

A Cross Cultural Comparison of E-government Adoption

Abstract

E-government is growing in popularity across the globe. Given the increasing relevance of electronic services in the public sector, there is a need for a global agreement on a consistent framework for assessing e-government. This study uses a cross-cultural comparison to assess the fundamentals of e-government adoption in the United States (USA) and Spain. In particular, we explore the effects for perceived ease of use, perceived usefulness, compatibility and trust on intentions to use e-government services. A survey was administered to citizens in both countries and analyzed using partial least squares to test the hypotheses derived from adoption literature and Hofstede's dimensions of culture. Results indicate that there are differences in the relationship between compatibility and use intention – this link being stronger in the USA sample. Furthermore, while perceived ease of use significantly impacts intentions for the USA sample, it does not for the Spain sample; and, while trust is not significant in the USA sample, it is for the Spain sample. The implications of these results, mostly consistent with the hypotheses as suggested by the dimensions of culture, are discussed for both research and practice.

Keywords: e-government, electronic government, culture, Hofstede, Spain, technology adoption

1. Introduction

According to the Organization for Economic Co-operation and Development (OECD), electronic government (e-government) is growing in popularity across the globe, becoming a truly global phenomenon (Azad et al., 2010). E-government advocates posit that we have entered a new era “where citizens can use open government data to build their own tools and collaborate directly in the process of governing (Smith, 2010 p.9).” In light of the ever-increasing relevance of electronic services in the public sector, the UN (2010) calls for a global agreement on a consistent framework for assessing e-government. In particular, more research is needed on the cross-cultural e-government trust and adoption factors (Gonzalez et al., 2010; Navarrete, 2010; Prandini & Ramilli, 2011). Yet, cross-national research on e-government is sparse (Carter & Weerakkody, 2008; Lee, Tan & Trimi, 2005). In this study, we perform a cross-cultural comparison to identify e-government adoption factors in two OECD member countries: the United States and Spain. The United Nations E-Government Survey of 2010 shows that Europe (0.6227) and the Americas (0.4790) score above the world average (0.4406) on the E-government Development Index (UN, 2010). Both Spain and the U.S. are in the top 20 countries on the E-government Development Index and the E-Participation Index. The U.S. index for each category is .85 and .76 respectively, while Spain's indices are .75 and .83 (UN, 2010).

In the United States (USA), the government continues to invest a significant amount of resources in technology. In 2010, the Office of Management and Budget received \$35 million for the E-Government Fund; it requested an additional \$35 million for 2011 (OMB, 2010). In addition to a significant financial investment by the government, American citizens have embraced this phenomenon. According to Smith (2010), in the United States, 82% of Internet users (61% of American adults) look for information or complete transactions on a government website. In addition to website utilization, citizens also take advantage of social media outlets to interact with public sector organizations. Approximately one third of online adults use diverse electronic platforms such as email, blogs, social networking sites, online video or text messages to get government information. Even more online adults (40%) use the Internet to access data about government information (legislation details, stimulus spending, etc.). According to Smith (2010, p.8), “half of government website visitors in the U.S. said that they accomplished everything they set out to do in their last government website interaction, and an additional 28% were able to do most of

what they wanted to do. Just 5% said that their most recent government website interaction was completely unsuccessful.”

Similar to the USA, Spain exhibits a high-degree of e-government readiness, as indicated by the large amount of services and information available online, Spain’s educated population, and an adequate distribution of broadband services. In Spain, approximately 29% of citizens obtained information from public authorities and approximately 8% filed forms online in 2009 (EU, 2010). Recent legislation has helped the diffusion of e-government services. In June 2007, a law established citizens' rights to access public administration services online, obliging those administrations to provide the necessary technology for this purpose. In fact, all of the ministries in the central Spanish government provide online services, and have made a commitment to reform their services, including digitalizing internal management of procedures and making them easily available to users by means of electronic signature systems.

While both Spain and the USA show great promises for the use of e-government, there are also some key cultural differences that may affect the adoption of e-government by the countries’ respective citizens. For example, in terms of national culture, Spain has been shown to be lower on individualism and masculinity and higher in uncertainty avoidance than the USA (Hofstede, 1991, 2001). These cultural differences are likely to impact e-government adoption. Yet, most e-government research has been conducted in one country only. This research seeks to fill this gap by answering the following question: *What are the differences in e-government adoption determinants in countries with diverse cultures?*

2. Background

2.1 USA and e-government

Given the increasing investment and utilization of e-government services, agencies in the USA are finding creative ways to get citizens electronically involved with government initiatives. For instance, the State Department used Twitter and text messages to send highlights of President Obama’s speech on June 4, 2009 in Cairo to more than 200 countries in 13 different languages. In addition, it posted several of the best responses on its website. The Federal Communications Commission (FCC) uses its website, broadband.gov, to allow citizens to track the development of the agency’s broadband plan, to share major findings with friends, and to communicate with the agency in real time using social media platforms such as Twitter. Another beneficial use of e-government was the recovery.gov website, which helped citizens track projects funded by the Recovery Act (i.e., the “stimulus bill”) and report cases of waste or fraud.

Local agencies also have engaging and effective ways to use electronic services. For example, the District of Columbia implemented an “Apps for Democracy” initiative, which offered a cash prize to the developer who could create the most user-friendly government data application. This initiative resulted in the development of 47 different applications (with an estimated value of \$2.3 million to the city) at a cost of only \$50,000 in prize money. Another creative local initiative was implemented by the City of Santa Cruz, California. The City used collaborative Internet-based tools to recruit the help of citizens in closing a \$9 million budget gap (Smith, 2010).

2.2 Spain and e-government

Spain holds an intermediate position as compared to other countries in terms of e-government development. Despite the investment made and the different strategic plans applied for this purpose, Spain has experienced slow growth for e-government despite legislation having been developed along those lines (Muñoz-Cañavate & Hípola, 2010). Recent data show that Spain is at about 80% of availability for online access to 20 basic services, slightly above the average for EU-27 (Eurostat). The latest UN report analyzing different countries' capacity to develop e-government shows Spain as ninth

overall, moving up from 20th and emerging as the country whose ranking has improved the most since the last report (the USA moved up two positions since 2008).

Studies conducted on e-government in Spain have had a clear focus on analyzing it from the supply perspective. They have initially focused on analyzing the level of development of public administration websites. More recently, these studies have been oriented towards identifying the factors involved in the degree of e-government development, based on the Spanish situation or including Spain in an analysis of an international context (Gallego-Álvarez et al., 2010; Pina et al., 2009; Rufin, Medina & Sánchez-Figueroa, AIP; Rufin & Medina, 2012). These studies focus primarily in identifying the social, economic, and demographic characteristics of the municipalities and states that may account for the technological innovations made in a specific geographical context. Recently, Muñoz-Cañabate and Hípola (2010) identified uneven development of e-government in Spain at different levels of public administration, and revealed that the demand for online public services is not as strong as it is in other EU countries. Belanche et al. (2010) performed one of the few studies that focused specifically on e-government adoption in Spain, examining the role that expectation confirmation can play in citizens' perceptions and behavior intentions. They found that trust, perceived usefulness, intention to use e-government services were potential determinants of positive word of mouth among citizens (intention of recommending online public services).

The low usage of e-government in Spain is consistent with e-commerce findings since recent studies show that only one out of every six Spaniards use e-commerce (INE- National Statistical Institute). Not surprisingly, 64% of the population considers it fairly or highly unlikely they will use e-government in the future (Spanish Center for Sociological Research, March-2009), and few SMEs use the Internet for e-government purposes (Cegarra et al., 2007).

2.3 Technology adoption

Technology adoption research is concerned with identifying the factors that influence user acceptance of technological innovations. Davis' (1989) technology acceptance model (TAM) and Rogers' (2003) diffusion of innovation theory (DOI) are two models commonly used to study user adoption of information systems. TAM has been widely used to study user acceptance of technology for various users and types of systems (Carter & Belanger, 2005; Gefen et al., 2005; Pavlou & Fygenson, 2006; Venkatesh et al., 2003; Shareef et al., 2011; Sipior et al., 2011). TAM has two major constructs: perceived usefulness (PU) and perceived ease of use (PEOU) – which influence one's intention to use a system. Perceived usefulness was originally defined by Davis as the belief that using a particular system would enhance one's job performance. Perceived ease of use refers to one's perceptions of the amount of effort required to use the system. The model predicts that higher perceptions of usefulness and ease of use will increase intention to use a system. All other things equal, perceived ease of use is predicted to influence perceived usefulness, since the easier a system is to use, the more useful it can be (Davis, 1989).

Unlike TAM, which refers specifically to technology adoption, Rogers (2003) conceptualizes a generic theory of adoption: the diffusion of innovation theory (DOI). DOI identifies five constructs that influence a potential adopters decision: relative advantage, complexity, compatibility, trialability and observability. Relative advantage refers to the belief that a new system has benefits above and beyond the current system. Complexity is synonymous to TAM's PEOU construct; it refers to perceptions of difficulty associated with adopting a system. Compatibility posits that one will be more likely to adopt an innovation if it is consistent with his values, views, beliefs, and customs. Trialability posits that one will be more likely to adopt an innovation if he/she can try it out before actually committing to it. And observability suggests that one will be more likely to adopt an innovation if its benefits are visible and tangible. Moore and Benbasat (1991) extend DOI by adding four constructs: result demonstrability, visibility, image and voluntariness in their Perceived Characteristics of Innovating (PCI) model. Result demonstrability and visibility, together, replace observability in Rogers' DOI model. Result

demonstrability refers to the tangible benefits of an innovation that are readily apparent. Visibility refers to society's exposure to the innovation. Image refers to one's perception of an innovation as a status symbol. Voluntariness refers to a potential adopters perception that adoption of the innovation is voluntary. The IS literature posits that three DOI constructs –perceived usefulness, perceived ease of use and compatibility - are among the most relevant constructs to technology adoption research (Tornatzky & Klein, 1982; Van Slyke et al., 2004). Studies of e-service adoption substantiate the importance of these constructs for online systems (He et al., 2006; Wu & Wang, 2005; Yi et al., 2006). Based on the aforementioned literature and in the interest of parsimony, we include only the three DOI adoption constructs that are most consistently identified by the literature as significant predictors of electronic service adoption: perceived usefulness, perceived ease of use and compatibility.

The DOI/PCI constructs have been studied frequently in information systems (Moore & Benbasat, 1991; Tornatzky & Klein, 1982), e-commerce (Ruyter et al., 2001; Van Slyke et al., 2004), and even e-government (Chan et al., 2010; Carter & Belanger, 2005; Warkentin et al., 2002) research. They have also been used in the Spanish context. These works confirmed the TAM hypotheses and identified that consumers' innovation capacity and dependence on online shopping information have a direct positive influence on their future purchase intention. Similarly, Hernández et al. (2011) observed that the experience acquired by individuals while shopping online favored the evolution of their behavior. Meanwhile, Spanish Internet users who shop online most often appear to trust a website only in terms of their prior satisfaction, whereas those users who perceive most risks have to perceive that the company has a good reputation and experience in the traditional business, in addition to other signs such as service quality.

In addition to adoption factors, trust also plays an important role in the diffusion of e-government services through society. Trust is defined as an expectancy that the promise of an individual or group can be relied upon (Rotter, 1967). Building upon this definition, McKnight et al. (2002) explore trust in an online environment. This institution-based trust refers to an individual's perceptions of the institutional environment, such as the structures, regulations, and legislations that make an environment feel safe and trustworthy. This construct contains two dimensions: structural assurance and situational normality. Structural assurance is grounded in the belief that regulations, promises, legal recourse and other procedures are in place to encourage honesty (McKnight et al., 2002). Situational normality presumes the environment is normal, favorable, and in proper order (McKnight et al., 2002). In the context of e-government, the Internet constitutes the institutional environment. Various studies have explored the role

of trust in e-government adoption (Bélanger & Carter, 2008; COLESCA, 2009). E-government adoption is influenced by a citizen's belief that the Internet is a dependable medium, capable of providing accurate information and secure transactions. However, more research is needed on the cross-cultural implications of trust and acceptance (Carter & Weerakkody, 2008; Gonzalez et al., 2010; Navarrete, 2010; Prandini & Ramilli, 2011). Figure 1 summarizes the literature on the key determinants of e-government adoption.

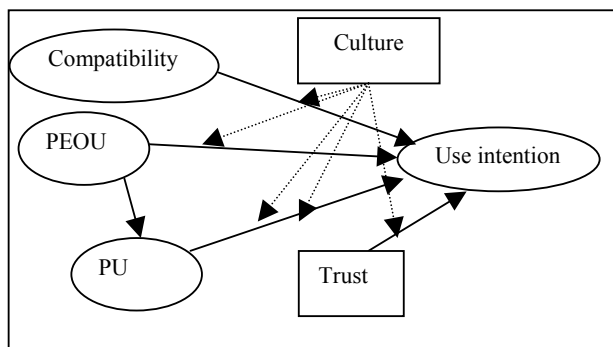


Figure 1. e-Government Adoption Model

2.4 Dimensions of culture and e-government

Differences in dimensions of national culture can explain differences in perceptions and adoption of technologies and e-commerce (Van Slyke et al., 2004). There are five dimensions to national culture:

power distance, uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity, and long-term vs. short-term orientation (Hofstede, 1991, 2001). Table 1 shows the definitions, scores and rankings for Spain and the USA.

Dimension	Definition		Spain	USA	Rank Differences
Power distance	Extent to which those with less power in the organizations of a country expect and accept unequal power distribution.	Score	55	40	
		Rank	44	52	8
Individualism	Degree to which a culture reinforces individual achievement and relationships.	Score	51	91	
		Rank	22	1	21*
Uncertainty avoidance	Degree to which uncertain situations make members of a culture feel threatened.	Score	86	46	
		Rank	15	55	40*
Masculinity	Degree to which distinct social gender roles characterize cultures.	Score	42	62	
		Rank	49	18	31*
Long-term orientation **	Extent to which a culture believes in a stable society based on family, and where virtuous behavior is expected.	Score	No Score	29	n/a
		Rank	No Rank	15	n/a

Table 1. Hofstede's Dimensions of Culture for Spain and the USA

* Major differences between the two countries relative to all countries evaluated by Hofstede.

** Scores for this dimension based on 25 countries versus 66 countries for the other scores.

As can be seen from Table 1, individualism, uncertainty avoidance, and masculinity shows major differences between Spain and the USA. Prior research has studied various cross-national differences in technology adoption (Mao et al., 2009; Yoon, 2009), and in particular how Hofstede's cultural dimensions impact adoption by users of e-commerce. Some of the key findings include: (1) customers from high power distance countries have less trust toward an online shopping mall than customers from low power distance countries; (2) a collectivist may express less trust toward an online shopping mall than an individualist; (3) greater attention should be paid to how the effects of gender can differ even across cultures that are nominally similar, the higher the degree of masculinity, the higher the effect of perceived usefulness (PU) on IT adoption, so the lower the degree of masculinity, the higher the effect of perceived ease of use (PEOU) on IT adoption; (4) perceived risk is a moderating factor on the relation between consumers' trust and their willingness to purchase products from Internet vendors, therefore, the higher the degree of uncertainty avoidance, the lower the effects of trust on intention to use the online environment; and, (5) a Long Term Orientation society emphasizes behavior, such as thrift or perseverance, intended to secure future rewards, therefore encouraging trust because the value of short-term gains from untrustworthy actions is reduced (Lippert & Volkmar, 2007; Srite & Karahanna, 2006; Stewart, 1999; Straub et al., 1997; Yoon, 2009). Combining prior e-government work with Hofstede's dimensions of national culture, we derive five hypotheses to be tested, presented in Table 2.

3. Methodology

To test the hypotheses, we administered a survey to citizens in the USA and Spain. In the USA, paper-based responses were collected from citizens at a community event in the southeast region of the country. In Spain, an online survey was published on the Bulletin of the Information Society of the Telefónica Foundation website, the Faculty of Economics and Business Administration website, and several specialized online reference forums in e-government. Emails were also sent to different professional organizations and academic institutions throughout the country. Survey items were adapted from previous studies: trust (McKnight et al., 2002); perceived ease of use and usefulness (Davis, 1989); PCI

items (Moore & Benbasat, 1991; Van Slyke et al., 2004); and intentions (Pavlou, 2003). All constructs included in the model were measured using seven-point Likert scales. In the USA, 105 valid responses were obtained. The ages of the subjects ranged from 14 to 83 years, with males accounting for 36% of the sample. In Spain, 836 valid responses were obtained. The participants ranged in age from 16 -74, with 51% of the sample being male.

Determinant	Definition	Culture impact	Hypotheses
Perceived Usefulness	Degree to which an innovation is seen as being superior to its predecessor.	Greater individualism leads to greater effect.	H1: Perceived usefulness will have a greater impact on e-government intentions in the USA than in Spain.
Ease of use	Degree to which an innovation is seen as being relatively difficult/easy to use and understand.	Greater uncertainty avoidance leads to greater effect.	H2: Perceived ease of use will have a greater impact on e-government intentions in Spain than in the USA.
		From prior technology adoption research.	H3: Perceived ease of use will have a similar effect on usefulness in the USA and Spain.
Compatibility	Degree to which an innovation is seen as being consistent with existing beliefs, values, experiences and needs.	Greater individualism and masculinity leads to greater effect.	H4: Compatibility will have a greater impact on e-government intentions in the USA than in Spain.
Trust	Degree to which consumers have confidence in the reliability and integrity of e-government	Greater power distance will lead to greater effect.	H5: Trust will have a greater impact on e-government intentions in Spain than in the USA.

Table 2. Definitions of Constructs and Hypotheses

3.1 Data analysis

Data analysis was performed with variance-based Structural Equation Modeling (SEM) (Reinartz, Haenlein & Henseler, 2009) by applying the Partial Least Squares (PLS) method. PLS allows a simultaneous analysis of how well the measures relate to each construct (measurement model) and whether the hypothesized relationships are empirically true at a theoretical level (structural model) (Sosik, Kahai & Piovosio, 2009). PLS path modeling focuses on the prediction of the dependent variables (both latent and manifest). This objective is achieved by maximizing the explained variance (R^2) of the dependent variables (Barroso et al., 2010). We used PLS-Graph version 3.00 (Build 1130) (Chin, 2003).

USA				
	AVE	Composite Reliability	R Square	Cronbach's Alpha
Comp	0,837	0,939	-	0,9027
PEOU	0,7037	0,9045	-	0,8587
PU	0,8111	0,9449	0,6410	0,9221
Trust	1,0000	1,0000	-	1,0000
Use Intention	0,7584	0,9397	0,8655	0,9183
Spain				
Comp	0,8413	0,9408	-	0,9056
PEOU	0,8183	0,9311	-	0,8887
PU	0,8518	0,9583	0,5578	0,9419
Trust	1	1	-	1
Use Intention	0,6572	0,9051	0,3232	0,8684

Table 3. Convergent validity analysis

3.1.1 Measurement model

Prior to testing hypotheses, we examined the reliability of the scales with Cronbach's alpha, which were all greater than 0.70 (see Table 3). We then examined items loadings, and those with loadings lower than 0.707 were eliminated. As a result, CT4 and PU3 in the USA sample, and CT4, PEOU4, PU5 in the Spanish sample were dropped. Convergent validity was then established by analyzing the Average Variance Extracted (AVE) where AVEs must be higher than 0.5 (Fornell & Larcker, 1981). In the sample, all AVEs were above 0.5, indicating convergent validity, as can be seen from Table 3. For discriminant validity, AVEs must be higher than the variance shared by the construct with others. In Table 4, element along the main diagonal represent the square root of AVEs, which must be higher than the correlations (Barclay et al, 1995). Discriminant validity is established for the Spanish sample, but there is a potential issue between perceived usefulness and use intention constructs in the USA sample. Therefore, a further test was conducted, namely cross loadings analysis. These results, presented in Table 5, show that every item loads higher on its intended construct, indicating discriminant validity.

USA					
	Compatibility	PEOU	PU	TRUST	Use intention
Compatibility	0,9149	-	-	-	-
Perceived ease of use	0,7861	0,8389	-	-	-
Perceived usefulness	0,9079	0,8006	0,9006	-	-
TRUST	0,4817	0,4807	0,4602	1,0000	-
Use intention	0,9069	0,8038	0,8982	0,5047	0,8709
Spain					
	Compatibility	PEOU	PU	TRUST	Use intention
Compatibility	0,9172	-	-	-	-
Perceived ease of use	0,7453	0,9046	-	-	-
Perceived usefulness	0,7530	0,7468	0,9229	-	-
TRUST	0,3850	0,4020	0,3677	1,0000	-
Use intention	0,4907	0,4480	0,5322	0,3515	0,8107

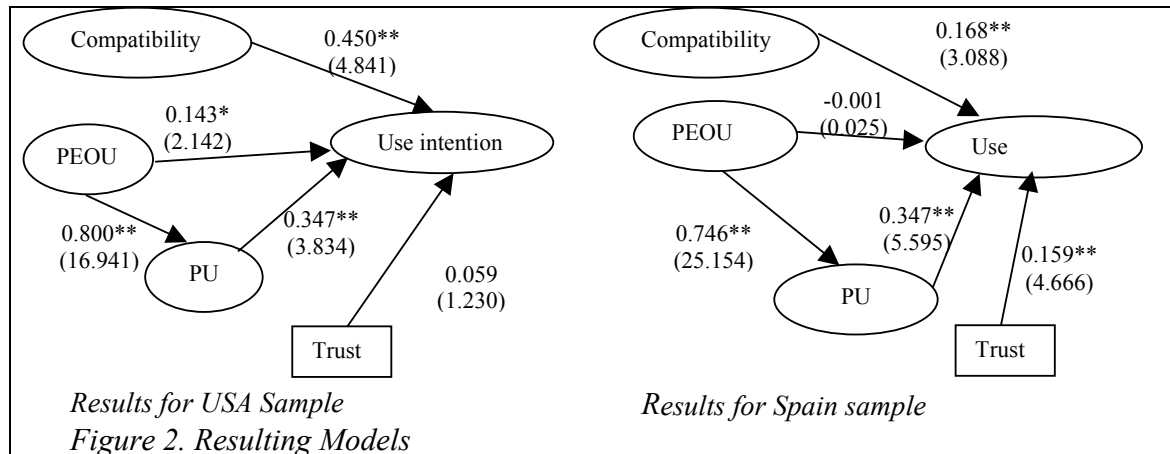
Table 4. Discriminant validity analysis (Diagonal elements are square roots of AVEs)

	USA					Spain				
	Compat	PEOU	PU	Trust	Use	Compat	PEOU	PU	Trust	Use
CT1	0,9294	0,7716	0,8482	0,4758	0,9016	0,9151	0,6904	0,6834	0,3460	0,4532
CT2	0,9315	0,7222	0,8746	0,4872	0,8338	0,9469	0,6815	0,7119	0,3643	0,4851
CT3	0,8829	0,6557	0,7636	0,3477	0,7416	0,8888	0,6818	0,6771	0,3494	0,4071
PEOU1	0,6227	0,8654	0,6778	0,3410	0,6718	0,6602	0,9014	0,6669	0,3258	0,3702
PEOU2	0,6826	0,8050	0,6405	0,6229	0,6526	0,7018	0,9309	0,7116	0,3539	0,4227
PEOU3	0,7302	0,9004	0,7705	0,3614	0,7644	0,6593	0,8807	0,6464	0,4120	0,4217
PEOU4	0,5946	0,7792	0,5807	0,2942	0,5946	-	-	-	-	-
PU1	0,8198	0,6667	0,8832	0,4493	0,8072	0,6642	0,6244	0,9057	0,3533	0,5072
PU2	0,8784	0,7537	0,9398	0,3904	0,8308	0,6845	0,6734	0,9349	0,3228	0,5129
PU3	-	-	-	-	-	0,7098	0,6928	0,9366	0,3309	0,4807
PU4	0,7542	0,8102	0,8693	0,3840	0,7991	0,7188	0,7595	0,9141	0,3504	0,4660
PU5	0,8176	0,6403	0,9085	0,4382	0,7960	-	-	-	-	-
TRUST	0,4817	0,4807	0,4602	1,0000	0,5047	0,3850	0,4020	0,3677	1,0000	0,3515
USE1	0,8212	0,7148	0,7997	0,4333	0,9244	0,4219	0,4025	0,4842	0,3137	0,7893
USE2	0,8576	0,7298	0,8142	0,5124	0,9092	0,4068	0,3604	0,4670	0,2870	0,8840
USE3	0,8350	0,7297	0,8104	0,3683	0,8826	0,4349	0,3886	0,4241	0,2834	0,7760
USE4	0,6085	0,5758	0,6156	0,4662	0,7165	0,3981	0,3586	0,4297	0,2843	0,8647
USE5	0,8005	0,7361	0,8487	0,4322	0,9047	0,3086	0,2894	0,3266	0,2485	0,7290

Table 5. Cross loading analysis

3.1.2 Structural model testing

Figure 2 shows the result of the PLS tests for hypothesis testing. The USA sample shows significant values for all relationships except for the relationship between trust and use intention, while the Spanish sample shows significant results for all relationships except between perceived ease of use and intentions.



3.2.3 Multigroup analysis

	t-value
Compatibility-Intention	1,7924*
EOU-Usefulness	0,6298
Usefulness- Intention	-0,0018

Table 7. Multigroup Analysis for Significant Paths

The ability to detect the presence or absence of differences between groups, and to estimate the strength of the moderating effects, is important in studies attempting to show contingent effects (Qureshi & Compeau, 2009). The hypothesis in these types of multigroup models, aiming to compare the intensity of the differences between them can be tested with a statistical comparison of the different path coefficients for the structural models for each one of the samples. We test moderating effects by comparing the existing path coefficients between the variables. To confirm the significance of these comparisons, this research uses the multigroup analysis proposed by Chin (2000) consisting of the calculation of a t-statistic test. Comparison of our two models shows some differences for the significant paths, as seen in Table 7.

4. Discussion

This study examines the similarities and differences in e-government perceptions and intentions across countries. The proposed research model includes the three most consistently influential adoption constructs – perceived usefulness, perceived ease of use, compatibility – along with trust to present a parsimonious, yet explanatory model of e-government adoption. Although numerous studies have explored the impact of TAM on intention to use e-government, few have considered the moderating role of culture in that adoption. We highlight three interesting findings from this study (H2, H4, and H5).

Unexpectedly, hypothesis two was not supported. On the contrary, perceived ease of use only had a significant impact on e-government intentions in the USA. This suggests that citizens in the USA place more value on factors such as ease of navigation and intuitiveness when interacting with e-government systems. Hence, features such as online tutorials and live-chatting may be important for government agencies in the USA interested in promoting e-government adoption.

H4 is supported; the U.S. sample shows a higher effect of compatibility on use intention. This result is in agreement with the findings of a previous study, i.e. in the largest Spanish cities (over 50,000 inhabitants) citizens perceive compatibility with their attitudes and beliefs as a key attribute for their intention to use e-Government. Perhaps life styles and environment, rather than native culture itself, could be a relevant factor moderating the relationship between both variables. Future research should explore the causes of the stronger compatibility-use intention link in the USA could lead to a better understanding of the actual effects that Hofstede's cultural dimensions have on e-government adoption factors –specially on compatibility. From this understanding better public policies could be implemented in each country or region. Also, future studies should assess this difference in perceptions using diverse electronic transactions such as e-commerce and online banking. It would be interesting to determine if these differences are present for both public and private sector transactions.

As suggested by H5, trust had a significant impact on e-government intentions in Spain but not in the USA. As aforementioned, with regards to Hofstede's cultural dimensions, there are some interesting differences between the two samples. Regarding the power distance dimension, Spain scores higher than the USA. This difference indicates that Spanish citizens are more likely to expect and accept an unequal distribution of power. This expectation of power distance could explain why trust is more salient among Spanish citizens. Another dimension that may impact citizens' perceptions of e-government is uncertainty avoidance. Spain scores much higher on this scale than the USA, which suggests that Spanish citizens sometimes feel threatened by uncertain situations. The distal nature of electronic transactions introduces an element of uncertainty. Hence, it is understandable that trust would be a significant factor among the Spanish sample. Given the fact that trust has an effect on the use intention of these initiatives by the citizenship, promoting trust should then be a main task for Spanish authorities.

5. Conclusion

As e-services in the public sector become more prevalent across the world, it is imperative that researchers understand the varied impact of these adoption factors for diverse cultures. This study also responds to the need for more citizen-centered e-government research in Spain. As aforementioned, more research exists on citizens' adoption of e-commerce; the demand side perspective of e-government adoption in Spain is sparse. This study represents an attempt to gain a more global understanding of e-government diffusion. Future research should build upon the proposed model by exploring the impact of other adoption factors such as perceived risk and privacy concerns.

This study uses a cross-cultural comparison to assess the fundamentals of e-government adoption in the USA and Spain. The results of a multi-group analysis of survey responses obtained from citizens in both countries reveals there are significant differences in the relationship between compatibility, trust, and perceived ease of use and use intention between the two countries. The research model has implications for both researchers and practitioners interested in developing a global framework and understanding of e-government adoption across the globe.

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