

Dumitru, Valentin Florentin; Albu, Nadia; Albu, Cătălin Nicolae; Dumitru, Mădălina

Article

ERP implementation and organizational performance. A Romanian case study of best practices

Amfiteatru Economic Journal

Provided in Cooperation with:

The Bucharest University of Economic Studies

Suggested Citation: Dumitru, Valentin Florentin; Albu, Nadia; Albu, Cătălin Nicolae; Dumitru, Mădălina (2013) : ERP implementation and organizational performance. A Romanian case study of best practices, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 15, Iss. 34, pp. 518-531

This Version is available at:

<https://hdl.handle.net/10419/168797>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<http://creativecommons.org/licenses/by/4.0/>

ERP IMPLEMENTATION AND ORGANIZATIONAL PERFORMANCE. A ROMANIAN CASE STUDY OF BEST PRACTICES

Valentin Florentin Dumitru^{1*}, Nadia Albu², Cătălin Nicolae Albu³ and
Mădălina Dumitru⁴

^{1) 2) 3) 4)} *The Bucharest University of Economic Studies, Romania*

Abstract

Best practices are conceived in management as improvement programs leading to higher organizational performance. We hereby take an interest in the effects of Enterprise Resource Planning (ERP), systems implementation as managerial tools on firm performance, in connection with the organizational processes, and accounting and controlling systems. The aim of this paper is to investigate 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. The paper 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.

Keywords: Best practices, ERP, Romania, performance

JEL Classification: M15, M41

Introduction

Ex-communist countries such as Romania underwent a complex process of transitioning from a centralized to a market economy, a difficult transition at times unfinished. Moreover, such economies also face today the need to compete and integrate into a global economy. The changes in the business environment have been significant, and entities

* Corresponding author, **Valentin Florentin Dumitru** - valentin.dumitru@cig.ase.ro

needed and still need management techniques in order to support decision making and control their activities. As the types of activities and the role of stakeholders in the business environment evolved significantly, a need for best practices emerged in these countries. Good reporting, taxation, costing and performance management systems are required to ensure organizational efficiency (Jaruga and Ho, 2002). Also, the implementation of enterprise systems is considered as a key step for entities in these countries in order to become more competitive and to better run their business (Themistocleous, Soja and da Cunha, 2011).

While the complex relationship between enterprise systems such as Enterprise Resource Planning (ERP) systems and management accounting has already been acknowledged in prior literature (Rom and Rohde, 2007), literature is evolving slowly in this area (Sutton, 2006). Additionally, management accounting practices and research are scant in emerging economies. More than that, Themistocleous, Soja and da Cunha (2011) underline that ERP implementation is much more complex in emerging economies than in more developed countries. These assertions motivate the need for research on ERP practices in entities located in emerging economies. Therefore, we undertake this stream of research by focusing on ERP as best practices. It is considered that an implemented technique or improvement program is a best practice if the adoption leads to higher performance (Laugen and Boer, 2007). Consequently, we are interested in the effects of the implementation of an ERP system on the organizational performance of a firm located in an emerging economy.

The aim of this paper is to investigate 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. By an in-depth longitudinal case study we relate an ERP's implementation process and its use to the organizational context specific to many entities located in emerging economies. We extend prior conceptual and empirical knowledge related to ERP in emerging economies in general (Roztock and Weistroffer, 2008; Themistocleous, Soja and da Cunha, 2011) and in Romania in particular (Dorobăț, 2006a, b; Dumitru and Florescu, 2009; Florescu, Ionescu and Tudor, 2010; Dumitru, 2011) by providing a detailed case study of how ERP implementation became a best practice in the case of a Romanian Small and Medium-sized Entity (SME) and how organizational factors were mobilized in order to facilitate this positive change. Our paper has practical contributions for the Romanian business environment, in that Romanian managers and IT employees may thus become more aware of how they can leverage their ERP system to realize its fuller potential, and regarding the importance of the organizational context for the implementation and post-implementation processes.

The remainder of this paper is organized as follows: a review of the relevant literature on ERP implementation in terms of expected benefits and generated change, and ERP as best practices; the methodology description; the presentation of the research site and the results; and conclusions on the contributions and limitations and future research avenues.

1. ERP systems as organizational best practices – a literature review

1.1 International evidence

Best practices are considered in management as improvement programs leading to higher organizational performance (Laugen and Boer, 2007). These best practices are promoted as elaborated advices that might generate organizational improvements (Crișan, Ilieș and Salanță, 2010). It is considered that ERP systems embody best practices in their reference models (Van Stijn and Wensley, 2005). Wagner, Scott and Galliers (2006) underline that the concept of best practice is used by ERP vendors to claim that the system was tested and it worked perfectly in other entities. Therefore, with regards to ERP systems, the concept of best practice is two-fold. First, it is related to the development of the ERP system based on prior experiences and cases. ERPs are generally considered to promote the Anglo-Saxon type of management (Caglio, 2003), and therefore they encompass good practices in the management of entities in these western economies. However, there are many recent claims that sometimes ERP systems fail, and this is because the social, organizational and cultural aspects were underestimated (Boersma and Kingma, 2005). On the other hand, the concept of best practices is linked to organizational practices, and more precisely to the models that are considered best practices because they generate significant performance improvements. Our attention is focused on the second stream of research, because we are interested to investigate how organizations and ERP systems evolve in order to generate performance improvements.

ERPs integrate material, monetary and information flows through a set of integrated application modules (Scapens and Jazayeri, 2003; Nicolaou, 2004a). They are implemented to help manage an organization in an integrated manner (Nicolaou, 2004a). Therefore, ERPs are considered managerial tools, and they are linked to the organizational process of accounting and controlling (Chapman, 2005), as this area is primarily concerned with resource management, providing information for decision making, and performance management. ERPs might serve to support critical functions of accounting and control system by facilitating decision making and organizational control (Nicolaou, 2008).

The benefits of ERP implementation may arise in many organizational areas, from operational to strategic benefits and from tangible to intangible results (Nicolaou, 2004a; Nicolaou and Bajor, 2004): internal integration, improved information, improved customer service, cost efficiency, improvements in productivity. Based on a literature review, Wagner, Scott and Galliers (2011) find that ERP adoption leads to improvements in transaction processing capabilities, in coordinating record keeping, in reducing the cost of duplicating data, but also in fiduciary control. Some studies argued that intangible benefits are in many cases more important than the tangible ones (Nicolaou and Bajor, 2004).

The organizations' accountability model is also influenced by the new technology. ERPs affect the planning and decision systems, the performance evaluation system and the communication system (Gabriels, 2004), by increasing transparency, integration and use of information for organizational change (Nicolaou, 2008). Scapens and Jazayeri (2003) argue that the new IT system facilitates the change in the roles of management accountants and management information, but it is not the cause of this change. Granlund and Malmi (2002) also find that ERP led to small changes in the accounting system. On the other hand, there are changes in the collection, measurement, analysis and communication of information and richer sources of information for accounting (Burns and Vaivio, 2001). Nicolaou and

Bajor (2004) suggest that ERPs promote cooperation, knowledge and expertise, authority and responsibility, therefore positively influencing the management of organizations.

ERP systems combine business processes and IT technology of the implementing organizations in order to ease the flow of information through business functions. A company implementing an ERP system may need to (Velcu, 2010): (i) make changes to its business processes and procedures, (ii) customize the ERP system, and (iii) become dependent on the ERP vendor for support and updates. The business process changes resulting from the ERP system customizations need to fit the organizational processes to the ERP system, and may be critical in successful use of the ERP system after its go-live stage.

However, the ultimate impact of ERP implementation is on organizational performance. By conducting a literature review, Hyvönen (2007) concludes to the existence of a strongly held view that information technologies can enhance organizational performance, especially in the case of a customer-focused, dynamic strategy. The impacts of IT in general and of ERP in particular, on organizational performance were discussed in a substantial body of literature (Velcu, 2010). ERPs' implementation is considered as a strategic investment decision (Cooke and Peterson, 1998; Wah, 2000) with benefits expected to accrue over several periods of time, as opposed to one-time windfall gains (Nicolaou, 2004b,c; Shang & Seddon, 2000). It is important to assess the impact of ERP implementation on organizational performance, because this is the ultimate measure in identifying successful projects and best practices, and separate them from failures.

1.2 Prior research in Romania

The literature on ERP implementation in Romania is in its infancy. The theoretical and methodological aspects related to research on ERP implementation are presented in prior research (Dumitru and Florescu, 2009; Florescu, Ionescu and Tudor, 2010), as well as the relationship between IT and organizations' performance (Florescu, 2008; Florescu, Ionescu and Tudor, 2010). On the other hand, empirical research is rather scarce in this area.

Rizescu (2007) concludes that the Romanian market on IT solutions is immature, with many new companies, few demanding clients, and high variances in quality. Many new companies proposing IT solutions were founded after 2000, as a result of the economic development. However, there is evidence that Romanian managers, especially of SMEs, do not adopt consistent and coherent approach based on rationality in order to achieve organizational change (Popescu, et al., 2012, Ilie, 2012). In line with this, it was suggested (Market Watch, 2006) that one of the factors negatively affecting the decision to implement an ERP in Romania is the lack of vision in terms of rigorous management techniques. Previous studies in management accounting in Romania for example indicated the reduced use of formal techniques to decision making and the lack of adequate management accounting systems (Glăvan, et al., 2007; Almășan and Grosu, 2008). On the other hand, those who decide to implement an ERP strongly believe that a good business needs a rigorous control and coherence, which might be provided through an ERP (Business Magazin, 2011).

The importance of a managerial culture and orientation towards the use of management techniques is also indicated by the few extant IT empirical studies. Dorobăț (2006a) conducted some interviews and analyzed several ERP implementation plans in the case of Romanian SMEs. The results indicate that SMEs recently started to implement integrated

information systems, as a result of various factors such as: increased business process cycle time, high level of inventories, inefficient use of resources, reduced productivity, unsatisfied customers and suppliers, reduced flexibility, lack of planning and control mechanisms. Also, the results indicate in the case of many SMEs that the limited resources and the lack of managerial knowledge led to a poorly-managed ERP implementation process, lack of attention and support, and underestimated costs. It was noticed that in many cases managers did not fully understand the implications of ERP implementation, and that the lack of managerial culture negatively affects the results of the implementation process. In a case study on an ERP implementation project, Dorobăț (2006b) also discusses the associated management issues. Communication and support were the main problems raised during the implementation stage, but slowly there was a movement away from reluctance toward the understanding of the continuous change involved by the new system.

Prior accounting research investigating practices and systems of Romanian entities also suggests a reduced extent of change. For example, Jinga, et al. (2010) show that many Romanian organizations (especially SMEs) do not have any managerial accounting system in place, and managers use financial reporting information to make decisions. Almășan and Grosu (2008) argue that in most cases there is virtually no communication between accountants and managers, that managers refuse to use accounting information, or that they do not understand it. There is also the view that despite the changes in the economic environment, accountants continue to use the same tools and traditional techniques.

These results of prior research suggest on the one hand that the process of change in this area would be a difficult one, and on the other hand that best practices are needed to be promoted in order to stimulate change.

2. Research methodology

This is an exploratory study aimed at deciphering, explaining and promoting best practices in the case of ERP implementation in the Romanian context in particular. Therefore, we follow a qualitative approach based on a longitudinal case study. From a methodological perspective case studies allow for a better understanding of the phenomenon under study. They contribute to a better understanding of the effects of ERP taking into consideration a wider view of the organization (Uwizeyemungu and Raymond, 2010). A longitudinal case study serves our purpose of investigating the fit between organizational variables and the effects on performance as a result of ERP implementation, as it traces organizational and systemic evolutions over time. Since the results of the implementation process cannot be seen over a short period of time (Nicolaou and Bajor, 2004), a longitudinal case study seems to be the most appropriate methodological choice in our case.

The research site is Alpha (the actual name of the company cannot be disclosed for anonymity purposes), mainly a commercial business which was founded in 2003. At the end of 2005 the decision to implement an ERP was taken, and the actual implementation process started in early 2006. A team of researchers maintained contact with the company since then, contributing to the ERP implementation and post-implementation activities. Therefore, data for this study were collected between 2006 and 2011, and include direct observations, interviews and informal conversations, as well as internal and public documents (internal reports and financial statements for the period under analysis). A notebook was used to collect data during this period, especially regarding the feedback

obtained in meetings and conversations. These sources of data, correlated with information about the economic environment, served to analyze the organizational context, in terms of strategy, structure and management techniques.

We are interested in investigating the effects on performance in order to claim that ERP implementation is a best practice (Laugen and Boer, 2007). Prior studies on ERP analyzed performance under various aspects. Nicolaou (2008) takes into consideration the following dimensions of performance: financial (analyzed through profitability, volume of sales and earnings growth) and strategic (analyzed through strategic competitiveness, strength of the strategic position and market share). Nicolaou and Bajor (2004) choose the financial aspects of performance from different types of performance measures (accounting, market and risk measures) because financial information is popular, publicly available and capture several dimensions of firm's operations. They use five financial indicators: return on assets, return on sales, the cost of goods sold to sales ratio, employees to sales ratio, and inventory turnover. HassabElnaby, Hwang and Vonderembse (2012) use return on assets (as a financial performance measure) and quality (as a nonfinancial performance measure) to measure performance.

We adopt a complex understanding of performance, which was previously employed by Velcu (2010) and Uwizemungu and Raymond (2010). Without following the exact logic of the Balanced Scorecard (as proposed by Kaplan and Norton, 1992), we will analyze performance as a complex concept, encapsulating various facets, derived from the literature review performed on the effects of ERP systems:

- Strategic aspects of performance – analyzed in terms of competitiveness, strategy development and implementation, and market share;
- Operational aspects of performance – analyzed in terms of process efficiency of order and inventory management, invoicing;
- Clients-related aspects of performance – analyzed in terms of clients satisfaction and quality of relationship with the company;
- Employees-related aspects of performance – in terms of satisfaction at the workplace, training and career development opportunities;
- Management-related aspects of performance – in terms of improved cooperation, business knowledge, developed authority and responsibility;
- Financial-related aspects of performance – in terms of sales, costs, income, and returns.

3. Research results – how the ERP project transformed into a best practice

Alpha was created in 2003 as a small trading entity. Its activity consisted in the sale of second hand tires and the provision of related services, but the company switched to selling cars and truck tires. The market prospects were strictly connected with the increasing number of cars in Romania. Sales of cars in Romania increased by 9% in 2001 as compared to 2000, and by 19% in 2002 as compared to 2001, thus leading to the setting up of new businesses in this domain. Alpha was created with the intent of serving mainly the low cost segment of the market, but they switched to selling tires from the producers with factories in Romania (e.g. Michelin) and imported tires.

The first years of activity witnessed a reduced level of structuration and organization, as it is usually the case in small and entrepreneurial businesses. The general economic development favored an increase in Alpha's activity over the first years (for example, the number of employees increased from 13 at the end of 2004 to 25 at the end of 2005). Alpha's main objective was to increase sales and to attract new customers (thus expanding the market share), even with the risk of selling below the initial cost and obtaining the profit from the discounts received from the producer quarterly. The partnerships with producers and trade discounts were supposed to generate an acceptable profit.

At that time, people were managed through direct coordination. Accounting software was implemented only on one computer, but many documents were hand-written and input into the system only to prepare financial statements. The other management techniques used were very "light"; for example inventories were managed with an Excel file, updated only every 1-2 hours. Customer orders were taken over the telephone, as this was the main communication channel with clients. Alpha's activities represented sales via a tire-changing business, additional services to the customers, and sale to nation-wide resellers. No web-site sales or other techniques were used to attract new customers and to advertise the products.

At the end of 2005 the idea of implementing an ERP emerged. The main motivations expressed by managers and employees during the preliminary discussions were the desire to support their company's growth, the need to face the increasing competition, the need to reduce the time of inputting documents into the software, to have access to credible information, the improvement of the customers service activity, the reduction of the customer service time, the need to obtain information in real time (especially regarding the inventory level) to support their decision-making processes, the need to use a software with increased capabilities to answer the necessities specific to their activity sector (as the activity became more complex, many rules were used, but it was very difficult to manage them without an IT system).

The ERP's implementation began in February 2006. The team comprised four persons, two of them from Alpha (its IT manager and its chief accountant) and two experts from the software provider (a programmer and a deployment consultant). At that time Alpha purchased several modules for invoicing, inventories management, orders, offers, accounting, wages, fixed assets, cash, bank, and balanced scorecard. 5 licenses were purchased accessing data from about 500 tables. The system analysts configured the system to execute automatically the adequate rules when introducing the appropriate information (e.g. computing the discounts offered to the customers). In addition, the programmer developed modules and specific reports to satisfy specific informational needs.

It is advanced in literature that expert users play an important role in supporting the other users of the ERP system. Given their knowledge and competencies with regard to the firm's business processes, their participation in the implementation project and the extended training they have received, expert users have a better comprehension of the system's functionalities and possible uses in their respective units (Uwizemungu and Raymond, 2010). This role was played in Alpha by two expert users. The maintenance staff comprised two IT specialists. The ERP supplier also provided on-line and on-site support, making add-ons and upgrades to the system.

The initial deployment phase lasted from February 2006 to December 2006. From 2006 the system was improved with functionalities necessary for Alpha's basic activities. In this regard, new modules (InfoSmartTouch, WheelService) were developed. In 2006 the system was improved to include the best practices in the domain and became suitable for the needs of the organization. Alpha's previous IT system had a very limited management support role, and the newly-implemented ERP offered solutions for problems that could not have been solved with the previous system. Such an example is the introduction of internal notes. These notes are used to transfer merchandise from one warehouse to another. Before having the ERP, the employees handwrote these documents. Via the ERP, they input the note issued (and they print it), they tick the option "internal note" and the system asks the operator if he/she wants to save the note received too. The note received is filled out automatically and the operator needs only to save it. The received note then appears on the screen, the appropriate warehouse is selected and the note is saved.

A module especially created was InfoSmartTouch. It allows employees in the service/garage to create an estimate document including the materials used for a certain service (e.g. tire replacement, tuning wheels) and the merchandises sold (tires, wheels etc.). Items are searched for in a form named InfoInventories. Various criteria for product search can be specified, such as its class, group, warehouse, name, available quantity, parameters etc. when searching for a product, information regarding the name of the product, its price, the currency of the purchasing invoice, the available quantity, the buffer quantity set aside for certain customers, the bonus of the sales agent, and the minimum selling price for a customer. Selecting a product allows seeing its availability and setting aside certain quantities. The estimation note is printed in one copy, is signed by the employee and is taken by the customer to invoicing. In the invoice, after selecting the estimate document's number, all the necessary information is automatically listed. The creation of this module also required the purchase of supplementary hardware equipment (touch screen monitors, thermal printers, and access control cards).

These examples are intended, besides showing ERP's operationalization, to contribute to an understanding of the way it was adapted to organizational needs and fulfilled a role in managing its core business processes. ERP was implemented in line with Alpha's needs, but as the organization developed, the internal changes were built on the ERP realities.

During 2007 the company had an average number of 80 employees, and issued 45,618 invoices and 61,218 estimation notes, to 9,493 customers. The company's average value of inventories was 15% of sales, and the inventory holding period was 65.7. Staff turnover in 2007 was 5%, and inventory's turnover was 5.55. Alpha's performance indicators for the same year follow (table no.1).

The financial information in Table 1 represents a significant increase of Alpha's activities between 2005 (before the implementation) and 2007 (immediately after the implementation). The sales increased by 463%, the profit increased by 436%, and the number of employees increased by 220%. The most important benefits of the ERP deployment for this period are related to the easier management of the activity, increased competitiveness of the entity, and sustaining the growth of the activity. Besides internal integration, the ERP acted as a resource management tool in terms of accounting and controlling mechanism (Chapman, 2005) and improved information for decision making (Nicolaou, 2004a; Nicolaou and Bajor, 2004) with a significant positive impact on Alpha's performance.

Table no. 1 - Financial performance indicators in 2007

Items	Amounts
<i>Financial aspects of performance</i>	
Sales (in RON)	26,290,300
Cost of sales (in RON)	19,894,161
Gross income (in RON)	2,669,992
Net income (in RON)	2,227,644
Return on assets (ROA)	22.31
Return on investment (ROI)	168.36
Operating return on assets (OIA)	0.30
Return on sales (ROS)	10.16
Operating income to sales ratio (OIS)	13.71
Cost of goods sold to sales ratio (CGSS)	76%
<i>Employees productivity</i>	
Number of employees divided by sales (ES)	0.000304
General productivity	68.88
<i>Operational activity</i>	
Number of tires sold	115,562
<i>Customers satisfaction</i>	
Returns from customers (number of tires)	1,623
Returns from customers (in RON)	345,639

The post-implementation phase started in August 2007. The training and users' acceptance of the project in this phase are critical factors for the project's success, being related to building and maintaining the alignment between people, process and ERP (Nicolaou, 2004a). The post-implementation activities were in line with Alpha's objectives and previous achievements. For example, in order to allow for sales increase, an on-line sale system was developed, in relation with the resellers' web-sites. In this system, orders were introduced and became immediately available in the ERP. The inventories are also available on the web-site in real time, being extracted from the company's database and from selected suppliers' databases. In the resellers' web-site each customer has a report containing select purchase invoices, invoices maturity, the value of the maximum amount of credit extended, the payments made, and invoices to be paid. For integration purposes, the invoice issued appears automatically as a received invoice in the customer's ERP (to the extent the customer uses the same ERP). ERP's developments such as these ones, with additional support from staff, resulted in further development of Alpha's activity. In 2008, sales increased by 77%, and the number of employees increased by 44%.

The company had in 2009 an average number of 144 employees, and issued 103,795 invoices and 79,489 estimation notes to 26,371 customers. Personnel's turnover for 2009 was 6.25%. Alpha's performance results in 2009 are presented in table no. 2.

These results indicate an increase in the level of activity (in terms of sales and number of employees). Being oriented towards attracting new customers and because of the economic crisis, the profit was lower in 2008 and 2009, also affecting return ratios. Besides the increase in activity, there are some negative aspects of the entity's performance, such as productivity and customers' satisfaction. This multidimensional system of assessing performance allows for an understanding of the complexities in terms of internal alignment

and consequences on performance (Velcu, 2010; Uwizeyemungu and Raymond, 2010). It is obvious that the strategy to increase sales led to superior performance in this area, but the environment (the economic crisis) and some internal techniques (e.g. selling by all means) generated negative performance in other areas (e.g. significant returns from customers).

Table no. 2 - Financial performance indicators in 2009

Aspects of performance	Amounts
<i>Financial aspects of performance</i>	
Sales (RON)	57,842,079
Gross income (RON)	755,286
Net income (RON)	401,740
Return on assets (ROA)	3.29
Return on investment (ROI)	22.52
Return on sales (ROS)	1.31
<i>Employees productivity</i>	
Number of employees divided by sales (ES)	0.000249
<i>Operational activity</i>	
Number of tires sold	205,806
<i>Customers satisfaction</i>	
Returns from customers (number of tires)	4,636
Returns from customers (RON)	1,307,472

The ascending trend is maintained over the following period, with tire sales amounting to 118,510,057 RON in 2011, which is 5.74 times bigger than in 2007. Over the period 2007-2011 the number of invoices increased almost three times with an average of 415 invoices issued per working day. We argue that this level of activity could only be supported by an ERP.

According to Alpha's management, the ERP system's implementation allowed in terms of strategy real-time knowledge of the products and services demands and the resellers' ecosystem, which made possible an informed and timely decision-making process regarding the pricing and supply policies. This evidence confirms our contention that the ERP played in Alpha's case a more important role than a mere integrating mechanism. Because of the ERP's position in the midst of internal arrangements, it facilitates new developments in terms of strategy.

Conclusions

This research was motivated by prior gaps in literature concerning the particularities of implementing ERP systems in emerging economies (Themistocleous, Soja and da Cunha, 2011), but also by the need for best practices in managerial techniques, including the implementation of ERP systems (Laugen and Boer, 2007). Employing a longitudinal case study, we illustrate how both the ERP system and organization changed, a fit being obtained which consequently led to improving organizational performance.

The case reveals particular aspects of the ERP implementation related to the case of emerging economies. While it is acknowledged that in these economies insufficient techniques are used by managers for decision making, especially in the case of SMEs, there is also reduced evidence about the role that ERP may play in this process. Professional

magazines (Business Magazin, 2011) claim that ERP may provide more control, coherence and accountability to a business, but there are only a few empirical studies filling this gap of the effects of ERPs in organizations. Dorobăț (2006a) underlined how lack of managerial culture might negatively affect ERP implementation in Romanian entities. Our case brings evidence that once management's support is secured, the ERP may become the central alignment mechanism, supplementing the accounting and controlling functions and improving organizational performance.

Also, by covering the period prior to and during the economic crisis in Romania, our case illustrates how the alignment between organizational elements evolves, in order to respond to the needs of the environment. The use of multiple criteria for performance evaluation also facilitates the understanding of the complex organizational situation.

Besides being considered a success story of an ERP implementation, the Alpha case illustrates the complexities of the implementation process and the various organizational factors that impact the results of this project. The benefits of this in-depth understanding are related to our methodological choice, but on the other hand our focus on a single case study limits the generalizability of results. Future research might investigate more in depth the organizational transformations related to ERP implementation, nuancing the success of the process and illustrating the variety of organizational practices. Also, best practices might be described in order to facilitate the development of the business environment. Both academia and industry are concerned with identifying and promoting best practices (Laugen and Boer, 2007) and future research should pay more attention to this issue.

Acknowledgements

This work has been supported by CNCIS-UEFISCSU, project number PN II-RU TE_337/2010 entitled "A model of the factors influencing the professional profile of the Romanian accountants in business. A study on the profession's adaptation to the current business environment and a forecast".

References

- Almășan, A.C. and Grosu, C., 2008. Managers' awareness of the accounting information usefulness. *Accounting and Management Information Systems*, Issue 24, pp.57-71.
- Boersma, K. and Kingma, S., 2005. From means to ends: The transformation of ERP in a manufacturing company. *Journal of Strategic Information Systems*, 14, pp.197-219.
- Burns, J. and Vaivio, J., 2001. Management accounting change. *Management Accounting Research*, 12, pp. 389-402.
- Business Magazin, 2011. Câți bani vă scot din buzunar soluțiile de gestiune a companiei [How much money cost the IT solutions for business management]. *Business Magazin*, [online]. Available at: <<http://www.businessmagazin.ro/business-hi-tech/it/cati-bani-va-scot-din-buzunar-solutiile-de-gestiune-a-companiei-7871605>> [Accessed 10 June 2012].
- Caglio, A., 2003. Enterprise Resource Planning systems and accountants: towards hybridization?. *European Accounting Review*, 12(1), pp.123-153.

- Chapman, C.S., 2005. Not because they are new: Developing the contribution of enterprise resource planning systems to management control research. *Accounting, Organizations and Society*, 30, pp.685-689.
- Chapman, C.S., 1997. Reflections on a contingent view of accounting. *Accounting, Organizations and Society*, 22(2), pp.189-205.
- Cooke, D.P. and Peterson, W.J., 1998. SAP implementation: strategies and results. New York: The Conference Board Inc.
- Crișan, E., Ilieș, L. and Salanță, I., 2010. Management best practices used in Romanian logistics customer service planning. *Amfiteatru Economic*, XI(27), pp.215-227.
- Dorobăț, I., 2006a. Critical Success Factors in Romanian SME's ERP implementation. In: *Proceedings of the 3rd International Workshop IE&SI*, Timisoara, Romania.
- Dorobăț, I., 2006b. The Anatomy of a Multisite ERP Implementation - A Romanian SME's Case Study. In: *Proceedings of the International Conference on Business Information Systems*, InfoBUSINESS Iași, Romania.
- Dumitru, V.F., 2011. The impact of information technologies on the organization and functioning of the company. *Amfiteatru Economic*, XIII (Special issue no.5), pp. 754-770.
- Dumitru, V. and Florescu, F., 2009. Enterprise Resource Planning deployment guide. *Amfiteatru Economic*, XI(25), pp.213-222.
- Florescu, V., 2008. Lien entre l'usage des TIC et la performance de l'entreprise: concepts fondamentaux et modèles de recherche. *Accounting and Management Information Systems*, Issue 24: 115-126.
- Florescu, V., Ionescu, B. and Tudor, C.G., 2010. IT&C contribution to organization's performance improvement: the case of ERP systems. *Accounting and Management Information Systems*, 9(3), pp.467-491.
- Glăvan, M.E., Brăescu, M., Dumitru, V., Jinga, G. and Lapteș, R., 2007. The relevance and quality of the accounting information in the managerial decisions. *Accounting and Management Information Systems*, Suppl., pp.103-115.
- Granlund, M. and Malmi, T., 2002. Moderate impact of ERPS on management accounting: a lag or permanent outcome?. *Management accounting research*, 13(3), pp.299-321.
- HassabElnaby, H.R., Hwang, D.W. and Vonderembse, M.A., 2012. The Impact of ERP Implementation on organizational capabilities and firm performance. *Benchmarking: the International Journal*, 19(4/5), pp.618-633.
- Hyvönen, J., 2007. Strategy, performance measurement techniques and information technology of the firm and their links to organizational performance. *Management Accounting Research*, 18, pp.343-366.
- Ilie D., 2012. Sustainability and Organizational Change by Sustainable Crediting Therapy. *Amfiteatru Economic*, XIV (32), pp. 393-402.
- Jaruga, A. and Ho, S.S.M., 2002. Management accounting in transitional economies. *Management Accounting Research*, 13, pp. 375-378.
- Jinga, G., Dumitru, M., Dumitrana, M. and Vulpoi, M., 2010. Accounting systems for cost management used in the Romanian economic entities, *Accounting and Management Information Systems*, 9(2), pp. 242-267.

- Kaplan, R.S. and Norton, D.P., 1992. The Balanced Scorecard – measures that drive performance. *Harvard Business Review*, 70(1), pp.71-79.
- Laugen, B.T. and Boer, H., 2007. The implementation of best practices: Process and performance effects. *Creativity and Innovation Management*, 16(4), pp.397-407.
- <<http://www.Manager-Financiar.ro/>> [Accessed 8 June 2011].
- Market Watch, 2006. ERP in Romania – concept si piață. *Market Watch*, [online] no. 90. Available at:
<http://www.marketwatch.ro/articol/1835/ERP_in_Romania__concept_si_piata/> [Accessed 5 June 2011].
- Nicolaou, A.I., 2004a. ERP systems implementation: drivers of post-implementation success. In: *The IFIP TC8/WG8.3 International Conference*, July 1-3, Prato, Italy.
- Nicolaou, A.I., 2004b. Firm performance effects in relation to the implementation and use of enterprise resource planning systems. *International Journal of Information Systems*, 18, pp.79-105.
- Nicolaou, A.I., 2004c. Quality of post-implementation review for enterprise resource planning systems. *International Journal of Accounting Information Systems*, 5, pp.25-49.
- Nicolaou, A.I., 2008. Effects of IT-enabled management accounting systems on interorganizational performance. In: *American Accounting Association Information Systems Section research conference*, January 11-12, Redondo Beach, California, USA.
- Nicolaou, A.I. and Bajor, L.H., 2004. ERP systems implementation and firm performance. *The Review of Business Information Systems*, 8(1), pp.53-60.
- Nicolaou, A.I. and Bhattacharya, S., 2006. Organizational performance effects of ERP systems usage: The impact of post-implementation changes. *International Journal of Accounting Information Systems*, 7, pp. 18-35.
- Popescu, D., Ciocârlan-Chitucea, A., Steriu, A. and State, C., 2012. Change management – condition of organizational sustainability in IT&C small and medium-sized enterprises. *Amfiteatru Economic*, XIV(32), pp.333-348.
- Rizescu, G., 2007. Analiza pieței românești de programe de contabilitate. *Accounting and Management Information Systems*, Issue 22, pp.101-117.
- Rom, A. and Rohde, C., 2007. Management accounting and integrated information systems: A literature review. *International Journal of Accounting Information Systems*, 8, pp.40-68.
- Roztock, N. And Weistroffer, H.R., 2008. Information technology investments in emerging economies. *Information Technology for Development*, 14(1), pp.1-10.
- Scapens, R.W. and Jazayeri, M., 2003. ERP systems and management accounting change: opportunities or impacts? A research note. *European Accounting Review*, 12(1), pp. 201-233.
- Shang, S. and Seddon, P., 2000. A comprehensive framework for classifying benefits of ERP systems. In: *Proceedings AMCIS 2000*.
- Sutton, S.G., 2006. Enterprise systems and the re-shaping of accounting systems: A call for research. *International Journal of Accounting Information Systems*, 7, pp.1-6.

- Themistocleous, M., Soja, P. and da Cunha, P.R., 2011. The same, but different: Enterprise systems adoption lifecycles in transition economies. *Information Systems Management*, 28, pp.223-239.
- Uwizeyemungu, S. and Raymond, L., 2010. Linking the effects of ERP to organizational performance: Development and initial validation of an evaluation method. *Information Systems Management*, 27, pp.25-41.
- Van Stijn, E. and Wensley, A., 2005. ERP's best practices and change: An organizational memory mismatch approach. In: *13th European Conference on Information Systems*, ECIS 2005, Regensburg, Germany.
- Velcu, O., 2010. Strategic alignment of ERP implementation stages: An empirical investigation. *Information & Management*, 47, pp.158-166.
- Wagner, E.L., Scott, S.V. and Galliers, R.D., 2006. The creation of 'best practice' software: Myth, reality and ethics. *Information and Organization*, 16, pp.251-275.
- Wah, L., 2000. Give ERP a chance. *Management Review*, March Issue, pp.20-24.