, were controlled by central government administrations and was often directed to other fields

rather than IT, such as physics and chemistry. Recently, various researchers have recognised this research gap and carried out studies in an attempt to highlight key issues surrounding the impact of ICT on the public sector in TECs. For instance, Kubiatko and Halákova (2009) studied ICT adoption in secondary education environments in Slovakia. Samoilenko (2008) conducted a study of factors that affect the efficient utilisation of investments in telecoms in the context of TECs and Myrtidis and Weerakkody (2008) examined the strategies adopted by state financial institutions in TECs when implementing ICTs. Hovelja (2008) examined how key challenges to ICT adoption identified in previous studies by the OECD relate to TECs in the context of Slovenia and Janson, Cecez-Kecmanovic, and Zupancis (2007) explore how ICT can facilitate organisational learning in the same country. While such studies have been more focused on specific TEC contexts, other broader studies have also been conducted that offer useful insights for the present study. For instance, the early studies by Muller (2002) is very relevant for the research discussed in this paper as it reports on Internet use in TECs across Central and Eastern Europe. Similarly, Piatkowskim (2004) reports on the impact of ICT on growth in TECs through a comprehensive study of central and Eastern European countries.

While these studies are encouraging, it is hard to ignore the fact that most TECs have often relied on business models and ICT strategies that were designed for developed countries. Roztocki and Weistroffer (2008) argue that many business models or strategic tools developed and used in the business environment of developed countries are of limited validity and offer limited applicability in TECs. While this is very true, there are also many applications of e-government that are universal and can easily be replicated at a user or citizen level to diffuse basic public services that are common to most countries irrespective of their economic status (Weerakkody & Dhillon, 2008; Weerakkody, Karunananda, & Dwivedi, 2009). At the same time, it is hard to ignore differences and barriers to adoption of such e-government services between developed and transition economy countries that are caused due to issues such as digital divide (see Carter & Weerakkody, 2008). However, Roztocki and Weistroffer (2008) concur that although individual possession of ICT in TECs may be modest, a substantial portion of the population access the Internet through workplace, family, friends, Internet cafes, public libraries, and other means. However, Hovelja (2008) cautions that TECs should be selective when implementing ICT solutions in organisations and not fall victim to large multinational vendors whose solutions may not always fit with the goals and objectives of TECs.

The above literature confirms that although there are many studied on e-government implementation in DECs, most studies on TECs in the public domain are focused on traditional ICT implementation rather than e-government. This confirms the arguments presented before that e-government implementation is still maturing in TECs and suggests that empirical research is needed to explore and analyse the implementation strategies adopted by TECs. In this respect, the lessons that DECs offer can be a further source of knowledge and contribution towards the understanding of e-government implementation in TECs.

3. Formulating effective strategies for e-government

One of the most prominent factors contributing towards the success of e-government has been the adoption and diffusion of services offered online (Moon, 2002) which are aimed at helping the enhancement of public service delivery systems (Lean, Zailani, Ramayah, & Fernando, 2009). Previous studies have shown that it is imperative to have an overall well thought out and robust strategy for establishing an e-government vision at the

national level (Information Service Division, 2002; Irani, Love, & Jones, 2008). The plan of action for e-government according to Lowery (2001) should include the following: a clear definition of e-government that covers key areas to be addressed and identification of all customers; a vision that is easily understood and succinctly expresses the concept of and plans for e-government; specific goals and objectives that can be monitored and measured; and identification of policies necessary to support e-government. Holmes (2001) argues that from the various e-government strategies and actions there are five underlining principles emerging: put information and services online and do everything online; ensure easy and universal access to online information and services; skill government employees to be knowledge workers; work in partnership to make it happen; and remove barriers and lead by example.

3.1. The UK strategy for e-government implementation and diffusion

Although the delivery of e-government services in the UK is one of the most advanced in the world (UN, 2010), a study by the OECD (2009) found that only 32% of the UK population is using e-government services. Official efforts to implement e-government in the UK began in 1997 when the government proposed plans to provide access to all public services through a single government web portal called *Directgov*. In terms of providing direct support to Local Government Councils (LGCs) to achieve their e-government programmes, two specific units were set up: (i) an e-government strategy support unit, which offered guidance on implementation, procurement, collaborations, tracking progress and learning from other industries such as technology; and (ii) an e-government implementation unit, which offers individual support to meet e-government targets and provide onsite programme and project management assistance (Cabinet Office, 2007).

To reach the e-government vision in the UK, the government has developed a cohesive strategy with strong leadership and a clearly articulated action plan that leverages the resources of the private sector (Accenture, 2003; Weerakkody & Dhillon, 2008). The UK initiated broad changes to its e-government program in 2004. Along with significant increases in expenditure on IT and progress on a number of high profile programmes, a new vision for ICT was developed which was spearheaded by a dedicated unit responsible for e-government (Accenture, 2005). In addition, The UK has always been conscious that e-government is a means to help drive the local policy objectives of mainstream services, release efficiency gains and achieve tangible improvements in terms of shared priorities agreed between central and local government (ODPM, 2005).

Around 2007, the emphasis of e-government in the UK shifted from e-enabling front office processes to transforming internal operations to realise more efficiency gains and cost reductions (Irani et al., 2007; Weerakkody & Dhillon, 2008). This new focus on e-government implementation was aimed at achieving three key changes in strategy. These include implementing ICT enabled services that are designed around the citizens, moving towards a shared services culture, and expanding government's professionalism in terms of planning delivery, management and governance of IT-enabled change. In this context, with its recent e-government strategy, the UK government has attempted to fundamentally change the way in which ICT is used in order to achieve joined up working between different parts of government and provide new, efficient and convenient ways for citizens and businesses to interact with government (Beynon-Davies & Martin, 2004; McIvor, McHugh, & Cadden, 2002; Weerakkody & Dhillon, 2008).

3.2. The Slovakian strategy for e-government implementation and diffusion

The Slovak Republic has a dual system of public administration, consisting of state administration and self-government. The fact that Slovakia is divided into a number of regions is focused on introducing the concept of self-government (Slovak term "samo-sprava" meaning home rule). Although e-government was initially introduced to the Slovak public sector around the same time as the UK (late 1990s), the strategy for implementation, resource allocation and commitment from respective governments was lacking in the early stages. Nevertheless, recently a number of strategies have been adopted by the current central government that are focused on accelerating the progress of development and implementation. A strategy document was approved by the Slovak parliament in February 2008 which defines the vision for e-government in Slovakia until 2013 as well as identifying the needed steps that are expected to lead the modernisation of public administration services. Consequently, the national strategy for e-government was developed and introduced (Ministry of Finance of the Slovak Republic, 2008). As a result of the aforementioned developments, recently there have been some signs of improvement in the central government strategy towards more transformational e-government; for example, the central public administration portal (portal.gov.sk) was established in 2006. This portal has been built as a one-stop-shop providing access to information sources and services delivered by individual public administration institutions.

Although the financial resources are now in place for e-government in Slovakia, questions still remain as to whether the government and related stakeholders have learned from their past failures (and successes) and accordingly set appropriate goals as part of their strategy and plans for e-government. Little evidence is seen in terms of progress; according to the United Nations e-government survey in 2010, Slovakia was ranked 43 in 2010, five places down from 2008 when the country was ranked 38 (UN, 2010). Conversely, other independent reports such as the 8th benchmark measurement study by Capgemini published in 2009 suggests that Slovakia is one of eight 'fast growers' in terms of sophistication and growth in Europe but at the same time offers a mixed picture as it has average internet use and low broadband access, high e-government use by businesses and low usage by citizens (CapGemini, 2009).

In Table 1, the authors synthesise the contextual background of ICT and e-government in the UK and Slovakia from a literature perspective where the strategic and practical considerations of e-government implementation are comparatively outlined. This comparative analysis is based on e-government vision and focus, implementation issues, changes to strategy, the impact of ICT and the need to understand citizens' needs on e-government implementation and diffusion,

4. Research method

The focus of this research is to provide an empirical comparative study of the strategies adopted for e-government implementation and diffusion between developed (UK) and transition economy (Slovakia) countries in Europe. The only sources of published information on e-government in the UK and Slovakia are official government reports and publications. Despite their significance, these publications provide a limited picture of the current situation in both countries in adequate depth. This study uses an interpretivistic qualitative research approach (Creswell, 1994; Creswell & Clark, 2006; Miles & Huberman, 1994; Myers, 1997; Walsham, 1995) utilising semi-structured interviews in addition to utilising a number of secondary resources. Therefore, data collection and

Table 1
Comparative analysis of the government perspective on e-government implementation and diffusion strategy in the UK and Slovakia.

	United Kingdom	Slovakia
The national perspective on e-government implementation		
Vision	A modern, efficient government which meets the needs of citizens and businesses and utilises the benefits of latest developments in e-business	Modernising the public administration services through adapting a national strategy for e-government to enable citizen-centric services
Focus	Government portals and links to private sectors to be implemented and to have all government services accessible electronically by citizens; focus on improving existing services and redesigning government structures	Single portal concept to provide links to public services so that citizens and businesses can access all government services electronically using one location
Implementation	The office of the deputy prime minister developed a common model to help local councils to understand the picture of the local e-government strategy, analyse the current position and implement these strategies	Discontinuity in strategic planning and implementation of e-government – this is caused by a lack of political consensus. E-government strategy tends to change when there is a change of government depending on political preferences
Changes	The office of e-Envoy was established in 1999 to encourage the UK population as a whole to get on-line and work with local councils to make *all* government services available electronically by the end of 2008. Since 2007, the UK government changed the emphasis of e-government to transformational government with a view of reengineering back of processes and IS/IT systems to improve efficiency and cost savings	The creation of the 'Operational Program Informatisation of Society' (OPIS) in 2009 has resulted in renewed motivation and accelerated efforts to implement e-government services across local government municipalities, but there are no visible signs that, when developing and implementing e-government solutions, existing good practices from other countries are being adopted to prevent reinventing the wheel
Impact of ICT	Electronic services should be seen as an enabler for citizen centric services in terms of accessibility and availability. However, it should not be seen as the only channel for offering public services at local level	Although the impact of ICT is recognised as strategic for facilitating electronic services, local government seems to see a need to implement physical front office services that mirror a one-stop concept
Understanding citizens' needs	Acknowledgement of the need to engage citizens is clear in the national strategy for e-government development and implementation and there is evidence of various local government initiatives to engage citizens	General lack of tradition of the Slovak public administration in focusing on citizen-centric services is hindering e-government efforts and no efforts were evident in engaging citizens when implementing and delivering such services

analysis follows suggestions made by Markus (1983), optimising both primary and secondary data resources to understand the strategic perspective of the government throughout its recent implementation strategies on e-government which conform with the aim of this paper. Hence, the authors decided to undertake a single case study in each country, with the intention that the one case study would provide richness and help generate a more substantive framework (Irani, Love, Elliman, Jones, & Themistocleous, 2005).

As suggested by Currie (2009) multiple levels of analysis were used in the empirical inquiry to reflect the similarities and differences in these two different contexts. In this respect, a semi structured interview approach was followed for data collection (Yin, 2009). In the UK, one strategic, two middle and one operational level experts were interviewed in a large local government agency between the periods of August to September 2009. In Slovakia the interviews were limited to one key senior executive responsible for e-government implementation due to time and accessibility constraints. This interview was conducted in September 2010. However, a large number of official strategic documents were made available to the researchers in Slovakia to complement the interview data. This guide was based on the conceptual analysis of strategy formulation for e-government implementation and diffusion discussed in Section 3.

Access to the interviewees in both the UK and Slovakia was gained through personal contacts and the researchers had the interviewees' permission to use a tape recorder. In keeping with ethical protocol, the interviewers ensured that the interviewees were fully informed about the purpose of the interviews, and took steps to put the interviewees at ease so that a two-way, open communication climate existed. Subsequently, email exchanges and telephone calls were used more than once to clarify any unclear information (Walsham, 1995; Yin, 2009). All interviews were recorded with permission from the participants and transcribed for qualitative analysis. The interviewees were given the transcripts to check and resolve any discrepancies that may have arisen and to eliminate any bias (Irani et al., 2005; Jick, 1979). The mixed nature of resources

that were used in this comparative study allowed the authors to maintain an adequate level of data triangulation which was deemed to be important in tracking the variation between primary and secondary data and thus improving the accuracy, interpretation and analysis of the collected data (Mingers, 2001). This ensured that no bias emerged from either the participants or the researchers (Yin, 2009).

A variety of secondary data source such as internal reports, other publications that form part of the case study institutions' history and past project documentation and strategy documents offered further information and context for the study (Irani et al., 2008) and allowed for additional triangulation and validation of the findings (Miles & Huberman, 1994; Yin, 2009). The data analysis process was done manually and began by examining the verified transcripts for emerging themes. These emerging themes were identified by scanning for direct quotes and keywords that were associated with e-government strategy and related themes. Finally, these themes were mapped against the conceptual analysis presented in Sections 2 and 3 of the paper (which was summarised in Table 1) to maintain further verification through cross checking against the individual empirical source.

5. The empirical perspective of e-government implementation strategies

5.1. E-government implementation and diffusion in the UK (LGC_UK)

Due to confidentiality reasons, the authors use the coded name LGC_UK, to refer to the first case organisation from the UK region (a developed European economy). This case organisation is situated in London and is home to a vast population (over 200,000). LGC_UK has been ranked highly in terms of e-government service delivery among other local authorities in the UK by the Audit Commission. LGC_UK has a collection of e-government services including online council tax payments, payments of housing benefits, environmental services, request for pest control, property services, planning

permission applications and licenses to name a few. Furthermore, LGC_UK has agreed a strategy that will bring together back-office services of each directorate in a single site and create up to four 'first stop shops' and joint service centres to provide front-office services.

Interviews were conducted in LGC_UK with its CIO (Chief Information Officer) and Head of Information and Customer Services (ICS), E-Government Officer (EO) and the Corporate Services Manager (CSM). The key findings from these interviewees are summarised in the following paragraphs. The interviews identified the Involvement of key stakeholders (employees, IT consultants, citizen groups, local councillors) in the council's ICT and business transformation strategy as one of the key factors for e-government implementation success in LGC_UK. The head of ICS suggests that LGC_UK has reengineered most of the legacy IS/IT systems to facilitate electronic service delivery. The head of ICS stated that LGC_UK "*is using a service-oriented architecture approach for its transformational government agenda and he also highlights that it is an ideal approach to use*". On the other hand, the Corporate Services Manager highlights that "*some key services are integrated with other services, however most services were re-modelled from scratch like for example HR, payroll and procurement*". In order to do this, LGC_UK involved key stakeholders in the process of re-modelling functions from scratch and the use of a SAP ERP system to integrate the various functions.

Another key issue that was highlighted was the use IT as an enabler for citizen-centric services. The EO highlighted that "*a one-stop-shop concept is mainly up to the citizen to decide if they wish to use one channel for all public services. In this respect IT must be used as an enabler so that when a citizen wants to, he/she can access services through the channels they prefer. Otherwise you go back to the old approaches of local government where there are restrictions on how citizens can request services. So, ultimately citizens should have a choice of what channel of communication they best prefer to communicate with the council*". As such, understanding citizens' needs in relation to e-government is critical in terms of promoting citizen-centric services. The CIO suggested that, "*LGC_UK left behind all mainframe legacy systems in 2002*". Part of the strategy at LGC_UK is to replace computer hardware every three years and by collaborating with voluntary agencies, the council shares information and recycles old systems so that people in the community such as elderly people that have not got access to computers and the Internet can benefit from e-government services. As the CIO pointed out, "*ultimately, as a council we must offer a range of methods of interaction for citizens to engage with the council. We have to measure the take up of what we propose to change in the organisation, in order to be successful*". In terms of best practice, "*local authorities need to understand their population and see what people want out of e-government services and design services around them, thus this is the key to achieving transformed services in our experience*" (CIO).

Interviews also highlighted the importance of maintaining successful collaboration and integration internally between business units in the government agency and externally with different stakeholders outside the public sector. The head of ICS suggests that he is interested in the partnership and sharing of information between LGCs and external voluntary agencies and private sector agencies. 'LGC_UK Direct' is the first point of contact for citizens online. Currently, the EO is "*working on finding what citizens' want out of the e-government concept and services are being designed around citizens' needs, in order to support the UK transformational government agenda*".

In terms of transforming public sector organisations from a silo based institution to a process based one that is capable of delivering e-services, organisational culture appeared to be one of the biggest barriers that the public sector is facing. According to the

CSM, since of late people are more accountable and motivated towards their work and the front line people are working differently. Conversely, "*the trust issue is a challenge because when you start sharing; some people have a 'me and my' mentality; however the culture has changed to, 'this belongs to us' as a whole and not individual departments*". As a result this is what is "*opening up departments towards sharing* (CSM). It was clear that culture is a big change barrier in the transformational government agenda. The head of ICS stated that "*it's about changing people's attitudes towards change and breaking the silo mentality they have; it is about seeing transformation as a positive advantage for the organisation as a whole. . . we are now beginning to break down the silos of cross departmental sharing.*" Consequently, involving people in change using training incentives becomes a necessity in order to overcome these cultural barriers. The head of ICS pointed out that "*we have had problems in the past with our CRM system but we know where the barriers are and we are dealing with them . . . We are coming closer to understanding and building upon the relationship of collaboration in the context of transformational e-government. However, we still have a long way to go . . . In terms of getting people within the organisation involved in the change initiative we offer training and support. We explain why we are making the changes to people in the organisation so that we can get them on side. LA1 was a poor performing council and this practice of involving people and training them actually helped in changing work practices*".

The above findings clearly indicate that LGC_UK were very ambitious and keen to implement e-government. As such, they have formed a team around committed individuals who were driving the initiative through adopting a strategy of education, training and collaborative working. The interview finding indicate that although the national strategy for e-government sets out the overall vision, at local government level, implementation strategy and efforts are very much oriented towards delivering services that are focused on local community needs and expectations. Furthermore, it is also fair to suggest that implementation strategy was mainly shaped by prior experiences as well as the expertise of the project managers and those individuals directly involved with e-government efforts in LGC_UK.

5.2. E-government implementation and diffusion in Slovakia (LGC_SLOVAKIA)

Like the UK case study, due to confidentiality reasons, the authors use the coded name LGC_SLOVAKIA, to refer to the second case organisation from Slovakia (a transition economy). LGC_SLOVAKIA is one of the largest cities in Slovakia with a large population (over 200,000 citizens). LGC_SLOVAKIA is considered as one of the leading municipalities in using ICT to deliver public sector services. LGC_SLOVAKIA has been ranked in the top five in 2009 for excellent public service delivery. LGC_SLOVAKIA's first online presence was in 1997, and since then the city representatives have been working on improving the municipality's e-services. For example, recently a front office of the municipal government, based on a 'one-stop-shop' approach was introduced. According to LGC_SLOVAKIA strategy documents, the main aims of the city in the area of e-government are: increasing satisfaction of citizens and businesses with public administration services; digitization of public administration processes; increasing efficiency and performance of public administration; and capacity building of public servants.

Interviews with the Chief Information Officer (CIO) in LGC_SLOVAKIA suggested that although new strategic plans are in place for online services, there are still some difficulties in developing and implementing e-government at local government level. In this sense, the CIO referred to the introduction of the electronic forms (e-forms) service in 2009 to LGC_SLOVAKIA in which it aimed

to provide 18 electronic '*intelligent forms*'. He pointed out that since its inception in 2009, there have been only 70 users who used this service. He continued by identifying the reasons behind such failure is due to the fact that (a) the service was not promoted through the right communication channels, and (b) although citizens can download, fill and print the form, they still need to submit it physically. Nevertheless, the CIO pointed out that the "*e-forms were just the first step for e-government in LGC_SLOVAKIA. We have initiated a number of other projects to expedite the implementation process of e-government services with a total budget of 4 million Euros which is maintained under the Operational Program Informatisation of Society (OPIS) which was formed in 2009*". In addition, the CIO stated that "*the general aim of these projects is to implement 94 electronic services*" (the full set of services in Slovakia is estimated to be 140). According to the CIO, these new projects will focus on fifth generation services which will aim to deliver personalised services to citizens for the first time.

Within the OPIS project proposals development, an analysis of all processes in the LGC_SLOVAKIA municipal government area was done by involving all key stakeholders within the municipality. All heads of departments participated in this process and were asked for personal opinions to formulate the development and implementation strategy. The CIO pointed out, "*all processes, experiences and requests were collected and, if possible, also incorporated into the project proposal*" The interview also clarified that LGC_SLOVAKIA was keen to cooperate with other public agencies and municipalities in Slovakia to share experiences and good practices. In this respect LGC_SLOVAKIA cooperates with Bratislava city (the capital of Slovakia) in the implementation of e-government solutions particularly for internal administrative processes such as taxation and accounting. In addition, a platform was set up with the Association of IT Officers in Municipal Governments of Slovakia to facilitate good practice exchange and experience sharing. The CIO pointed out that these are two rare local examples and expressed disappointment that best practices were not shared at a wider national and European level, particular between developed and transition economies.

A successfully case of service delivery in LGC_SLOVAKIA was through a physical front office that was set up as a one-stop shop for citizens. The CIO explained that all public services provided by the city are accessible in this one-stop front office. According to LGC_SLOVAKIA estimates, in 2009 more than 100,000 citizens visited this front office. All internal departmental information resources and processes are now accessible from this front office. According to the CIO, ICT will be used to e-enabling this one stop concept where services will be designed around citizens needs and delivered online as the next stage of LGC_SLOVAKIA's e-government plan. As stated by the CIO "*for the time being we miss the interface of electronic communication with the citizens*".

One of the other factors that were highlighted during the interview is the need to reduce the organisational and cultural barriers in e-government implementation. The CIO pointed out that LGC_SLOVAKIA were faced with strong resistance during the implementation of new information systems. According to the CIO "*technical implementation is not difficult, but the most difficult thing is to persuade people to accept new systems*". As it was pointed out by the CIO "*Most of the city servants were (and still are) used to the traditional public service work practices and structures – these people have been working for the city since the time when there were no computers. Their 'ceiling' of IT skills is very low and they have problems working with new software or even when the design of an interface is changed. However, younger generation city servants have no problem in using new IT systems*". The CIO suggested that senior management in LGC_SLOVAKIA on the other hand strongly supported the introduction of new information systems, which made the whole process somewhat easier to manage. Further, it was revealed that the IT department is now supporting all city servants by frequently organising and providing training to current staff.

6. Discussion

This research has shown that although the high level vision of e-government is the same for many countries, the implementation strategies, plans and focus vary between countries. It was found that while local municipalities in Slovakia are focused more on local government modernisation, automation and rationalisation of procedures, in the UK they are focused on reengineering back office processes and change management. From a tactical perspective, both national and local strategy was seen to be more important in the UK, a developed economy, than what it is in Slovakia, a transition economy. The dependence on external funding from EU, digital divide, delivering citizen-centric services, lack of skills, resistance to change and providing the needed training to employees were seen as the most important challenges highlighted by local municipalities in the transition economy (Slovakia). However, in the developed economy (UK) local councils considered raising citizens' awareness of e-government and offering a choice of methods for citizens to engage with government among their key challenges. From an organisational change perspective, interviewees in both case studies confirmed that e-government has implemented a comprehensive paradigm shift to their way of working.

Further, when comparing the empirical research findings to the literature, there is a similar focus and level of importance in the different e-government strategies for implementation and diffusion from both a theoretical and practical perspective. However, strategy and organisational change are two topics that are seen to be more important theoretically (Earl, 1993; Galliers, 1991; McFarlan, 1971; Sambamurthy, Zmud, & Byrd, 1994) than what was actually found in practice. With regards to good practice, this research indicates that e-government should be defined with cues such as customer/citizen oriented local government, service delivery using a 'one-stop' concept, change of work processes and the use of ICT to maximize service efficiency and cost savings. Local agencies have come further in the UK than in Slovakia and this is attributed to two reasons: (a) the UK has a local strategy promoted by the government which the local agencies are guided to follow and (b) the UK has had strong leadership from the start of the e-government initiative in 1999 compared to Slovakia.

Having presented the findings, it is clear that countries in both developed and transition economies consider e-government as a national priority. However, as expected, their focus, strategies and implementation plans differ from each other. What is common though is that, in their e-government implementation, both the UK and Slovakia are focusing on building services around the citizens' needs and making government and services more accessible with the use of ICT. While the UK strategy has stronger guidelines at local level, the status of e-government in Slovakia can be described as "ready for development or improvement". The current level of e-government services in Slovakia is still modest compared to the EU average. While local governments in Slovakia have a unique chance to develop their e-government services to catch up with other EU countries, the Slovak government is still dependent on EU structural funds. Sadly, this implies a very high risk for future sustainability of e-government in Slovakia.

A key lesson that emerges from the study is that, in comparison to the developed economy, the transition economy country has not had strong leadership to push the implementation of e-government forcefully. It is widely accepted that e-government was not on top of the political agenda in Slovakia until 2009 and there was no high level 'IT champion' who would promote and push through the e-government agenda at the highest political level (this can be at

Table 2
Empirical perspective of e-government implementation and diffusion strategy in local government in the UK and Slovakia.

	United Kingdom	Slovakia
Empirical perspective of e-government implementation strategy		
Vision	Facilitating e-government through the implementation of enterprise-wide cooperate information systems to integrate front and back office processes	Facilitating the provision of personalised e-government services through sharing of experiences and best practices among municipalities
Focus	Initial focus was to offer 'one stop shop' concept to diffuse e-government services. However, due to low levels of citizens adoption, local councils are adopting various channels (such as face to face, mobile, digital TV, social media) to engage with citizens	Focus on improving the satisfaction of public services among citizens and businesses using the concept of 'one stop shop' to diffuse e-government services. Currently, this is achieved using a physical office rather than through an online service
Implementation	Combining business process re-engineering techniques and service oriented architecture approaches to improve existing processes and supporting legacy systems	Implementing new information systems to automate traditional public sector services and to introduces interactive online services
Changes	While the initial focus of e-government implementation was centred on a 'one-stop-shop' concept, in recent times a multi-channel approach has been adopted to encourage citizens engagement	Focus on a 'one-stop-shop' concept for all e-government services, but forced to adopt a more step-by-step (incremental) approach for e-enabling local level services
Impact of ICT	Local councils have worked closely with large software and technology vendors to integrate and utilise existing legacy systems with new IT systems	Local municipalities have focused on utilising ICT to automate existing traditional processes, but are faced with resistance from management and employees to adopt new IS/IT systems
Understanding citizens' needs	Acknowledgement of the need to engage citizens is demonstrated through proactive collaboration and engagement with citizens through various channels	Although the national strategy for e-government focused on offering personalised services, no efforts were evident at municipality level to engage citizens when designing and implementing online services
Practical considerations for e-government		
Collaboration	Local councils have established working partnerships with neighbouring councils, local NGOs and citizens groups to deliver more comprehensive and citizen centric services	Lack of proactive collaboration and coordination between municipalities and other relevant stakeholders (citizens, NGOs, technology providers etc.) has resulted in delays and new challenges for e-government implementation
Organisational culture	Employees are encouraged to participate in the changes that are implemented within local councils and training is provided to equip employees with the needed skills	Lack of employee participation in change and incentives to promote participation (i.e. training) as well as ineffective communication between senior management and lower level employees is resulting in user resistance
E-government implementation expertise	Adequate skills and human resource capabilities were evident at local level to support the development and implementation of e-government services and the resulting back office process reengineering tasks that were needed to support these services	Insufficient human resources and lack of e-government and project management experts and professionals at all levels of public administration was seen to hinder implementation and diffusion efforts at national and local level

least partly explained by the fact that in the past there were more urgent political, economic, and social reforms with higher priority in transition economy countries). As such, the responsibility for e-government has moved several times from one government to another (due to political change), accompanied by lack of coordination, insufficient management and no clear definition of roles and responsibilities.

However, with forming of OPIS in 2009 in Slovakia, there has been a stronger focus on implementation recently. In contrast, the UK government has had a business unit responsible for ICT and e-government since 1999. From the information gathered during the interviews and secondary research in the UK and Slovakia, the main features that characterise the e-government initiatives are mapped against the conceptual analysis of e-government development and implementation strategies outlined in Table 1. In this respect, Table 2 offers a high level comparison of the two countries' e-government efforts from an empirical perspective.

As indicative in Table 2, the empirical research in the study exposed a number of practical issues that needed consideration. Organisational culture has emerged as one of the fundamental issues that impact the implementation of e-government

specifically at the local level. In particular, senior management's approach to realising change was seen as a key enabler as much as a barrier towards successful e-government implementation. In addition, collaboration between local government agencies and with stakeholders plays an influential role towards the successful diffusion and adoption of e-government services (Rowley, 2011). Besides, it was noticed that the level of e-government development and implementation expertise and support has a significant impact on the progress of e-government at local government level. In this respect, appropriate strategies to train and skill local government employees was seen as an imperative to ensure proactive participation in change.

Furthermore, as outlined in Table 2, the central government has pushed the local authorities in the UK to: (a) collaborate with other local agencies, (b) improve information sharing within departments and with other local agencies, (c) provide better coordination of business processes and (d) provide integrated service delivery (Beynon-Davies, 2005). In doing so, LGC_UK officials believe that to achieve this, a flexible and integrated e-government infrastructure is required to: (a) enable web based transactions, (b) improved service delivery, (c) improve performance management and knowledge and (d) improve the robustness of business processes. In this

context, LGC_UK adopted well known off-the-shelf enterprise systems to facilitate this change.

On the other hand, government reports indicate that Slovakia is lagging behind in the delivery of e-government due to a number of factors. It is accepted that the concept of e-government is ill-defined in Slovakia and at the same time is not harmonised with EU terminology. This is further compounded by the lack of sufficient legal frameworks that interlink existing legal norms and regulations with their corresponding ICT applications and e-government throughout the various public administration areas. It is also acknowledged that the current status of ICT infrastructure is insufficient for provision and use of transactional electronic services. In terms of e-government adoption, evidence in Slovakia suggests that the digital gap (between younger, better educated, economically well off population and the elderly, less educated, low income, rural population) is widening (Ministry of Finance of the Slovak Republic, 2008).

7. Conclusion

The empirical evidence in this study shows that irrespective of socio-economic status of the two countries, there were a number of common themes that emerged in terms of e-government implementation and diffusion. In this respect, the need to align central and local e-government plans, political will and commitment, guidelines for local level implementation, developing user centred solutions, strong leadership and a common understanding of the benefits of e-government are seen as some of the key components of good e-government implementation practice. From a citizens' perspective, adoption was seen to be lacking both in the UK and Slovakia and this is worrying from a national perspective as it hints that good strategies, plans and implementation projects will be meaningless if not backed up with appropriate marketing strategies to raise e-government awareness levels among citizens.

From a planning perspective, it is inappropriate to draw any conclusions regarding overall e-government strategy in developed and transition economies given the limitations of this research – as the empirical findings only represents the views of a few individuals in one UK council and one Slovakian municipality. Nonetheless, it can be clearly distinguished that the Slovakian e-government strategy is less comprehensive than the UK whereby the country has focused on a few services at a time with decisions being made on a one-by-one basis to implement and promote local e-government services. Although this approach mirrors Earl's (1993) suggestions that a more incremental approach is suitable for strategy formulation and execution, the empirical evidence in the transition economy suggests otherwise.

7.1. Contribution to theory and practice

Limited studies that were found in the literature addressed ICT implementation and adoption strategies in the public sector in transition economy countries (InfoDev, 2007; Kubiatko and Halákova, 2009). This is particularly relevant as the motivations for using ICT in the private sector often differs significantly in comparison to the public sector. However, the empirical evidence in the UK (through the case study of local government efforts to implement e-government) indicate that the public sector is now following a similar strategy to that of the private sector in terms of the exploitation of ICT to improve service delivery and customer satisfaction. On the other hand, research published thus far on the exploitation of ICT in TEs indicates that, although lagging behind developed economies, the private sector in TEs in particular has made significant strides in recent years.

Through the adoption of a research strategy focusing on a transition economy country that is not in an advanced stage of e-government implementation and diffusion, this study offers a holistic view in understanding the good and bad practices of e-government strategy formulation and planning. In addition, the factors influencing electronic service development in the public sector are largely strategic and political in nature and therefore implementation and diffusion success will largely depend on local government and/or individual level strategies, project plans, availability of skills and resource allocations by respective public agencies. These factors can be further compounded by organisational culture, approaches used to facilitate change and attitude towards collaboration in both developed and transition economies.

Nonetheless, it was clear that transition economy countries need better alignment of their national ICT strategies with various local level e-government projects. Close synergy needs to be developed between respective public municipalities implementing electronic services and other stakeholders (employees, citizens groups, businesses, NGOs and third party ICT providers) helping these agencies to facilitate successful implementation. Further, clear legislation, political will and commitment, and implementation guidelines and standards in terms of the projects and ICTs that are used to support e-government will need to be identified by the respective governments and closer collaboration will need to be established between local councils/municipalities and central governments to facilitate smother implementation and diffusion of e-government services.

7.2. Research limitations and future directions

It has to be noted that this research only focused on e-government implementation and diffusion strategies facing local government in one transition and one developed economy country and did not investigate how these strategies may influence citizens' adoption of e-government services in these countries or in a wider context. Although the authors acknowledge this as a research limitation, a glimpse of the many previous studies on public sector electronic services adoption suggests that issues such as ICT literacy, lack of access to online resources, and language and age barriers may pose significant challenges in terms of adoption of e-government services from a citizens' perspective. The results from such studies can help formulate effective strategies for overcoming some of the present barriers to e-government implementation and diffusion seen in Slovakia. This is particularly important as only one interview with a key individual responsible for e-government was conducted in Slovakia, although this effort was combined with reviews of a large number of secondary resources. Further, as much as this study provides some insights on the variations in the strategic scope of e-government implementation between UK and Slovakia, it is noted that further cross-country comparative studies can be of benefit for developed and transition economy e countries across Europe. In this respect, online platforms such as the EU best practice database (http://www.epractice.eu) as well as social media tools can be of benefit to European countries in sharing experiences in e-government implementation. Finally, although from a strategy and implementation perspective e-government will differ between developed and transition economies due to culture, socio-economic settings and political environment, future research can nonetheless attempt to identify good practice for e-government implementation in common public administration processes across developed and transition economies.

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