

The impact of participation on government employees' adoption of IT - Empirical research focusing on e-file

Mariam Ben Rehouma¹

Abstract: The progress of information technology over recent decades has led public administrations to digitize most of their business processes. The adoption of IT requires the participation of the government employees in the introduction process. Although participation seen as a key for the success of e-government, very few researches in this field investigate the impact of participation on the adoption of this change. To fill this gap, my research will investigate the influence of participation on the employees' adoption of IT. The implications for theory of my research will contribute with new insights into IT-adoption research, especially into the interaction field between the government and its employees (G2E). Furthermore, the implications for practice in form of recommendations should help government to integrate participation into the introduction process of IT intended to achieve better employees' adoption.

Keywords: Adoption; E-file; E-government; Employees; IT; Participation

1 Introduction

The progress of information technology over recent decades has led public administrations to digitize most of their business processes. This evolution has rapidly changed from rudimentary use of ICTs as simple tools to support highly structured administrative work to the integration of ICT through government operations [LY15]. Thereby, E-Government services like the electronic file (e-file) also known as Document Management System (DMS), which built the central of the digitalisation of government transaction processing, are supposed to belong to standard information and communication tools in German public administrations [T10]. The nationwide introduction of e-file in German public administrations poses a big challenge for the majority of the public servants. Fears and anxiety shape this domain according to statistics on E-government in the German-speaking region [S16]. Employees in the public sector are considered as “the key to a successful implementation of change and modernization processes” [M14, p.122]. Staff participation has a key role for insuring employees' adoption of change [O02]. It represents a key drivers of innovation and should be stronger considered by E-Government projects [D16]. In this context, states the German Trade Union Confederation and many other concerned organizations the necessity to provide new architecture for employees' participation and to reform traditional change management approaches. They aim with this rethink to face the challenges of the digitalization of public administrations and to achieve a high degree

¹ University of Bremen, Department 03 Mathematics/Computer Science, Bibliothekstraße 1, 28359 Bremen, mariem.benrehouma@uni-bremen.de

of acceptance by the employees in this sector. This requires appropriate employees' preparation and participation to adopt this change [K15]. Although participation seen as a key for the success of e-government, very few researches in this field investigate the impact of employees' participation on their adoption of this change. To fill this gap, my research will explore opportunities for participation in theory and practice and investigate the influence of participation on the employees' adoption of IT.

My proposal is structured as follow: in the following section, I will describe the problem statement that need to be addressed followed by the development of my research questions. Then I will give an overview about the state of research on IT-adoption and participation in section 2. Section 3 will introduce the research design of my thesis. Finally, I will present my first results.

1.1 Problem Statement

Despite the needs and requests of including employees' participation into the introduction process of IT to achieve employees' adoption in public administrations, the impact of participation on the adoption has not yet been investigated. Only few researchers in the field of IT-adoption in general deal with the employees' perspective in public administrations (G2E) and with the influence of participation on the employees' adoption of e-file in particular (e.g. [B06], [NSS10], [HTC09]). It is claimed that employees' participation is essential for their adoption but it has in fact never been investigated. There is a clear gap in this area that provide the investigation of the real impact of employees' participation on their adoption of IT.

1.2 Research Questions

In the context mentioned above, I see the necessity to identify opportunities for participation in the introduction process of IT and to investigate the impact of the employees' participation on their adoption of IT. With the aim to advance the research in this area and to provide new theoretical and practical implications, I address the following main research question:

How does participation influence government employees' adoption of IT?

In order to answer my overall research question several sub questions are guiding my research:

- Which opportunities are available for participation in theory and practice?
- How are government employees involved in the introduction process of IT?
- Which role have participation for the different employees' groups?
- Which influence have participation on government employees' adoption of IT?

2 Theoretical Background²

2.1 IT-adoption

The adoption research focuses on the readiness of employees to benefit of the possibilities of information processing, and with the degree of their participation in the introduction of new computerized application systems [SH02]. IT-adoption is defined with the degree of readiness to use the possibilities offered by the information processing related with tasks on the own workplace [SH02]. User acceptance can be according to [DM96] defined as "...the demonstrable willingness within a user group to employ information technology for the tasks it is designed to support". In the same context is the user acceptance of IT-Applications described as a state illustrated through the adoption and the use of this applications, and which change of characteristics and forms over time [W11]. Two theoretical perspectives are mainly considered in researches on individual IT-adoption [B06]. The first perspective is based on individual perceptions like perceived usefulness and perceived ease of use as determinant for the user acceptance intention and behaviour. Such determinants are treated in the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB) including the Technology Acceptance Model (TAM), the Decomposed Theory of Planned Behaviour (DTPB), and the Unified Theory of Acceptance and Use of Technology (UTAUT). The second perspective is oriented on the Diffusion of Innovations Theory (DOI). In IT-Adoption research TAM is the most frequently used theory in this field followed by TPB and DTPB [RWD12]. Beyond these definitions, the terms "adoption" and "acceptance" are widely used as synonyms. A distinction in the literature is mentioned over the frequency of use an information system. Thereby refers the term "adoption" to user's decision to use this system at the first time and the term "acceptance" refers to the post adoption stage [H14]. I apply the term "adoption" in the course of my research, except of the explicitly use of the term "acceptance" in the relevant literature. Participation is often cited as an important factor for adoption. The following section gives an overview about participation. In section First Results, I will report about studies on the influence of participation on IT-adoption.

2.2 Participation

The concept of participation is integrated in many disciplines: social-, political-, economic sciences and business management. Therefore, many definitions are assigned to it. According to [HPS98] participation is defined as "the totality of forms and intensity by which individuals, groups, collectives secure their interests or contribute to the choice process through self-determined choices among possible actions". The forms of participation consist of direct participation, which requires the active involvement of the employees and the indirect participation through representation of interest like lobby or staff council. Information, communication, consultation, codetermination and control

² Parts thereof have also been submitted as research paper in a conference

present various degrees of participation according to [MA2000, p. 406]. In practice, direct participation is sectioned in four categories. The first category is downward communications, which is the weakest category of direct participation and presents a form to convey information. The second is upward problem solving, which is based on employees' knowledge and ideas. The third one is task-based participation, which may include employees' training for extensive tasks or the assumption of responsibilities. Finally team working and self-management, which incorporates responsibility for a complete task, working without direct supervisor, discretion over work methods and time, encouragement for team members to organize and multi-skill and influence over recruitment to the team [MA00].

3 Research Design and Methodology

I will apply in my research a mixed research approach. First explorative than confirmative using qualitative and quantitative methods as recommended by future research needs in many studies. The explorative approach will be based on two methods that serve as complementary rationale of each for the development of my hypothesis. The first one is a theoretical framework in form of a systematic literature review. The review aim to identify the state of research on IT-adoption especially the influence of government employees' participation on IT-adoption. The main results of my systematic review summarized and indicated under the section primary results. The second part applied qualitative methods based on a case study in German federal agencies to get insights into the implementation process of IT and how do employees participate in this process (instruments for participation, implementation stage, qualification, etc.). The access to the federal agencies is given through the German Trade Union Confederation (DGB) and the German Association of Civil Servants (dbb). Guided interviews with different employees' groups and focus groups (IT, organization, human resources and others) will serve to determine the role of participation for the employees and whether it seem to be essential for them or not in regard to their adoption of e-file. At this point participation will refer to the different aspects established in the theory and to instruments applied in the practice. This approach serve to explore information about employees' participation in theory and practice necessary for the generation of my hypothesis that will present the focus of my research model. The Hypothesis will be elaborated after these results and will be verified in the confirmative approach on the base of an empirical quantitative study in form of a survey. Surveys built a popular empirical method in researches in IT-adoption [BC08]. For the Evaluation of the data gained from this survey, it is supposed that I will use a partial least square approach (PLS) due to the correlation between the variables according to my current findings in the literature review. This could change during the research depends on the findings after conducting the planned studies.

4 First Results of my theoretical Framework³

In order to determine the state of research in employees' adoption of IT in public administration and to give an overview about future research needs in this field, I conducted a structured literature review according to Webster & Watson [WW02]. The search of the relevant literature was according to vom Brocke et al. [vBS09]. First results from my structured literature review on factors that influence IT-adoption indicate that Participation and involvement turn up to be relevant factors that influence users' behavioral intention to use a given system and should be deeper investigated in future research. This results due to a depth qualitative analysis in my review of the antecedents used on these studies. Prior studies on individual innovation within the public sector report that employees in public organizations seem to perceive more barriers that limit their innovation work behavior (IWB) than employees in private sector organizations [N2015]. Employees' participation in the public sector is considered as an important part of the employee empowerment management approach to encourage their innovative behavior. One effective way of doing that, is providing information and access to job-related knowledge through training and development (Fernandez & Moldogaziev, 2013). The positive effect of employee participation and involvement on their outcome, life and organizational performance was reported in several studies ([HL04]; [ISP97]). In contrast to conventional organisational top-down approach used for strategies, structures and process of implementation in public sector, could participation and employees involvement be used as a strategy to achieve acceptance of change [O2002]. Practical experiences with employees' participation in modernization processes in German municipalities report about central forms of participation considered on information, qualification and Participation by elected representatives in the various project groups which were conducted spontaneous without integrated participation model and concept. The study indicates fundamental problems and the need for optimization of the participation process [BK97].

Regarding studies focused on E-Government adoption and in particular, the adoption of e-file on the internal perspective, very few studies investigate the influence of participation on this concern. Employees' use of information technology is driven according to several articles from their behavioural intention to use this technology. Behavioral intention was determined as the most used dependent variable that is significantly influenced by perceived usefulness and perceived ease of use ([HTW03]; [HTC09]; [S11]; [SP11]). The variable involvement was expressed by participation, commitment, partnership and responsibility and found as a positive influencing factor on employees' use of e-government technology [NSS10]. In this study participation and involvement have only been theoretically explored, have not yet been validated, and need to be further considered by future research. Furthermore, the variables information quality, argument quality, source credibility, adaptability and organizational climate, which – at first glance – seem to be quite different, turn out to be in fact quite similar and address the same type of factors,

³ Parts thereof have also been submitted as research paper in a conference

i.e. communication, information, absence of bureaucracy, decision-making practices and job satisfaction ([B06]; [M10]; [SMD16]). Further factors such as the users being informed about the introduced technology also play an important role in the processes of creating user adoption of new IT [B06]. According to [R1995], user acceptance is particularly influenced by the provided information content and IT-relevant details as well as the communication channel used for spreading the information. Information built according to [MA2000] the first step of the participation escalator. It is a part of the category downward communication as mentioned under the definition of participation declared above. The importance of information has already been shown in related contexts such as citizens' adoption and continuous use of an e-government system [TSJ09] as well as in the government-to-business context [CE05]. The fact that most studies are based on widely used theories such as TAM, TPB and UTAUT inevitably leads to standard constructs such as perceived usefulness and perceives ease of use being analysed over and over again. That is not erroneous in itself, but the research field on IT adoption of government employees' remains incomplete where special characteristics of the public servants and characteristics of the public organization and the obligatory use of IT are not appropriately taken into account. Despite the diverse existing IS research theories and models, there is no generic e-government adoption research model. On the base of recommendations and future research needs in many articles, there is a necessity for deeper investigate special organizational and individual factors that influence the government employees' adoption of IT such as participation, information, training and education within the requirements and expectations of the different employees 'groups. In addition, it is recommended on the methodological aspect, to conduct both qualitative and quantitative approaches and to select an advanced statistical modelling concept to fully meet the requirements of this area of research.

5 Conclusion and Implications

The employees' perspective is underrepresented in IT-adoption research. In particular, participation is less investigated in this relationship. The aim of my research thesis is primary the theoretical understanding of the impact of participation on the government employees 'adoption of IT. The implications of theory with hopefully new findings could enhance the research field in this area. Further implications of my research are for the practice and should help government with recommendations to integrate participation into the introduction process of IT intended to achieve employees 'adoption. With an explorative approach with different qualitative methods, I will give insights about participation opportunities in theory and practice and explore information necessary for the development of my research model. The impact of participation on the employees 'adoption of IT will be investigated on the confirmative approach of my research design.

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