

Ionescu, Luminița; Lăzăroiu, George; Șerban, Silviu

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A THEORY OF THE AVAILABILITY AND LEVEL OF CONSUMER PROTECTION IN ONLINE AND MOBILE PAYMENTS FOR PUBLIC ECONOMIC SERVICES

Luminița Ionescu^{1*}, George Lăzăroiu², Silviu Șerban³

*¹⁾ Romanian Academy, Postdoctoral Program SPODE/
Spiru Haret University, Bucharest, Romania*

*²⁾ Institute of Interdisciplinary Studies in Humanities and Social Studies, New York/
Spiru Haret University, Bucharest, Romania*

³⁾ Spiru Haret University, Bucharest, Romania

Abstract

The mainstay of the paper is formed by an analysis of the factors that influence the community use of mobile payment for e-Government services, the use of mobile payment for the exchange of government goods and services, the types of e-Government services for which mobile payment is suitable, and real and perceived risks associated with mobile financial services. This paper presents a theory of the level of consumer protection and especially the availability of online payment systems and mobile public economic services, and highlights the use of Internet technology to provide effective and efficient public services. We underline the need to configure citizen-centric government services, accessibility challenges associated with the use of mobile, and diverse and transient nature of mobile technology use.

Keywords: Services of general economic interest, mobile payment, e-Government services, consumer protection

JEL Classification: D18; E42; L63; L86; L93, J33;

1. Introduction

Considerable research attention has focused nowadays on emergence of the need for electronic service delivery in the public sector, the factors affecting the acceptance of SMS-based e-government, the high-level risk and complexity involved in realizing public service

* Corresponding author, **Luminița Ionescu** – luminitaionescu2003@yahoo.com

reform through e-government, and factors that influence citizens' adoption of e-government services. In this paper we are particularly interested in exploring the influences that need to be addressed when researching or implementing m-government, the evolving and diverse nature of mobile technology use, the influencing factors on consumer behaviors on the use of mobile payment, and the level of adoption of mobile technologies for payments of e-technological advancements to support procedures and methods of mobile payment. Our paper contributes to the literature by providing evidence on electronic payments made to Government public services.

This study is based on a serious support research examining mobile payment as a new alternative electronic payment for government services, the exchange of information between government and citizens on the use of electronic devices, expansion of e-Government services using devices and technologies and progress underlying technological procedures and methods of electronic payment. In Section 3, after a brief and purely methodological section, our paper shows examples of electronic payments for e-commerce transactions, characteristics and structure of online and electronic payments market in a continuous change, and in Section 4 customer concerns and new online payment systems and electronic and the role of online and electronic systems in facilitating e-commerce transactions and consumer authorization. In section 5 (case study), among other topics we will address are the extent and financial transactions conducted by mobile phone, electronic transfer of money ecosystem, the legal basis for online or phone payments, availability and level of protection consumer when making payments online or by phone. Section 6 shows the results and discussion about the level of consumer protection and the availability of online payment systems and mobile public economic services.

2. Methodology

For this research we used the method of questionnaires designed to collect information about consumer protection and availability of OECD countries in online payment systems and mobile public economic services. Then, we performed an analysis of the 542 responses received, following consumer protection for online or phone payments (Section 3) and the factors that influence consumer behavior paying with your mobile phone (Section 4). We conducted a case study aimed at consumer protection and availability of mobile payment using e-Government services (Section 5). As an example, we selected countries with the highest specificity in the regulation of e-governance and describes how consumer rights are respected online payment systems and mobile public economic services. Thus, we presented a theory of levels and availability of consumer protection, in which we stressed the need for joint and individual self-protection association (the safest, most effective and least expensive) direct and indirect protection achieved by each OECD country.

3. Consumer protection in online and mobile payments

In many OECD countries, there is no specific legislation governing mobile commerce and payments. a few OECD countries have developed specific legal or regulatory provisions protecting cardholders in cases of nondelivery of goods or non-performance of services. The development of innovative and easy-to-use payment systems by financial institutions

and other businesses (Backer, 2010) has helped to support rapid growth in e-commerce, and to address problems consumers (Peters, 2010) may experience with vendors when products do not meet expectations or are not delivered. The rapid development of the Internet and the growth of mobile services (Balan and Zegreanu, 2012) have proved highly beneficial to consumers. The payment industry has developed competitive online and mobile payments services (Bajrektarevic, 2012) to respond to the consumption of physical and digital goods (Čudanov, M. *et al.*, 2012a), and services online (new payment players have increased their market share and gained consumer acceptance worldwide). Mobile payments include Internet payments using a mobile device, and payments made through mobile network operators (MNOs). Mobile network operators (MNOs) are playing a growing leading role in mobile payments in a number of countries, under a range of business models: *Mobile centric model* (The mobile operator acts independently to deploy mobile payment applications to NFC-enabled mobile devices), *Bank centric model* (banks develop a mass-market payment mechanism independently), *Partial integration model* (involving a mobile operator creating a bank subsidiary to handle mobile payments which offers a payment mechanism for vending machines), and *Full collaboration model* (a joint venture is formed between mobile operators, banks, and other payment providers).

The growth in mobile commerce has been accompanied by the development of innovative, easy-to-use and more secure payments schemes that inspire greater consumer confidence (Petrescu *et al.*, 2010) and participation in online shopping. Credit cards are the dominant form of online payments, but debit cards tend to be a useful and inexpensive way for consumers to easily handle their micro-payments. Payment solutions have been coupled with additional services (Xu, 2012) that are implemented to increase consumer satisfaction online. Purchases of products using mobile devices with high speed broadband have accelerated. Mobile devices have become a popular payment mechanism in the developing countries where credit cards are not widely available and many people do not have bank accounts. Mobile payments mechanisms are increasingly perceived by both merchants and consumers as a good payment solution for small value products. Consumers and merchants may not fully understand what legal and/or voluntary framework applies to a particular transaction. Unauthorized charges in online and mobile payments may result from fraud (this type of fraud is a major issue for online and m-payments). Most online payment systems remain vulnerable to the problem of unauthorized charges. Chargeback mechanisms are remedies provided by payment card issuers to consumers when problems with purchases arise.

Deceptive and fraudulent commercial practices may be tied to inadequate or misleading disclosure. Key information can be hidden in the terms and conditions, increasing the risk of consumers not being aware of, or understanding, the costs. In instances where charges appear on the consumer's mobile phone bill, the consumer may find that he or she enjoys few of the protections credit card companies may provide. Negative option is an increasing challenge for consumers shopping online, involving a company taking a consumer's silence or failure to cancel as acceptance of an offer and permission to bill them. Cramming involves including fees and charges on bills for services consumers did not purchase or authorize. Under existing regulations, consumers often have limited rights to remedies and redress for defective intangible goods or services. "Chargebacks" may offer consumers effective protection in case of problems with a payment transaction. Consumers are not well informed about available dispute resolution schemes, and the potential role of payment providers. Education about consumer rights and obligations in online and mobile payments

should be provided to consumers (education designed to provide consumers with help to understand their rights online should be enhanced). A lack of consumer confidence in the security in online and mobile payments is an important factor (Kaufmann et al., 2012, pp.50-69) affecting the development of e-commerce (consumers' lack of trust is linked to concerns over the security and the misuse of payment data). Consumer misperception of the level of risk associated with the theft of payment details inhibits confidence.

Consumers are unaware of the need to be proactive (Nica, 2012) in helping to secure mobile payments. Security threats on mobile devices may be more challenging than for personal computers. Authentication enables a payment provider and/or the retailer to verify the identity of a potential payer before processing a payment. Online retailers and banks use more efficient fraud detection tools (Zaharia et al., 2010) that make cards more secure when shopping online. With rapid technological changes, consumers may not know how best to guard against fraud and preserve security. Consumers oftentimes do not know how to stay safe online, despite consumer education and awareness campaigns.

Enhanced interoperability of payment mechanisms, technology, and systems helps facilitate cross-border e-commerce. Consumer choice online (Brătianu et al., 2010) is inhibited by a lack of merchant acceptance of means of payments. Consumers should be better informed about the protection levels available when they use different payment mechanisms. Protection against fraud is a shared responsibility between payment providers and merchants. Payment providers should work jointly with merchants and other stakeholders to develop effective dispute resolution and redress systems. Consumer concerns about security may inhibit their online and mobile activities (OECD, 2012, pp.5-23).

4. The influencing factors on consumer behaviors on the use of mobile payment

Greater convenience and enhanced ability to monitor account balances may encourage consumer adoption of mobile payments for in-store purchases. Consumers can make three types of payments with a mobile device: person-to-person transfers initiated from a mobile device, goods and services purchased over the Internet on a mobile device, and mobile payments at a point of sale (POS) - payments initiated from a mobile device at physical locations (POS purchases account for the vast majority of consumer payments). Uncertainty about the net benefits to consumers of moving to mobile payments discourages consumer adoption and reinforces the supply side barriers (a better understanding of the potential benefits to consumers of replacing traditional payments with mobile payments may overcome barriers to adoption). Mobile payments have the potential to reduce the likelihood of fraudulent POS transactions by facilitating dynamic authentication of the transaction at the point of sale and through password protection of the mobile phone and of the mobile payment application on the phone (such benefits can be realized only if mobile devices are protected from malicious software and hacking attacks). Under current laws and regulations, most consumer protections depend on the payment instrument (the lack of protection does not depend on whether the method is used with a mobile phone).

Mobile payments could worsen consumers' actual or perceived protection against fraud losses in two ways: consumer protections for mobile payments linked to a mobile phone bill or mobile prepaid account are provided by state laws and public utility agency rules, whereas the greater flexibility that mobile payments provide to consumers in choosing among payments methods may create greater uncertainty about their liability for fraud

losses. Low merchant acceptance of a payment method makes consumers less willing to use the method. Many different payment instruments can be loaded on a mobile phone, and thus consumers have greater flexibility to choose the payment instrument with the most favorable financial impact. The ability to monitor finances and control spending is an outstanding payments attribute for key groups of consumers. The greater ability to monitor finances and control spending with mobile payments should favor adoption by consumers. The payment attributes that may encourage use of mobile payments are convenience and ability to monitor finances and control spending. Consumers value convenience and are increasingly looking for control of finances and spending. Mobile payments have the potential to be less vulnerable to fraud than traditional payments. New mobile technology can make it easier for merchants to verify a consumer's identity at the point of sale (consumers are unconvinced that mobile payments are safe enough to be used widely) (Hayashi, 2012, pp.35-66).

Unbanked and underbanked consumers are making use of emerging mobile financial services technologies. Mobile banking and mobile payments have the potential to expand access and inclusion to the mainstream financial system. Mobile phones can provide consumers with just-in-time information on account balances and credit limits (they can avoid overdrawing their accounts or going over their credit limits). Providing a full suite of mobile financial services (Dinu, V. *et al.*, 2012) may be a means to facilitate underbanked and unbanked consumers' access to, and inclusion in, the mainstream financial system. Many unbanked consumers make use of general-purpose reloadable cards: using a mobile device to track balances on these cards could prove useful to these consumers. Mobile technologies can better integrate the unbanked and underbanked into the mainstream financial system (Gross *et al.*, 2012).

The absolute value of any one maximum holding of an e-money transfer from a mobile device may be small. Mobile money transfers are viewed with the most concern due to their ability to transfer funds quickly. Many mobile-led transactions do not benefit from the potential gains and efficiencies of transnational payment channel systems. The risks inherent in all retail payments systems are also present in the mobile phone banking arena. The subprime mortgage-based global financial crisis provides lessons to the players in the mobile phone banking and payments system. Mobile network operators are not subject to national banking regulation and supervision (Stephens, 2010).

5. Case study: the use of mobile payment in e-Government services

New applications, services and businesses have led to transactions including mobile commerce and mobile government. Payments carried out via mobile devices are usually for transactions involving commercial activities, constituting the majority of mobile payments. In the public sector, use of mobile technology is a complementary channel of Internet-based service delivery known as e-Government (mobile payment for e-Government services is a new scheme of payment). The convergence of multiple services over the mobile network overlaps the idea of on-line payment and mobile payment. The MNO has the ability to provide multiple options for mobile payment. Mobile Government means value added features of e-Government with greater flexibility of data communications and information exchange (Table no. 1). The transportation service is the most suitable for utilizing a mobile payment scheme in the e-Government environment (Ahsan *et al.*, 2012).

Table no. 1 Mobile payment in e-Government services

Factors contributing to the acceptance of mobile payment in e-Government services	Factors impeding the acceptance of mobile payment in e-Government services
Convenience	Operational Reliability Risks
Technological Impulse	Technological Protection of Security
Credit Facility	Casual and Incidental Risks

Source: conducted by the authors from Ahsan, A., Chang, V., Tomayess, I., 2012.

Governments all over the world have been moving to providing services to their citizens via the Web. Mobile phones and the simple functions of voice and text messaging can affect the way citizens interact with each other and with the society as whole, opening up for a deepened democracy (Bratu, 2010, pp.301-306) through citizen participation and insight into state affairs, citizens may save time and energy by accessing the Internet and government networks through mobile phones and other wireless devices. While mobile devices are excellent access devices, most of them are not suitable for the transmission of complex and voluminous information (mobile phones do not have the same amount of features and services as PC-based Internet applications) (Alhomod and Shafi, 2013).

Mobile applications rely on good back office ICT infrastructure and work processes. m-Government is suited for the developing world where mobile phone penetration is growing rapidly. States should address new regulations for mobile payments and the associated authorization and authentication requirements. Government organizations may adopt a specific standard for mobile employees. m-Government development focus mostly on infrastructures. Governments will have to regulate and develop legal aspects (Păun, 2011, pp.200-205) of mobile applications and use of the mobile services. The mobile infrastructures and applications in most developing countries do not allow providing intellectual public services (Kumar and Sinha, 2007).

Successful m-government depends on developing and disseminating services (m-government provision), and on individuals ‘pulling’ these services into their normal practices. The m-government framework has two purposes: it draws attention to the importance of investigating and addressing the needs of all stakeholders and provides the context for detailed examination of the needs of any one set of stakeholders. Citizens’ needs are only one aspect (Mihăilă, 2011) of the diverse influences on the likely long-term success of m-government. Success of m-government requires active engagement by both government and its citizens (Table no. 2). Achieving acceptance and widespread persistent use of m-government by citizens depends on the design and implementation of m-government offerings that citizens appropriate so that they become part of their interactions with government.

Table no. 2 Incentives of using mobile technology in government

The drivers that ‘push’ the use of mobile technologies in government
Widespread acceptance of mobile technologies
The capabilities of technology
The needs of government to provide services efficiently and effectively
Vendors of systems, hardware and devices, software developers and consultants
Business models that capture how innovations can add value to an organization
Telecommunications companies that aim to increase profits through distribution of more

content on their networks

Source: conducted by the authors from Carroll, J., 2006

User practices are in transition (Săvoiu, G. *et al.*, 2011), with needs and practices evolving along with the technologies. The introduction of new technologies or systems will lead to the emergence of further new practices. There are valid grounds for concerns about the uptake of m-government services. Widespread acceptance of mobile technologies will not automatically lead to broad acceptance of m-Government (Table no. 3). Designing m-government services merely to support current practices leads to obsolescence (*flexibility in the form and nature of applications is needed to meet the changing needs of a variety of citizens*). Designing m-government services and applications should build upon users' current practices and shape their expectations and needs for using mobile technologies to access public sector services (Carroll, 2006).

Table no. 3 Deficiencies of the m-Government system

Lessons for m-government
The limitations of mobile phones for undertaking complex interactions
The use practices around mobile technologies are diverse
There is a need for co-ordination amongst the multiple levels of government that may provide m-government services
Interactions using mobile technologies may be one-way, where citizens receive information that is broadcast from government; two-way, where citizens can communicate with government; or more active, where citizens are participating in government activities
There are complex issues around the privacy of identity data collected when citizens access government services remotely
Broadening m-government offerings to citizens beyond those current touted requires great sensitivity

Source: conducted by the authors from Emmanouilidou, M., and Kreps, D., 2010

In m-Government, the physical constraints of interacting with mobile devices limit both the amount and type of information that can be located and accessed. m-Government promises access to government services at any place and time – a key citizen demand. m-Government could aid in creating more socially inclusive government services: mobile devices could provide a solution for overcoming the digital divide barriers imposed by traditional e-Government applications (m-Government constitutes a complementary communication channel of e-Government). With m-Government, governments are in a position to take a lead. Some services may not be suitable for consideration as part of the m-Government agenda (*there are no standard browsers for mobile and wireless devices nor is there a single standard for all wireless devices*). Usability and accessibility are top priorities for the successful implementation and wide adoption of m-Government applications (Emmanouilidou and Kreps, 2010).

The conventional e-government efforts have focused on providing access to services through internet portals (e-government is the conventional government services made available for citizens through electronic means). Governments have recognized the potential of ICT to bring about fundamental changes in the way they function and in their relations with other organizations, societal groups and individuals. Mobile computing in local government means delivering services in the field, and mobile technology must go

together with other management measures. Mobile government initiatives have rebuilt trust through close interaction with the citizens (Păun, 2011) and more effective and efficient service delivery. a *distinct managed fluidity* in local mobile government practices facilitates a fluid information flow and interaction both within the government departments and between the government and citizens. The convergence of mobile information and communication technology enables fluid coordination of work across space and time. Local government should face up to the challenges and opportunities it offers to transcend the traditional e-government model (the essential benefits come from an alignment of organizational change and process re-engineering with the mobile technologies) (Song, 2005).

Many countries are actively engaged in e-Government projects to enhance the provision of government services. e-Government encompasses the usage of all forms of information and communications technologies to deliver governmental services to citizens. The advent of the term “m-Government” is related with public services provided via mobile technologies to citizens and business. The use of mobile technologies and applications differentiates m-Government from any other developments in the public sector. Provision of public services through mobile platforms allows better personalization and accessibility of the services due to specific features of mobile technology. Most mobile devices are carried around, granting users ubiquitous access to government services. m-Government services allow improved precision and personalization in targeting users (Popescu, 2012), may include different types of applications, serving as a support for activities of the communities, are provided mainly through SMS with the expectations of developing more intelligent services when technology emerges, refer to the services that have been assigned specific roles in the public interest, and services allow better precision and personalization in targeting users as mobile devices are designed to be used by a single user.

Most m-Government services are various SMS-based notification services providing information which is continuously updated, and represent a bundle of services offered to the users in different fields or a package of services offered to a specific community, including different types of services serving as a support for activities of communities. m-Government services are the ones which have sense only when provided mobile, and represent a bundle of services offered to the users in different fields or a package of services offered to specific community. m-Government may be an extension of e-government to mobile and wireless applications in the public sector, and creates flexibility for work and provisions of services, enriching accessibility independent of places. Technological enhancement can open new horizons for provision of government services. Technological advances making possible migration of e-Government applications to a mobile platform can assure high levels of adoption inherent to the usage of mobile services in the world. The assessment process of an m-Government service pack corresponds closely to the direct measurement used in self-explicated approaches.

The preferences for content of m-Government services are identified independently from their technological solutions. Pervasive use of media-streaming and broadcasting features (Celebi, 2011) plays a critical role in unleashing m-Government potential. Ubiquitous information society concept implies the incorporation of m-Government services. Integration of the efforts of mobile providers and local governances in designing services targeted at citizens in particular regions is crucial in the success of m-Government initiatives. Mobility helps to eliminate some erroneous considerations towards

determinative power of technology in m-Government success. m-Government is an extension of e-Government to mobile and wireless applications in the public sector or an intermediate step on the way to the ubiquitous network society. Users' adoption of m-Government service arise from added value given by mobility and value in use represented by perceived usefulness, and perceived ease of use. m-Government's primary value comes from the need for mobility (the need to access information from anywhere and anytime) (Ishmatova, 2010).

Government decision makers need an understanding of the factors that would encourage use of electronic service delivery methods. Online services are easy to learn and use (Zaharia et al., 2011), especially when support is provided. The greater one's Internet experience, the easier it would be to learn and use e-government services. E-Government services need to be straightforward and easy to use to enable all potential users to benefit from the services. Users' experience with online services may determine whether there would be any social influence on the adoption of e-government services. Technical problems may cause annoyance to users who might be frustrated if they find it difficult to conduct their transactions successfully. Trust in the Internet is likely to influence the adoption of e-government services. Participants' levels of Internet experience play an important role in enhancing trust in the Internet (AlAwadhi and Morris, 2009). In the table no. 4 we present the motivations and intentions for using e-Government in Kuwait:

Table no. 4 Using e-Government services in Kuwait: motivations and intentions

The motivations underlying the intentions to use e-government services in Kuwait
85% of participants thought that e-government services would be useful to them.
42% of participants thought that e-government services would prevent them encountering stressful situations, such as waiting in long queues, and dealing with uncooperative employees.
5% of participants showed concerns about the usefulness of online services (such services might still require them to visit government buildings for additional procedures such as signatures, stamps and payments).
63% of participants claimed that any online e-government services needed to be easy to use if they were to be used by those with little Internet experience.
20% of participants mentioned that peers might influence their views about using online services if their experience was successful.
23% of participants were influenced by large numbers of people using the e-government services
78% of participants were optimistic about the planned reforms in terms of reducing bureaucracy.
53% of participants expressed a cynical attitude towards government bureaucracy that requires them to follow unnecessary and complicated procedures when completing government transactions.
86% of participants might be encouraged to use e-government services if the importance of connections or "wasta" was likely to be decreased in Kuwaiti society
66% of participants expressed their hope that e-government services would bring about radical changes such as a speedier service and more efficient procedures.
24% of participants thought it would be difficult to limit wasta in governmental work, even if such work is electronic, because they considered it to be part of their culture.
5% of participants thought that the level of human interference in the system would be

likely to determine the level of “wasta” in service transactions.
47% of participants indicated that they would be more inclined to use online services if other members of their families had used them.
45% of participants thought that cultural differences in Kuwaiti society might affect the adoption of e-government services by the majority of its adult population.
56% of participants were worried about technical problems that might interrupt service transactions and cause serious delays in terms of service performance and in all government work.
64% of participants said they had trust in the Internet because they believed the advanced security solutions and technologies in cyber space were capable of protecting inter-operations and electronic transactions against fraud and hacking.
72% of female participants were enthusiastic about e-government services, who thought that they would be advantageous to them.
30% of participants thought that security and privacy issues were factors that might prevent them from trusting, and therefore using, e-government services.
87% of participants complained about a lack of awareness of the e-government project in general, and of online services in particular.
49% of participants mentioned that lack of awareness of e-government services was essentially a lack of knowing about the benefits to be gained, and of how to use the services.

Source: conducted by the authors from Al Awadhi, S., and Morris, A., 2009.

Achieving organizational transformation of bureaucracy through e-government is complex because of internal stakeholder buy-in and commitment required from policy makers, management, and public servants. ‘e-Tax’ radically improves tax administration efficiency in both back office tax record management and front-line tax consultation. Through ‘e-Tax’ the public can access online transactional functions (taxpayers can fulfill their national tax obligations anywhere and anytime at their convenience). Taxpayers without sufficient computer literacy and Internet efficacy find it intimidating to start using ‘e-Tax.’ With the ‘e-Tax’ system use, Japan’s National Tax Agency (NTA) aimed to simplify extant tax administration processes. Citizen adoption of “e-Tax” is evidence that citizens perceive the ‘e-Tax’ channel choice and online self-service option as superior to the traditional tax services (the increased level of ‘e-Tax’ adoption is positive evidence for the NTA performance improvement in achieving better tax laws compliance online through e-Tax). The voluntary citizen adoption of the ‘e-Tax’ option assesses the role of e-government in achieving the transformational change in public administration performance. ‘e-Tax’ had two major transformational impacts on the government agency performance, the NTA reducing tax administration costs internally and tax laws compliance costs by providing new, convenient, faster, and improved public services. sophisticated e-government development is necessary for the transformational impact of e-government to occur (the integrated, sophisticated e-government system enabled the transformation of the NTA as a networked information sharing organization), whereas sophisticated e-government provision by itself is not sufficient to effect public service reform through the use of e-government (the transformational impact of e-government requires mobilizing internal resources to implement changes through e-government initiatives) (Chatfield, 2009).

SMS-based e-government systems have enabled governments to communicate with and to provide a range of services. For developing countries, SMS-based e-Government allows

people to access and to use e-government services, whereas for government in developed countries, SMS-based e-government is a complementary channel of existing Internet-based e-government. According to the information presented in the table no. 5, the popularity of SMS itself may not guarantee the success of the SMS-based e-government service (awareness of services is not sufficient to encourage citizens to use SMS-based e-government services).

Table no. 5 Models of public services through the SMS channel

Delivering public services through the SMS channel	Country
54 national government agencies provide SMS services to augment traditional public services	The Philippines
Citizens have been able to access 150 public services through a single SMS number	Singapore
SMS is used for bushfire alerts in Victoria and notification for public transport timetables in Adelaide.	Australia
Most local authorities provide SMS-based services for listening to people's opinions.	Ghana, Indonesia and the Philippines
People can apply for jobs via SMS	Oman
People can receive on request information about the water consume, invoice and deadline for payment from the water company	Romania

Source: conducted by the authors from Susanto, T.D., and Goodwin, R., 2010.

As the citizens' age increases, there is more awareness of and adoption of SMS-based e-government services. The higher the awareness of the service (Čudanov, M. *et al.*, 2012b), the higher the likelihood of citizens using SMS-based e-government services (table no. 6).

Table no. 6 Using public service water company

Public service delivery through SMS	Country
Receiving payment information of the consumption of water, sewage and rainwater	Romania
Receiving information on drinking water supply of houses	Romania
Payment by mobile phone	Romania
Communicating drinking water consumption index	Romania
Sending payment amounts monthly, quarterly	Romania

Source: results obtained by the authors using questionnaires

Governments should run intensive advertising campaigns about the SMS-based e-government services to make sure people are aware of them. Mass media channels are the most effective means of informing and influencing citizens about the existence and benefits of SMS-based e-government services. Governments should advertise services on all the mass media channels (Săvoiu, G. *et al.*, 2012) in order to make citizens aware of and to provide detailed knowledge about the services. Local authorities should consider the expectations and the perceptions of citizens toward using the SMS-based e-government services (Susanto and Goodwin, 2010). In the table no. 7 we present the advantages and disadvantages of the e-government services based on SMS.

Table no. 7 E-government services based on SMS – advantages and disadvantages

Reasons that influence citizens to use or to reject SMS-based e-government services	
Perceived ease of use	Citizens use SMS-based e-government services because they believe that the services are easy to use.
Perceived value for money	Citizens use SMS-based services because SMSs are cheap.
Perceived efficiency in time and distance	It is the degree to which an individual perceives that the service will reduce the time spent and effort to go to the public service office or to use another channel.
Perceived responsiveness	People feel that they communicate with the government person-to-person.
Perceived usefulness	It is the degree to which a citizen believes that using the SMS-based e-government service will help them to get what they want and make their life easier.
Perceived convenience	It is associated with the degree to which a citizen perceives that the services can be accessed anytime anywhere.
Trust in SMS technology	Citizens trust SMS-based e-government services since the messages are recorded by mobile phones and the SMS-based system
Perceived relevance, quality and reliability of the information	People reject <i>Notification</i> and <i>Pull</i> SMS services when they find that the information is not updated, is not relevant to their needs, unclear, not precise or insufficient in detail, not accurate, and of no value.
Perceived risk to user privacy	Citizens use SMS-based services for sending complaints and reports to local authorities because they do not have to meet person-to-person and disclose their names or other personal information.
Perceived reliability of the mobile network and the SMS-based system	Citizens put the performance of their mobile networks and performance of the SMS-based system as consideration factors when deciding to use or to reject SMS-based e-government services.
Trust in the government and perceived quality of the public services	The degree to which citizens trust the government and perceive that the public services have been delivered well influences citizens to use or to reject available SMS-based e-government services.
Perceived risk to money	Citizens stop using SMS-based e-government services when they had the experience of receiving an unwanted SMS message for which they were charged, and worried about SMS fraud and risks associated with SMS-based transactions.
Perceived availability of device and infrastructure	Citizens use the SMS-based e-government services because they have the device (mobile phone) and the mobile network is available for them.
Perceived compatibility	Citizens do not use SMS-based e-government services because SMS is not a common or a popular communication channel for delivering public services in their country.
Self-efficacy in using SMS	Citizens do not use the services because they have no idea

	of how to use SMS (the degree to which an individual perceives his or her ability to use SMS influences a citizen to use or not use an SMS-based e-government service).
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Source: conducted by authors from Al-Sobhi, F., Kamal, M., and Weerakkody, V., 2009.

The national e-Government program in Saudi Arabia aims to ease access to government services for different stakeholders, facilitating the reduction in the physical contact between citizens and government employees demanded by traditional services. Trust, privacy, security and computer literacy influence the implementation and diffusion of e-Government services. Madinah is the only city in Saudi Arabia that has implemented the e-Office concept under their local e-government initiatives. The e-Government program in Madinah is a partnership between the government and private sector, and thus electronic services are developed, managed and expanded on an incremental basis in Madinah city. Madinah has adopted a multi-channel system for citizens to interact with the government services. To connect to e-government systems, citizens are required to have a code, which is given after they register with the e-Office. Government departments use mobile text messaging to confirm to the citizen that they have received his or her request. The e-Offices concept has reduced the waiting time for citizens' services and/or applications to be processed. The Madinah City e-Government initiatives need to provide more services and bridge the digital divide (Al-Sobhi *et al.*, 2009).

6. Results and Discussions

The results of the current study converge with prior research on the nature and types of risks involved in mobile financial transactions, the net benefits to consumers of mobile payments relative to traditional payment methods, the potential benefits to consumers of mobile payments, and consumer information about the conditions under which the online and mobile transaction may be processed. The overall results provide strong evidence for new and emerging online and mobile payment mechanisms, the emergence of and the need for safer and more convenient online and mobile payments, the issues raised by new and emerging online and mobile payment mechanisms, and financial transaction of the government services using the mobile device. This article shows the need to promote a vision of consumer electronic payments using understood as complex social and economic phenomenon, which involves systemic integration of consumer interests in all relevant areas of OECD. Fundamental objectives covered by this article are major strands of action for building a legal and institutional system to provide increased consumer protection by increasing the capacity of the individual self and associative, so that they become the main way of consumer protection, and optimization state activity, direct and indirect protection. Simple requirement of mutual recognition, without harmonization, is not sufficient consumer protection issues. The full harmonization minimizes the variations between consumer protection rules in the OECD area, causing fragmentation of the internal market to the detriment of consumers (efficient and secure payment modes and networks are essential for a functioning internal market). The most important elements in building consumer confidence in e-commerce are secure networks, secure access and protecting privacy.

7. Conclusions

The paper generates insights about the adoption of e-Government services using technology acceptance theories and models, knowledge management in m-government environment, the potential of implementation of m-Government in developing and developed countries, and the understanding of the peculiarity of m-Government services. The current study has extended past research by elucidating the potential benefits of using mobile technologies in the provision of public sector services, roles of legal interventions in developing mobile market, improving effective governance through mobile phones, and factors that affect customer's preferences to use mobile payments for e-Government services.

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References

- Ahsan, A., Chang, V. and Tomayess, I., 2012. Community perception of mobile payment in e-Government services. In: *ACIS, 23rd Australasian Conference on Information Systems*, December 3-5. Geelong: ACIS, pp.1-11.
- AlAwadhi, S. and Morris, A., 2009. Factors influencing the adoption of e-government services. *Journal of Software*, 4(6), pp.584-590.
- Alhomod, S.M. and Shafi, M.M., 2013. Mobile phone and e-government: the future for dissemination of public services. *Universal Access in the Information Society*, 43. *Forthcoming*
- Al-Sobhi, F., Kamal, M. and Weerakkody, V., 2009. Current state of e-services in Saudi Arabia: the case of intermediaries in facilitating government services in Madinah city. In: *EMCIS, Proceedings of the European and Mediterranean Conference on Information Systems*. Izmir: EMCIS, pp.1-15.
- Backer, L.C., 2010. Values economics, theology and legitimacy: catholic social thought and its implications for legal regulatory systems. *Economics, Management, and Financial Markets*, 5(2), pp.17-56.
- Bajrektarevic, A.H., 2012. Is there life after Facebook? Addendum, the cyber Gulag revisited and debate reloaded. *Review of Contemporary Philosophy*, 11, pp.125-139.
- Balan, C. and Zegreanu, M.-P., 2012. Insights into the development of the market of mobile marketing services in Romania. *Amfiteatru Economic*, XIV(Special no. 6), pp.786-801.
- Bratu, S., 2010. Fundamental values of political discourse in a democratic society. *Contemporary Readings in Law and Social Justice*, 2(2), pp.301-306.
- Brătianu, C., Orzea, I. and Ghișe, I. 2010. Media knowledge consumers protection. *Amfiteatru Economic*, XII(28), pp.287-296.
- Carroll, J., 2006. 'What's in it for me?': taking m-Government to the people. In: *E-Center (University of Maribor), 19th Bled eConference 'eValues.'* Maribor: Bled, pp.1-13.
- Celebi, S.I., 2011. The effects of the mass media and demographics on pre-purchase, purchase and post-purchase activities. *Analysis and Metaphysics*, 10, pp.67-80.

- Chatfield, A.T., 2009. Public service reform through e-Government: a case study of 'e-Tax' in Japan. *Electronic Journal of e-Government*, 7(2), pp.135-146.
- Čudanov, M., Săvoiu, G. and Jaško, O., 2012a. New link in bioinformatics services value chain: position, organization and business model. *Amfiteatru Economic*, XIV(Special no. 6), pp.680-697.
- Čudanov, M., Jaško, O. and Săvoiu, G. 2012b. Public and public utility enterprises restructuring: Statistical and quantitative aid for ensuring human resource sustainability. *Amfiteatru economic*, XIV(32), pp.307-322.
- Dinu, V., Schileru, I. and Atanase, A., 2012. Attitude of Romanian consumers related to products' ecological labelling. *Amfiteatru economic*, XIV(31), pp.8-24.
- Emmanouilidou, M. and Kreps, D., 2010. A framework for accessible m-government implementation. *Electronic Government*, 7(3), pp.252-269.
- Gross, M.B., Hogarth, J.M. and Schmeiser, M.D. 2012. Use of financial services by the unbanked and underbanked and the potential for mobile financial services adoption. *Federal Reserve Bulletin*, 98(4), pp.1-20.
- Hayashi, F., 2012. Mobile payments: what's in it for consumers? *Federal Reserve Bank of Kansas City Economic Review*, 1st Quarter, pp.35-66.
- Hosterman, A.R., 2010. Superimposing reality on digital spaces: a search for understanding, explanation, and questions. *Analysis and Metaphysics*, 9, pp.35-41.
- Ishmatova, D., 2010. *Research on methodology for assessment of user preferences: toward m-government services: case study of m-campus services*. Tokyo: Waseda University Press.
- Kaufmann, H.R., Fateh, M., Panni, A.K. and Orphanidou, Y., 2012. Factors affecting consumers' green purchasing behavior: an integrated conceptual framework. *Amfiteatru Economic*, 31, pp.50-69.
- Kumar, M. and Sinha, O.P., 2007. m-Government – mobile technology for e-Government. In: SIGeGOV, *International Conference on e-government*. Gachibowli: SIGeGOV, pp.294-301.
- Mihăilă, R., 2011. (Un)Gendered private space in nineteenth-century Romanian society. *Journal of Research in Gender Studies*, 1(1), pp.147-163.
- Nica, E., 2012. Economic processes and gender equality. *Contemporary Readings in Law and Social Justice*, 4(2), pp.670-675.
- OECD, 2012. Report on consumer protection in online and mobile payments. In: OECD, *Digital Economy Papers*, No. 204. Paris: OECD Publishing, pp.1-45.
- Păun, E., 2011. The changing form and functions of cities in an expanding global economy. *Geopolitics, History, and International Relations*, 3(1), pp.200-205.
- Păun, Ș., 2011. The democratic legitimacy of European governance. *Geopolitics, History, and International Relations*, 3(2), pp.229-234.
- Peters, M.A., 2010. Education, power and freedom: third way governmentality, citizen-consumers and the social market. *Contemporary Readings in Law and Social Justice*, 2(1), pp.15-35.
- Petrescu, I., Dinu, V., Ștefănescu, C. and Dobrescu, E., 2010. Human factor's involvement in the consumer. *Amfiteatru Economic*, XII(28), pp.267-286.

- Popescu, G.H., 2012. The influence of gender inequalities on economic outcomes. *Contemporary Readings in Law and Social Justice*, 4(2), pp.654-659.
- Săvoiu, G., Manea, C., Iorga-Simăn, V., Enescu, F.M., Čudanov, M., Jaško, O. and Ana Jaško, 2011. A corporate model of similitude for SMEs reunion into a corporation, viewed from the angle of physical thought, and its complex economic and social impact. *Amfiteatru Economic*, XIII(29), pp.10-27.
- Săvoiu, G., Vasile, D. and Tachiciu, L., 2012. Romania foreign trade in global recession, revealed by the extended method of exchange rate indicators. *Amfiteatru economic*, XIV(31), pp.173-194.
- Song, G., 2005. Transcending e-Government: a case of mobile government in Beijing. In: CMG, *The First European Conference on Mobile Government*. Sussex: CMG, pp.1-9.
- Stephens, M.C., 2010. Promoting responsible financial inclusion: a risk-based approach to supporting mobile financial services expansion. *Banking & Finance Law Review*, 27: pp.329-343.
- Susanto, T.D. and Goodwin, R., 2010. Factors influencing citizen adoption of SMS-based e-Government services. *Electronic Journal of e-Government*, 8(1), pp.55-71.
- Xu, X., 2012. Internet of things in service innovation. *Amfiteatru Economic*, 6(Special), pp.698-719.
- Zaharia, C., Tudorescu, N. and Zaharia, I., 2011. The growth of the green economy. *Economics, Management, and Financial Markets*, 6(3), pp.203-208.
- Zaharia, G.C., Zaharia, C. and Zaharia, I., 2010. Online crime and the regulation of business on the Internet. *Economics, Management, and Financial Markets*, 5(4), pp.238-243.