PREMISE ȘI CONSECINȚE ALE UTILIZĂRII SISTEMELOR ȘI TEHNOLOGIILOR INFORMAȚIONALE ÎN ORGANIZAȚII

ABSTRACT

The habilitation thesis encapsulates my research activity after finishing the doctoral stage, together with my future scientific research directions and academic career prospects. The thesis is structured in two parts. The first part includes the presentation of my academic profile and details the steps and accomplishments during the academic career, together with a synthesis of the research outcomes for the significant period after the confirmation of the PhD title. The second part includes the future research directions and teaching objectives configured for advancing the academic career.

Part I of the thesis starts with a preamble structured in four sections: "Context and motivations", "Evolution of the academic, scientific and professional career", "Capacity for coordinating research teams, to organize and manage teaching activities, to explain and facilitate teaching and research", "Research directions, contributions and impact".

The first chapter "An organizational perspective of the premises and consequences of using information systems and information technology in organizations" is divided in two parts. In the beginning of the chapter, I described the context of information systems adoption in the organization's strategy for digital transformation and defined the ERP systems as the most significant IT projects in this category.

The section "Premises of using information systems and information technology in organizations – the ERP systems case" examines the critical success factors for ERP's implementation. The critical success factors for ERP projects are classified and examined in various angles; therefore, the research focused on the empirical studies that pointed out the most relevant CSFs. The final list included eight factors that were investigated in a quantitative study performed in Romanian higher education institutions. The respondents were managers involved in the projects for IS implementation. The results indicated significant dissimilarities from the similar research because only three of the factors were confirmed to be relevant for ERP implementation. The conclusion that is consistent with other studies is the combined power of different categories of factors (technical, managerial, organizational) for the ERP successful implementation.

The next section "Results' achievement for information systems adoption. IT assimilation and continuous improvement" considers the ERP lifecycle and connects the IT assimilation stages with the ERP project phases. Analyzing the ERP systems particularities, the conclusion points out the pronounced relevance of the post-implementation stage of these projects, because the organizations need more time to accept and routinize the ERP system.

The first chapter ends with the section "Consequences and perspectives of using information systems and information technology in the innovative and evolutionary technological context". The significant technologies that affect the IS transformation are discussed at first: Cloud Computing, IoT, Big Data, Artificial Intelligence and Machine Learning, Business Analytics. The challenges in front of organizations' digital transformation derive from the fact that ERP systems are here to stay and their future projects need to be built around them. Recent technological trends create great expectations and in this respect the results of a systematic literature review around Machine Learning, Open Data, and applications for smart cities was included next. The conclusion is that Machine Learning offers a large diversity of applications and all organizations, public or private, need to profit, while also taking advantage of the opportunities provided by Open Data. The practices of data consuming and processing in organizations are about to be revolutionized in Industry 4.0 era.

The second chapter "An end-user perspective of the premises and consequences of using information systems and information technology in organizations" discusses how do users accept the new information system and how do they perceive the effects of using IS or technology at work.

The section "Premises of successfully implementing information systems – the Technology Acceptance Model" includes an empirical research that uses TAM, which is a classical method to investigate how users respond to technology related change in their work, knowing that people are natively resistant to change. According to TAM, perceived usefulness and perceived ease of use influence a person's behavioral intention to use a technology, which determines the actual use. After examining the utilization of TAM in previous studies, it was decided to expand the model with factors suggested from other theories and contextual factors: employee's digital skills and adaptability plus bureaucracy reduction and work efficiency of the new IS. The research model was statistically tested and six out of eight hypotheses were validated.

The next section "An end-user perspective of the consequences of using information systems and information technology in organizations" gives emphasis to the negative effects of IS or technology usage. Indubitably, technology and information systems play a major role

in improving organizations' performance and employees' work efficiency. Nevertheless, there is a ‘dark side’, defined as "a broad collection of negative phenomena that are associated with the use of IT, and that have the potential to infringe the well-being of individuals, organizations and societies” that not many studies have investigated yet. Among the negative consequences of using IS or IT at work, the following paragraphs present the effects of inadequate information systems (workaround behavior) and the effects of technostress on employees' work performance and individual well-being. Both studies are empirical, performed in Romanian companies and based on the Structural Equation Modelling methodology. Also, both of them provide interesting implications for practice and research and open new possibilities for further research.

The second part describes the envisaged perspectives for the academic career and it contains two sections.

The first section focuses on the research activity. I intend to go on with the research activity and contribute to the research advancement in my University. I plan to think out new developments of the classical research directions, while also deepen the newer research topics. For the ERP systems topic, I plan to fathom new models for organizations' digital transformations given the innovative technologies that recently emerged (Machine Learning, Big Data and Analytics, Cloud based platforms). The other direction targets the dark side of information systems and I plan to contribute to the IS literature and IS practice with new studies on technostress, interruptions, or inadequate information systems.

The second section describes the future plans for the teaching and professional activities. I plan to evaluate the efficiency and effectiveness of my teaching and to improve it accordingly. Also, I think it is important to permanently adapt our teaching methods and materials in accordance with the technological evolution and with the students' needs. I also plan to improve my competencies with ERP systems (Clarvision from NTT Data and SAP S/4 HANA) in order to deliver better knowledge to my students and prepare courses and seminars for new post-graduation programs.