Determinants of User Acceptance of a Local eGovernment Electronic Document Management System (EDMS)

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Abstract: On numerous occasions the significant value of the investments involved in the development of eGovernment and the expectations of governmental information systems use do not correspond to the rate of effective use. This scenario makes it difficult to justify the development of electronic government by governments and local authorities among its citizens. It is therefore important to understand the factors that influence the employees' intention of using governmental information systems. With the aim of understanding the determining factors of using an Electronic Document Management System (EDMS) in the context of Portuguese municipalities, this study develops an empirical analysis using the Unified Theory of Acceptance and Use of Technology (UTAUT) model, (Venkatesh et al., 2003). This model's application for information systems research in the governmental context has a weak expression and is unique in EDMS research. This empirical research follows a realist and positivist approach. Data was collected from a survey answered by 2,175 employees of Portuguese municipalities (EDMS users). Partial Least Squares (PLS) was used to test the model proposed. The results showed that Intention to Use is positively affected by Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions. With respect to the EDMS Use, the results showed that it is positively influenced by Intention to Use and Facilitating Conditions. The main result indicates that EDMS users believe that the use of this information system will help them to obtain performance benefits in their work. However, the increasing use of EDMS is not very influenced by the system's perceived ease of use. In short, this study provides a contribution to the Information Systems Acceptance and Adoption literature in local eGovernmental contexts. In addition, our contribution empirically tests the model for implementation in governmental organizations and provides a better understanding of the adoption and use of an EDMS.

Keywords: local eGovernment, UTAUT, determinants of use, EDMS, PLS

1. Introduction

The development of electronic government is on the agenda of most countries that wish to have a modern public administration. In line with this, Portugal presents in its Digital Agenda 2015 and Technology Plan a significant convergence of human, technological and financial resources. One of the major projects of this Technology Plan is the implementation of Electronic Document Management Systems (EDMS) in the modernization of local government services. This type of information system enables the creating, storing, organizing, transmitting, accessing, manipulating, updating, and making available of digital documents for organizational needs (Sprague, 1995). This also enables organizations, such as municipal councils, to have a system for secure document transfers, remote access to documents, to comply with legislative requirements, manage knowledge and improve the efficiency of their activities. Its use is dictated by the increasing quantity of information in a digital format that is being created in organizational contexts (Wilkins et al., 2009).

Despite all efforts to implement EDMS in organizations, only a low rate of EDMS projects is considered successful. No matter how well-planned and implemented the EDMS may be, the success depends on the use and acceptance of a large number of employees. Also, they must be active users (Johnston and Bowen, 2005; Gunnlaugsdottir, 2008). Despite recognizing this, EDMS adoption research has a weak expression (e.g., Borglund and Sundqvist, 2007; Cho, 2007; Bhattacherjee et al., 2008; Gunnlaugsdottir, 2008; Brocke et al., 2010). This also occurs with the use of the UTAUT model for information systems research in the eGovernment context (e.g., Yao and Murphy, 2007; Gupta et al., 2008; Loo et al., 2009; Wang and Shih, 2009; Sapio et al., 2010; Schaupp et al., 2010).

With the aim of applying the UTAUT model to understand the determinant factors of using EDMS in Portuguese municipalities this paper is structured as follows. In the second section the hypotheses concerning the relations determining the use of the EDMS are proposed. The third section presents

the research methodology. Section four includes the data analysis and results. The following section identifies the implications for academics and professionals. In addition, it also presents the limitations and proposals for future research.

2. Literature review and research hypotheses

2.1 Performance expectancy

The Performance Expectancy refers to the perception of success at work by Information Systems and Technology (IST) use. This is the construct of the UTAUT model that has been shown to be the most influential in the intention of use. This influence has been verified both in voluntary and mandatory contexts, and in situations of greater or lesser experience (Venkatesh et al*.,* 2003; Lu et al., 2009). In all these models, a strong influence of Performance Expectancy on Intention of Use was proven (Venkatesh et al*.,* 2003; Kijsanayotin et al., 2009; Zhou et al*.,* 2010). In the context of this research, Performance Expectancy means that the users think that EDMS is beneficial because it speeds up work, improves productivity and mainly because it is useful in performing their tasks. Several studies that used the UTAUT model confirmed that Performance Expectancy has a significant influence on Intention of Use (Al-Gahtani et al*.,* 2007; Chang et al*.,* 2007; Gupta et al*.,* 2008; Wang et al*.,* 2009; Wang and Shih, 2009; Sapio et al., 2010; Venkatesh et al*.,* 2010). Therefore, we hypothesize:
H1 (+): Performance Expectancy has a positive effect on Intention of Use

2.2 Effort expectancy

According to Carter and Belanger (2004), Effort Expectancy is related to the ease of use, ease of learning, flexibility and clarity of the interface. Based on UTAUT, EDMS acceptance is expected to depend on a use that is easy and does not require much effort. Some studies that used the UTAUT model empirically identified the positive effect of the Effort Expectancy variable on the Intention to Use (Al-Gahtani et al*.,* 2007; Chang et al*.,* 2007; Gupta et al*.,* 2008; Lin and Anol, 2008; Kijsanayotin et al., 2009; Wang and Shih, 2009; Sapio et al., 2010). Thus, our second hypothesis is:

H2 (+): Effort Expectancy has a positive effect on Intention of Use

2.3 Social influence

The Social Influence variable reflects the effect of influential factors, such as the opinions of friends or hierarchical superiors, on users' behaviors. In this way, their opinions will affect the adoption of EDMS (Zhou et al*.,* 2010). The social influence role is recognized in many works and therefore it is included in the models of Taylor and Todd (1995) and Thompson et al. (1991). However, there was a lack of recognition in other works, such as the Technology Acceptance Model (TAM) from Davis (1989). Some UTAUT studies showed the effect of Social Influence on Intention of Use (Al-Gahtani et al*.,* 2007; Chang et al*.,* 2007; Lin and Anol, 2008; Gupta et al*.,* 2008; Kijsanayotin et al., 2009; Wang et al*.,* 2009; Wang and Shih, 2009; Sapio et al., 2010). Thus, we hypothesize:

H3 (+): Social Influence has a positive effect on Intention of Use

2.4 Facilitating conditions

The variable Facilitating Conditions reflects the effects of user knowledge and skills, resources access and necessary support on the Use of an information system (Venkatesh et al*.,* 2003; Schaupp et al*.,* 2010). Venkatesh et al. (2003) showed that Facilitating Conditions had a significant effect on Intention of Use during the initial period of low experience. Other studies have also identified such an effect (Hung et al*.,* 2007; Wu et al*.,* 2007; Zhou, 2008; Al Awadhi and Morris, 2008; Shi, 2009; Ho and Chou, 2009; Duyck et al., 2010). Thus, we hypothesize:

H4 (+): Facilitating Conditions have a positive effect on Intention of Use

Consistent with the Theory of Planned Behavior (Ajzen, 1991) and the Model of PC Utilization (Thompson et al., 1991) models, as well as with the work of Venkatesh et al. (2003), several studies have recognized the effect of Facilitating Conditions on Usage behavior (Al-Gahtani et al*.,* 2007; Chang et al*.,* 2007; Gupta et al., 2008; Lin and Anol, 2008; Wang and Shih, 2009; Sykes et al., 2009; Kijsanayotin et al*.,* 2009; Jong and Wang, 2009; Duyck et al*.,* 2010; Sumak et al*.,* 2010; Venkatesh and Zhang, 2010; Zhou et al*.,* 2010). We therefore present the following hypothesis:

H5 (+): Facilitating Conditions have a positive effect on Use Behavior

2.5 Intention of use

The Intention of Use variable comes from the Theory of Reasoned Action (Fishbein and Ajzen, 1975) and aims to measure a user's motivation to adopt a behavior. In this way, the UTAUT model suggests that people's behavior performance is determined by their intention to carry out that behavior (Ajzen and Fishbein, 1980). In the UTAUT model (Venkatesh et al.*,* 2003), the Intention of Use is influenced by Performance Expectancy, Effort Expectancy and Social Influence. In addition, Intention of Use is, along with the Facilitating Conditions, decisive in Use Behavior. After the work of Venkatesh et al. (2003), several UTAUT researchers recognized the positive effect of Intention of Use on Use behavior (Al-Gahtani et al.*,* 2007; Chang et al.*,* 2007; Zhou, 2008; Kijsanayotin et al., 2009; Shin, 2009; Sykes et al., 2009; Venkatesh et al.*,* 2010). The aforementioned discussion allows us to formulate the following hypothesis:

H6 (+): Intention of Use has a positive effect on Use Behavior

3. Method

The research methodology follows a quantitative approach. We began with a thorough literature review. Next, we carried out a survey to collect data. Finally, we applied PLS statistics to test the model. PLS was selected because this research aims to predict the dependent variables Intention of Use and Use, and because the variables do not have normal distributions (Henseler et al.*,* 2009; Roldán and Sánchez-Franco, 2012: 201). This study uses SmartPLS (Ringle et al., 2005) software.

3.1 Participants

With the implementation of the online questionnaire 2,175 responses were obtained from EDMS users of 71 of the 308 Portuguese Municipalities. The respondents were registered EDMS users from their local councils. These users received an e-mail with an invitation to take part in the study. The respondents were limited by their mayors accepting their participating in the study and because it was necessary for the municipalities to be provided with EDMS and the dematerialization process to have started. The context of implementation of this study is mandatory in nature, since the system use is mandatory.

We applied a pre-questionnaire to validate the understanding of the meaning of the items by the EDMS users. It was given to employees of Municipalities that are users of the system under study and members of a focus group. A simulation of sending the inviting messaging was also carried out.

The development of this process resulted in some changes in some statements, formats and also in the correction of some errors. This pre-test process was repeated until we realized that the research tool was ready to be applied to recipients.

3.2 Measures

The items used for Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions and Intention to Use were adapted from Venkatesh et al. (2003). With regard to these constructs, it was necessary to adapt the items to the context of this work - the use of an EDMS in a local eGovernment context. The answers given to each item of these constructs were measured by a 7-point Likert scale, in which 1 represents the negative extreme of the scale (1= I completely disagree) and 7 the positive extreme of the scale (7= I completely agree). The dependent variable Use was measured by three items adapted from Adams et al. (1992) and was self-reported.

4. Results

4.1 Measurement model

The measurement model is assessed in terms of individual item reliability, construct reliability, convergent validity, and discriminant validity. Individual item reliability is considered adequate when an indicator has a factor loading that is greater than 0.7 on its respective construct (Roldán and Sánchez-Franco, 2012). Most our individual item loadings are above 0.7 or very near (pe4, u3) (Table 1)

Table 1: Loadings and cross-loadings from measurement model

	PE	EE	SI	FC	IU	U
pe1	**0.8765**	0.5282	0.4535	0.5066	0.5467	0.4112
pe2	**0.9139**	0.5130	0.4574	0.4920	0.4194	0.3440
pe3	**0.9231**	0.5217	0.4939	0.4961	0.4408	0.3712
pe4	**0.6914**	0.3861	0.5286	0.3634	0.2918	0.2597
ee1	0.5536	**0.9146**	0.4089	0.6322	0.4253	0.4137
ee2	0.5137	**0.9188**	0.3946	0.6116	0.3787	0.4296
ee3	0.5633	**0.9117**	0.4097	0.6267	0.3810	0.3557
ee4	0.4801	**0.9274**	0.3605	0.6270	0.3846	0.3841
si1	0.4130	0.2993	**0.8426**	0.3357	0.3330	0.2331
si2	0.4345	0.3118	**0.8361**	0.3389	0.3176	0.2176
si3	0.5084	0.4013	**0.8360**	0.4436	0.3261	0.2500
si4	0.4498	0.3888	**0.7604**	0.4808	0.3453	0.2245
fc1	0.4245	0.5002	0.3840	**0.8230**	0.3917	0.2274
fc2	0.4468	0.7097	0.3688	**0.8470**	0.4116	0.3592
fc3	0.5067	0.4777	0.4155	**0.7524**	0.3661	0.2169
fc4	0.3660	0.4305	0.3967	**0.7405**	0.3544	0.2275
iu1	0.5357	0.4457	0.3979	0.4899	**0.9456**	0.4246
iu2	0.4377	0.3753	0.3624	0.4379	**0.9442**	0.4393
iu3	0.4855	0.3985	0.3923	0.4452	**0.9639**	0.4218
u1	0.3338	0.3667	0.2350	0.2951	0.4391	**0.8828**
u2	0.3999	0.4025	0.2812	0.3173	0.3939	**0.8692**
u3	0.2771	0.2807	0.1639	0.1790	0.2348	**0.6982**

Note: PE: Performance Expectancy; EE: Effort Expectancy; SI: Social Influence; FC: Facilitating Conditions; IU: Intention to Use; U: Use

Construct reliability is evaluated using two measures of internal consistency: Cronbach' s alpha and composite reliability (CR). The interpretation of both values is similar. We can use the guidelines offered by Nunnally (1978) who suggests 0.7 as a benchmark for a 'modest' reliability applicable in the early stages of research. In our research, all of the constructs are reliable (Table 2) since they have internal consistency measures that exceed 0.762 (alpha) and 0.859 (CR). Convergent validity is assessed via the average variance extracted (AVE). AVE values should be greater than 0.50 (Straub et al., 2004). Consistent with this suggestion, AVE measures for all variables exceed 0.627 (Table 2). For an adequate discriminant validity, the square root of the AVE of each construct should be greater that its correlations with any other latent variable (Barclay et al., 1995). All constructs satisfy this condition. In addition, discriminant validity can be also assessed analyzing the cross-loadings table (Table 1). Our measurement model satisfies this requirement since each item loads higher on its own construct than other latent variables, and each construct loads higher with its assigned indicators than other manifest variables (Gefen and Straub, 2005).

4.2 Structural model

The structural model is assessed analyzing the coefficient of determination (R^2) of the endogenous constructs, the algebraic sign, magnitude and significance of the path coefficients, and the predictive relevance of the endogenous reflective variable (Q^2) (Gefen et al., 2011). Consistent with Henseler et al. (2009), bootstrapping (5.000 resamples) was used to generate standard errors and t-statistics. This allows us to assess the statistical significance of the path coefficients. In addition, the bootstrapping confidence interval of standardized regression coefficients is reported. "If a confidence interval for an estimated path coefficient *w* does not include zero, the hypothesis that *w* equals zero is rejected" (Henseler, Ringle and Sinkovics, 2009: 306). Specifically, we have applied a percentile approach, which has the advantage of being completely distribution free (Chin, 2010).

Table 2: Composite reliability, Cronbach's alpha and AVE

	Composite Reliability	Cronbach's alpha	AVE	PE	EE	SI	FC	IU	U
PE	0.9158	0.8772	0.7334	**0.8564**					
EE	0.9555	0.9380	0.8431	0.5755	**0.9182**				
SI	0.8909	0.8362	0.6716	0.5518	0.4289	**0.8195**			
FC	0.8703	0.8014	0.6273	0.5493	0.6803	0.4902	**0.7920**		
IU	0.9662	0.9475	0.9049	0.5127	0.4284	0.4044	0.4820	**0.9513**	
U	0.8599	0.7623	0.6741	0.4136	0.4316	0.2828	0.3320	0.4504	**0.8210**

Note:
1) The square root of the AVE score for each construct is shown in diagonal (bold). Off-diagonal values display the correlation between constructs. For discriminant validity the diagonal values must be greater than the values of the correlation.
2) PE: Performance Expectancy; EE: Effort Expectancy; SI: Social Influence; FC: Facilitating Conditions; IU: Intention to Use; U: Use

Table 3 shows the R^2 values of the model's endogenous variables. In this vein, the model explains 32.9% of the variance of IU, corresponding to a moderate level of explanatory power (Chin, 1998). The Use variable has an R Square of 22.0%. The model has an average explanatory power of 27.5%, surpassing the minimum level of 10% recommended by Falk and Miller (1992).

The results for t-values allow us to affirm that all β coefficients are significant. This is also confirmed by the analysis of the significance using percentile bootstrap with a 95% confidence interval (Roldán and Sanchez-Franco, 2012: 206). The results for the algebraic signs are all positive, which confirms the direction of the hypotheses. With respect to the analysis of the explained variance, Intention to Use is explained by Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions - 15.20%, 2.45%, 4.20% and 11.05% respectively. Finally, Use is explained 4.97% by Facilitating Conditions and 17.03% by Intention to Use.

The predictive importance of dependent variables is as prevalent as the Stone-Geisser Q^2. According to Chin (2010), the cross-validated construct redundancy Q^2 should be used to examine the predictive relevance of the structural model. Accordingly, this model has predictive relevance, because the Q^2 values presented in Table 3 are all greater than zero (Henseler et al., 2009; Roldán and Sanchez-Franco, 2012).
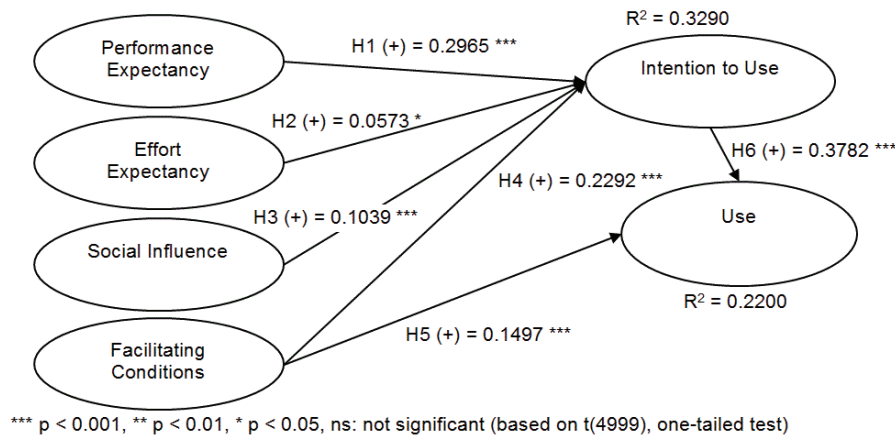

Figure 1: Research model results

5. Discussion

5.1 Theoretical implications

This study contributes to the development of research in Acceptance and Adoption of IST. Replicating an extension of the UTAUT model (Venkatesh et al., 2003), it is contributing to: the general increase in generalization of the UTAUT model; the deepening of the understanding of the use of systems by employees; the accumulated knowledge in this area of research, in particular, and the field of Information Systems in general.

Table 3: Effects on endogenous variables

	Direct effect	t-value	Explained variance	Percentile 95% confidence intervals		Support
Intention to Use (R2 = 0.3290 / Q2 = 0.2948)						
H1 (+): PE ➔ IU	0.2965 ***	9.3202	15.20%	0.2341	0.3610	Yes
H2 (+): EE ➔ IU	0.0573 *	1.9085	2.45%	0.0001	0.1184	Yes
H3 (+): SI ➔ IU	0.1039 ***	4.1625	4.20%	0.0559	0.1528	Yes
H4 (+): FC ➔ IU	0.2292 ***	6.3803	11.05%	0.1583	0.2957	Yes
Use (R2 = 0.2200 / Q2 = 0.1452)						
H5 (+): FC ➔ U	0.1497 ***	5.7952	4.97%	0.1000	0.1975	Yes
H6 (+): IU ➔ U	0.3782 ***	14.1334	17.03%	0.3260	0.4290	Yes

Note:
1) PE: Performance Expectancy; EE: Effort Expectancy; SI: Social Influence; FC: Facilitating Conditions; IU: Intention to Use; U: Use
2) *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, ns: not significant (based on t(4999), one-tailed test) t(0.05, 4999) = 1.65, t(0.01, 4999) = 2.33, t(0.001, 4999) = 3.09

The results showed that the Intention to Use EDMS comes from the perception that it is useful (Performance Expectancy), that it seems easy to use (Effort Expectancy), that it is important to others to believe that an employee must use it (Social Influence) and the perception that technical and organizational support for the use exists (Facilitating Conditions). Also, model analysis showed that the Use of the EDMS is determined by the Intention to Use the EDMS and also by Facilitating Conditions.

Research has empirically shown the direct effects of Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions, which are the main constructs of the UTAUT model. However, the UTAUT model showed the effect of these constructs only with the moderation of Age, Voluntariness, Gender and Experience. In the current study an interesting result was obtained with the significant relationship between Facilitating Conditions and Intention to Use, which was not observed in the UTAUT model.

The study results indicate that the Performance Expectancy is the most important determinant of Intention to Use. These results are consistent with several empirical studies that used the UTAUT model (Al-Gahtani et al*.,* 2007; Chang et al*.,* 2007; Gupta et al*.,* 2008; Wang and Shih, 2009; Wang et al*.,* 2009; Sapio et al., 2010; Venkatesh et al*.,* 2010). However, in the UTAUT model this relationship was only confirmed when moderated by age (-) and Gender (M > W), being more significant for men and young employees.

In the current study, the effect of Effort Expectancy on Intention to Use occurs directly. Thus, the acceptance of the EDMS by the employees depends on if this system is used easily and effortlessly. In the UTAUT model, the effect of Effort Expectancy on Intention to Use does not occur directly but moderated and simultaneously by Gender (W > M), Age (+) and Experience (-), being more significant for women and older workers. This effect decreases with experience.

The direct and positive effect of Social Influence on Intention to Use is empirically verified in this investigation. This result is partially in line with the UTAUT model, where the effect of Social Influence on Intention to Use is only significant when moderated by all four moderating variables included in that study. The role of Social Influence in the use of EDMS can be partly explained by this system being an organizational information system, which supports organizational processes associated with several employees that are naturally influenced by the need to work together with others. The effect of Social Influence on organizational contexts is suggested in the works of Davis (1993) and Davis et al. (1992). On the other hand, the dimensions of the Portuguese culture (Hofstede, 1997) may explain some of the effect of Social Influence on the Intention to Use the EDMS. Consequently, in the Portuguese culture, which verifies a power distance index of 63, employees tend to exhibit a strong association between Social Influence and Intention to Use. In addition, the low level of individualism in Portugal (27) is characteristic of a culture that values collective goals and inter-personal relationships. A high respect for groups suggests that the collective opinion of others can have an impact on individual Intention to Use the EDMS.

Regarding the direct effect of Facilitating Conditions on Intention to Use, the results in this study were significant and relatively expressive, the second strongest determinant being Intention to Use. In this sense, EDMS users expressed that the knowledge and skill as a user of it and the possibility of access to resources and support necessary to use it increases the Intention to Use. This result is consistent with the works of Al Awadhi and Morris (2008), Duyck et al. (2010), Ho and Chou (2009), Hung et al. (2007), Shi (2009), Wu et al. (2007) and Zhou (2008). In the UTAUT model, this relationship was not part of the model, the argument being that the relationship was not significant in the presence of the relationship between Effort Expectancy and Intention to Use.

The result of the direct effect of Facilitating Conditions on Use was significant. In the UTAUT model this effect was only significant when examined in conjunction with the moderating effects of age and experience, i.e., the facilitating conditions only interested older workers with more experience. In short, having hardware and software resources, knowledge and technical support allows users to overcome the barriers to the use of EDMS and facilitate their use (Taylor and Todd, 1995).

5.2 Practical implications

This research also provides implications for information systems and management professionals. In this sense this work provides a model to be applied and therefore it is useful in order to have an understanding about EDMS adoption and use. With their results they can monitorize the EDMS use and compare it with results of this study. To obtain information related to the evolutionary adoption of EDMS, the model should be used periodically. With appropriate modifications, the model of this study can be used to carry out the evaluation of other information systems.

The study results indicate that users with a higher performance expectancy tend to use the EDMS more. Due to this, ways to increase the performance expectancy of the EDMS should be considered. With this in mind, we propose the following measures: make users aware of the impacts of the EDMS on work performance; develop a variety of functions with value that can help meet the potential needs of the most demanding users; cause an increase in competition among users groups; train with the aim of strengthening the expected consequences of EDMS; create structured training programs taking into account the different needs of each group; create organizational goals - group or individual- and time-related handling of documents; plan daily or weekly registration targets for elements that record documents; monitor pending cases of the employees, and of the working group for the process, making this process visible.

With a view to increasing the effect of effort expectancy on the intended EDMS use, it is proposed that the managers identify users with little or no experience using the EDMS and create for them a clear interface that is easy to use and involves little effort. The effort expectancy and the Use of EDMS should be monitored and incentives provided for users to gain initial experience with the EDMS. When the effect of effort expectancy on the intended EDMS use is no longer significant, more advanced options and more complex interfaces with a focus on instrumentality should be offered.

To increase the effect of Social Influence on Intention to Use the EDMS, the following is recommended: to publicize the success of early adopters; to cultivate a positive reaction to the EDMS by the organization's opinion leaders; to identify individuals with greater social capital during the pre-implementation of the EDMS and to create a Community of Practice.

For Facilitating Conditions we propose: to communicate and recognize the successes and progress in order to increase self-confidence; to communicate during implementation what support is being offered to ensure that users have the necessary support and confidence to use the EDMS; to improve hardware and software based on the necessities of the different users or group of users; to ask and follow users' suggestions in order to improve the information systems and working conditions; to obtain the employees' acceptance by emphasizing in training that it is easy to use EDMS.

5.3 Limitations

This research obviously presents several limits beyond the natural time constraint that may have restricted the number of Municipalities and responses. Second, the model of this study does not include variables to moderate the effects of independent variables on the dependents. Third, the present study is limited to not being longitudinal. Fourth, this study reflects the perspective of organizations such as Municipal Councils and we cannot generalize the results to non-governmental

organizations. Fifth, frequency of use is measured in a self-reported way. Sixth, this study is not very clear at the task level of EDMS use. Finally, in light of the cultural dimensions of Hofstede (1997), the generalization of the results is limited to countries with similar levels of cultural dimensions to those of Portugal.

We propose future research of the model of this study with the moderate variables of organizational units, various EDMS software solutions, a hierarchical level of respondents, different sizes of organizations and with different levels of Hofstede (1997) cultural dimensions to those of Portugal. Future study should be longitudinal, which does allow having values that reflect the dynamics of the variables and the relationships between these over time, as the perceptions vary over time and users will also gain experience. Another type of organization should be studied. Finally, Sánchez-Franco (2006) recommends the study of the tool use, in this case of the EDMS, associated with a specific task.

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