

**BUCHAREST UNIVERSITY OF ECONOMIC STUDIES**  
**FACULTY OF ACCOUNTING AND MANAGEMENT**  
**INFORMATION SYSTEMS**

**HABILITATION THESIS**

**THE IMPLEMENTATION AND EMPLOYMENT OF**  
**THE INFORMATION TECHNOLOGIES**

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## ABSTRACT

The present thesis summarises my scientific, professional and academic activity after publicly presenting the PhD Thesis entitled *The Impact of Information Technology on the Organization and Functioning of the Financial-Accounting System of the Company*, coordinator PhD. Prof. Vasile Florescu, at the Bucharest University of Economic Studies in 2009. The scientific activity and achievements presented here are developed on the implementation and employment of information technologies, particularly the enterprise resource planning systems (ERPSs) and enterprise systems (ESs).

My contribution relies on a few pillars: the benefits of the implementation and employment of the ERPSs or ESs, the difficulties encountered by the companies in the implementation and employment of the ERPSs or ESs, the impact of the ERPSs or ESs on the company. The research methodologies employed were qualitative (for example, by conducting interviewees for the case studies) or quantitative (for example, by using questionnaires or databases). In this area, I used the contingency theory, the grounded theory etc.

Statistics reveal that companies worldwide spend billions of dollars each year for the ES. If this is the case, I wonder which are the benefits that the companies expect to experiment from using the ES. In the article *An analysis of the benefits generated by the implementation and employment of the enterprise systems in a transition economy* my analysis relies on a theoretical framework suggested by Shang and Seddon (2003) and improved by my own findings. I use as a research method the case study. I present the benefits identified from the point of view of the experts. One of my contributions relies on the application of the theoretical framework in the case of a company operating in a transition economy. Also, I mapped the benefits on the implementation stages of the enterprise systems. I approached the benefits on a module by module basis, as opposed to the whole ES.

For the distribution companies, the adoption of information technologies can open new selling channels. In the article *Enterprise systems benefits for distribution companies* I synthesize the possible benefits of the ESs. In order to do this, I analyse the benefits reported by a set of distribution companies after adopting ESs.

Best practices are conceived in management as improvement programs leading to higher organizational performance. In the article *ERP implementation and organizational performance. A Romanian case study of best practices*, me and my research team took an interest in the effects of ERP systems implementation as managerial tools on firm performance, in connection with the organizational processes, and accounting and controlling systems. The investigated how the mutual evolution of both organizations and systems transforms the case of ERP implementation in best practices in management and accounting in an emerging economy. This research comes in the context of a slowly developing research based on empirical data in Romania in this area. However, best practices need to be promoted

in order to stimulate change, in an increasingly complex and competitive environment, and with fewer resources available to organizations. By an in-depth longitudinal case study, we illustrate how both the ERP system and the case organization evolved, triggering a fit which consequently led to improving organizational performance. Our research has practical contributions for the Romanian business environment, in that Romanian managers and IT employees might become aware how they can leverage their ERP system to exploit its fuller potential, and regarding the importance of the organizational context for the implementation and post-implementation processes.

In the article *The impact of the interaction between context variables and ERP systems on organizational performance. A case study from a transition economy* me and my colleagues investigated how ERPSs are implemented and employed in Romania. Specifically, we conducted a longitudinal case study to investigate the fit between context variables that is, variables describing the organizational factors and the business environment, and the ERPS. We show how the case company's ERPS substitutes management techniques, facilitates strategy formulation and implementation, thus significantly improving organizational performance.

Previous research on ERPSs shows that the risk of failure is very important. Also, the difficulties in implementing an ERPS in a transition economy are different from the ones encountered in a developed country (Huang and Palvia, 2001; Roztocky and Weistroffer, 2008). In the article *Difficulties in the implementation of an ERP system: evidence from a transition economy*, my research relies on the presentation of a case study developed in a Romanian company implementing an ERPS. Based on the literature review, I define the phases of the implementation process (Markus and Tanis, 2000; Parr and Shanks, 2000; Ross and Vitale, 2000; Somers and Nelson, 2004). I present the difficulties encountered in my case company. The implementation started in 2013 and difficulties related to financing, IT infrastructure, employees, management etc. were identified. I present the difficulties on specific implementation phases. I was actively involved in the implementation process, which makes this paper an action research.

The need to use high volumes of data and the high competition are only two reasons which make necessary the use of information technologies. In the article *The impact of the information technologies on the accounting department of the Romanian companies*, starting from the literature review I made an empirical research based on a questionnaire. I investigated the types of technologies used, the reasons which led to the implementation of certain technologies, the benefits brought by the use of the information technologies, the difficulties brought by the implementation and the future effects of the applications. The conclusions showed that there is an evolution in the degree of implementation of the information technologies in the Romanian companies, compared with the results of other studies conducted a few years before.

I was also interested in the information technologies used in specific domains. Thus, in the article *Innovative information technologies and their impact on the performance of the entities which activate in the retail industry* me and my team built our research under the

auspices of the diffusion of innovations theory. Using the questionnaires collected we could establish correlations between the variables included into three categories (company's size, the information technologies used for retail, the impact of information technologies on the company) and we developed two original econometric models. The turnover is considered an endogenous variable (underlying the impact of the information technologies on its value) as well as exogenous (the existence of a unique computers network within the company depending on the turnover as a development factor). The models show that there is a negative correlation between the total turnover and the percentage of the turnover obtained through online sales, respectively the existence of a unique computers network is influenced by the existence of the online retail within the company. The conclusions underline the research limits and the necessary future developments.

My work after the presentation of the PhD thesis resulted in 7 books, 11 ISI indexed articles, 9 articles published in journals indexed in international databases, 9 papers presented at international conferences etc. Out of these, for two books, six ISI articles, three articles published in journals indexed in international databases and seven papers presented at conferences I was first or unique user or principal investigator. I won a postdoctoral research scholarship with the project *The increase of the competitiveness of the transition economies by using ERP information technologies*. Also, I was a member of 4 national research projects obtained in competition.

The first part of the thesis presents my professional achievements as well. Thus, I created an ERPS called Manager Financiar.

My academic achievements are concisely presented in the third section of the first part of my habilitation thesis.

In the second part of the thesis I presented the research plan in which are outlined future research objectives, the plan to disseminate the research results, the presumptive impact of the research and directions for the development of the academic and teaching activities.