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REDEFINITION OF "SUCCESS" WHEN IMPLEMENTING INFORMATION SYSTEMS – FOCUS ON ERP SYSTEMS IN KOSOVO

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Abstract. We live in the Information Age, where traditional industry is rapidly shifting to an economy based on Information Technology, known also as Digital Revolution. Said that, ERP (Enterprise Resource Planning) systems are the best example of a technology which has become a necessity and a must for every organization which aims growth, be that a small, medium or large enterprise. Both, the theory and practice, intensively promote that implementing an ERP system will bring the organization to the skies, which indeed is true, but only if the ERP implementation is successful. A partially implemented or failed ERP implementation can only bring debts and headaches. For more, this technology is not cheap, so before spending thousands and millions it is very important to clarify few concepts. Especially because, nonetheless high diffusion, the successful implementation rate of ERP systems is low and many firms do not achieve intended goals [1].

The main objective of this paper is to assess and evaluate successfulness concept of ERP implementations aiming to identify a specific and concrete definition on ERP Success. Case Study Methodology was distinguished as most appropriate for complex and real-life projects investigation, and Mixed methods approach was selected in order to enrich the research from both perspectives, quantitative and qualitative. To ensure the triangulation data was retrieved from different evidence sources like interviews, author's audit trail as the direct observer and action/intervention activities, and different documents and archival records. To construct credibility of the analysis in this research, the Author had a prolonged engagement with participants since the very first project initiation activities, and even after the Go-live phase when the project was accomplished and the Final Acceptance was issued by the client. To give it a final touch for the Analysis Credibility, we study the negative case. Furthermore, the Reliability and Conformability were constructed by careful examination of the detailed audit trail constructed by the author as active observer in this research.

The results from the secondary research, the systematic literature review, show that none of the carefully examined researches on key success factors for ERP implementations has ever provided any kind of definition on what the success indeed means. Indirectly they tend to weight the ERP success in terms of time and cost, and sometimes also in terms of the goals achieved, but without explicitly explaining the measure for evaluation at any moment. On the other hand, the results from the primary research, case studies, dement the big trio: 1. Time, 2. Cost and 3. Objectives as the only or main evaluation factors of success. Successful project management doesn't necessarily mean successful project, and the notion of success goes beyond all that when ERP implementations are in question. Projects may finish on time and within budget, but if the implemented ERP system is not used to its 100% for what it was aimed, then there is no success to celebrate. Furthermore, what a successful project is to the Project Manager is not necessarily also to the Business Manager. The secondary research results helped in developing two hypothesis, which were then tested through the primary, case study research. The results from the primary research dement the hypothesis 1, that says that *If the ERP implementation project is finished on time, within budget and fulfils all its objectives, the project can be considered as successfully completed.* An ERP implementation project success goes far beyond this definition. On the other hand the hypothesis 2 reveals to be true, *what a successful project is to a project manager, is not to the business manager.* The project success needs to be defined while considering all the involved parties or stakeholders.

Keywords: Key Success Factors, ERP systems, Successful Project Management, Successful ERP implementation, IT Project Management

1. INTRODUCTION

ERP implementation is complex and risky due to large capabilities and the essential solutions expected from it. ERP systems engage a considerable number of enterprise resources, which are put at risk during implementation [2]. Unfortunately, the organisations do not have clear and useful guidelines to direct, effectively and efficiently, the process of implementing an ERP system. Consequently, researchers have been continually attempting to find suitable approaches which influence ERP implementation success [3]. From standard definition of project management, a project is successful if it is on time, within budget and fulfils the objectives. But what if, for example, the implemented Information System is not used by all the users and/or for all the business processes, although they are all there correctly implemented, can it still be considered as successful? Of course, not. As ERP

systems are a centralized system integrating all the departments and business processes, If only one process is missing in the system, the whole information will go wrong. Imagine if the receipt of goods is not checked in the ERP, you won't be able to sell them because your stock will be empty, or even if you sell them as some systems might allow negative sales, you will still get wrong information on item's cost. It all goes as a circle, and this is why ERP implementation projects are very complex and it is of crucial interest to carefully reach the real successful end. The success of an ERP project goes far beyond being accomplished on time and within budget, and even with all the user requirements implemented. The following section provides a review of literature on dominant success factors in ERP implementations.

2. SECONDARY RESEARCH – Literature Review

From over 100 research papers, books, conference proceedings, thesis, and so on, we have selected in total 41 researches as most relevant to the ERP implementation success to be analysed in more depth. Although they don't explicitly discuss on the success meaning or how they'd define the notion of success, they do suggest and assess different success factors which, according to the authors would lead an ERP implementation to a successful end. Dominant success factors are defined as "factors which, if addressed correctly, can significantly improve project implementation success" [4, 5]. Simple Excel tables and functions were used to analyse all the literature and 14 KSFs have been extracted as most important and are presented in Table 1. They are widely cited and consistent with academic research. They are presented below according to the importance suggested by the count in literature. Irakoze's [6] research has helped start the basis of this table, and then it was extended with other research material found as relevant by the author. The count column, indeed, denotes the importance of a KSF, and so are they ordered in the table.

KSF	Merged KSFs	Authors	Count
Top Management Support	Project champion, Goal realization, Business plan and vision	Ramburn, Seymour, & Gopaul, (2014), Kalema et al. (2014), Ahmed & Khan,(2013), Dawson & Van Belle, (2013), Van Schalkwyk & Lotriet, (2011), Shah et al. (2011), De Jager, (2010), Dlodlo, (2011), Hart,(2010), O'Donovan et al. (2010), Bhagwani, (2009), Singh & Wesson (2009), Young & Jordan, (2008), Brink et al. (2006), Standish Group, (2005), Loh and Koh (2004), Somers and Nelson (2004), Yusuf et al.(2004), Al-Mashari et al. (2003), (Joubert, 2002), Ang et al.(2002), Averweg & Erwin, (2000), Akkermans et al., (2000	23
Change Management	Organizational culture	(Dzanic, 2017), (Ramburn et al., 2014), (Ramburn & Seymour, 2014), (Kalema et al., 2014), (Ahmed & Khan, 2013), (Gibson, 2012), (Dlodlo, 2011), (Van Schalkwyk & Lotriet, 2011), (De Jager, 2010), (Hart, 2010), (O'Donovan et al., 2010), (Smuts, Van der Merwe, Loock, & Kotze, 2010), (Singh & Wesson, 2009), (Joubert, 2002), Hong and Kim2000	15
User Training	Knowledge management, Learning Competency	(Kalema et al., 2014), (Ramburn et al., 2014), (Gibson, 2012), (Dlodlo, 2011), (De Jager, 2010), (Hart, 2010), (O'Donovan et al., 2010), (Singh & Wesson, 2009), (Bhagwani, 2009), (Brink et al., 2006), Umble et al. (2003), (Joubert, 2002), Zhang et al., (2003). Mandal and Gunasekaran (2002); (Averweg & Erwin, 2000).	15
Project Management	Clearly defined scope	(Kalema et al., 2014), (Dawson & Van Belle, 2013), (Gibson, 2012), (Shah et al., 2011), (Dlodlo, 2011), (De Jager, 2010), (Smuts et al., 2010). (Hart, 2010), (Bhagwani, 2009), (Singh & Wesson, 2009), (Standish Group, 2005), Yusuf et al.(2004), AlMashari et al. (2003), Umble et al. (2003), (Joubert, 2002).	15
Business Process Reengineering	Enterprise-wide implementation, Appropriate business and	Kalema et al., (2014), Dlodlo,(2011), Shah et al., (2011), Hart, (2010), De Jager, (2010), Smuts et al., (2010), O'Donovan et al., (2010), Singh & Wesson,	14

	legacy systems Management, Education on new Business Processes	(2009), Woo (2007), Finger, (2005), Yusuf et al.(2004), Malbert et al.(2003), Joubert, (2002), Hong and Kim (2002).	
Communication	/	(Kalema et al., 2014), (Gibson, 2012), (Dlodlo, 2011), (Smuts et al., 2010), (De Jager, 2010), (Hart, 2010), (Brink et al., 2006), (Finger, 2005), (Joubert, 2002)	9
User Involvement	User satisfaction	(Kalema et al., 2014), (Ahmed & Khan, 2013), (Dawson & Van Belle, 2013), (Dlodlo, 2011), (Van Schalkwyk & Lotriet, 2011), (Shah et al., 2011), (Bhagwani, 2009), (Standish Group, 2005), Zhang et al., (2003), (Averweg & Erwin, 2000).	10
Vendor Support	Use of consultants	(Ramburn & Seymour, 2014), (Kalema et al., 2014), (Ahmed & Khan, 2013), (Shah et al., 2011), (Smuts et al., 2010), (Brink et al., 2006), (Finger, 2005), Yusuf et al. (2004), Motwani et al. (2002);	9
Team Skills and Commitment	Development, Troubleshooting and testing, Teamwork & Comp	(Ahmed & Khan, 2013), (Dlodlo, 2011), (Hart, 2010), (De Jager, 2010), (Smuts et al., 2010), Remus (2006), Loh and Koh (2004); (Joubert, 2002).	8
Implementation Resources	Funds, Technological infrastructure	(Kalema et al., 2014), (Gibson, 2012), (O'Donovan et al., 2010), (Singh & Wesson, 2009), (Brink et al., 2006).	5
Data Accuracy	Information source	(Dawson & Van Belle, 2013), (Finger, 2005), (Kalema et al., 2014), (Gibson, 2012), (Marshall & Taylor, 2014).	5
ERP Suitability	System quality	(Averweg & Erwin, 2000), (Kalema et al., 2014), (Gibson, 2012), (Marshall & Taylor, 2014), (Singh & Wesson, 2009).	5
ERP Flexibility	Relative use	(Kalema et al., 2014), (Singh & Wesson, 2009), (Averweg & Erwin, 2000).	3

Table 1. Key Success Factors Framework based on literature review

A huge gap found in the literature is that none of the researchers have ever paid attention to clearly define the success of an ERP implementation. Although it can be implicitly understood how they do assess the successfulness, under which conditions they evaluate if an IS project is successful or not, still there is no research found to have analysed if those three famous conditions: time, cost and goals, are sufficient to determine whether the ERP system implementation project has been successfully finished. A business manager needs an up and running ERP, used to its 100% capacity to retrieve accurate information and reports on business performance, he doesn't need a project finished on time and within budget, that's what a Project Manager needs. All these KSF mentioned widely in the literature might be really crucial for an ERP project to succeed but as long as there is no unified and consistent definition of what "successful ERP implementation" means it is hard to rely on all the above mentioned success factors.

From the above mentioned facts we want to highlight two hypothesis, which we want to test through a case study, presented in the next section:

H1: *If the ERP implementation project is finished on time, within budget and fulfils all its objectives, the project can be considered as successfully completed.*

H2: *What a successful project is to a project manager is not to the business manager.*

3. PRIMARY RESEARCH – Case Study

Company background

Company 'A' has started its activity on September 5, 1990 as a small distribution company with only 7 employees, over time has increased with other units where the company now under the umbrella counts seven companies (wholesale and distribution, Shopping Mall, Sport Equipment, Fashion retail, Restaurants and Coffee Shops), with over 800 employees. The ERP implementation in this company is considered a failure as the ERP system is being used only to 40% of its capacity. The interviews at this company were done one year after the ERP implementation and using the application for daily tasks. In this case a huge discrepancy was evidenced between the results from the two phases of the research, namely the interviews and the direct observation. The interview answers were

convincing to the top-management's vulnerability and positive attitude towards the ERP adoption and its successful implementation, but in reality the ERP system adopted was not being used to more than 40% of its potential, and many processes remained to be performed manually, because as stated by the Commercial Manager, "we don't think that these processes could be done correctly by a Software" or "we don't make orders electronically so we don't need to use this functionality of the ERP", just to mention some. While, when interviewed, the answer to the question: Was the implementation of the ERP system in your company successful? Six out of six interviewed executive and department Managers answered affirmatively; or to the question: Do you see the ERP adoption in your company as important to business development? Again, six out of six answered: "Very important".

In the following section we'll assess all the problems found in this Case company in a generic perspective and will confront them to each KSF accordingly.

Top Management Support

At first, during the interviews, the General Manager who was also one of the owners expressed himself as satisfied with the implementation, but when we moved down to observing different departments and their key roles (Finance Manager, Commercial Manager, ecc) we found out that there were too many gaps and anomalies in the implementation done, so basically most of the processes continued to be performed in the old and manual way by the workers. According to them, Top Management didn't trust at all that an ERP system would be of help to them, but have been constrained to implement it as a condition to win a Grant for business development. Not having the Top Management Support and Trust before all, even if the system is correctly implemented, it is not used at its maximum and the implementation is considered as a failure to contribute to the organization's improvement and growth.

Change Management. It is a non-sense to discuss about Change Management when there was no Management Support at first place. While the company leaders were refusing to adopt to the change what is left to be expected from the staff.

Project Management. In terms of Project Management, the ERP implementation in company A has been accomplished on time and within the budget. Meaning that the application has been deployed and running, but unfortunately, missing the first two very important KSFs, the implemented ERP system was being used only at its 40% of capacity.

*** *Here is the moment of truth. The PM KSF shows how and why the hypothesis 1 is not sustainable, while supporting the truthiness of the hypothesis 2.*

Business Process Reengineering. Most of the processes in company A remained the same as before the ERP implementation, so much work was being done manually and in an old-fashion way.

Communication. Communication was almost inexistent between the top management and the employees.

User Involvement. Users were never asked if there is something they would suggest about the processes or what is bothering them or anything about their daily work at the company A.

Data Accuracy. In this case the data migration was very painful and time-consuming as the old database had to be migrated from native to SQL. During the migration hundreds of errors appeared as strange characters, redundant names, and so on. Even when the new database was finally created, the data in it was still not clean and accurate. This was another big obstacle in the full use of the ERP system in company A.

ERP Suitability. Being a company that was craving for a very high grow and fast business expand, the chosen ERP was just the right thing and at the right time.

ERP Flexibility. There was no requirement of any changing to test the flexibility.

User Training. The training was provided by the vendor, but the level perceived by the employees was very low.

Vendor Support. Vendor was supportive although without much effort being that they weren't required any big support.

Team Skills and Commitment. The vendor team was skilled but not as much committed.

Implementation Resources. The technical infrastructure was quite outstanding for this implementation.

Customizability. The chosen ERP system was quite customizable but as it happens with all ERP systems some of the business process must be changed and adopted to the system's framework. Without Manager's interest at first place, everything is of course impossible. Users continued using the ERP in a strange way, for example, at the end of the day the mobile warehouse had to be unloaded and the next morning it would be loaded again with the same items and exactly the same quantity. This process was not being done in reality but only in the system, as, regarding to the commercial clerk, this was required by the ERP system and there was no other way. Being the expert of the field and after the consultation with the vendor technician, we realized that this was totally not true. There was a way that the system could be customized for this process, but the employees preferred their own way of performing that task.

4. RESULTS AND CONCLUSION

Living in the Digital Era, both, the theory and practice, intensively promote that implementing an ERP system will bring the organizations to the skies, which indeed is true, but only if the ERP implementation is successful. A partially implemented or failed ERP implementation can only bring debts and headaches. ERP implementation is complex and risky due to large capabilities and the essential solutions expected from it. Furthermore, this technology is not cheap, so before spending thousands and millions it is very important to clarify few concepts.

From standard definition of project management, a project is successful if it is on time, within budget and fulfils the objectives. But if, for example, the implemented Information System is not used by all the users and/or for all the business processes, although they are all there correctly implemented, it can't be considered as successful. ERP systems are centralized systems integrating all the departments and business units, so if only one process is missing in the system, the whole information will go wrong. Imagine if the receipt of goods is not checked in the ERP, you won't be able to sell them because your stock will be empty, or even if you sell them as some systems might allow negative sales, you will still get wrong information on item's cost. It all goes as a circle, and this is why ERP implementation projects are very complex and it is of crucial interest to carefully reach the real successful end. The success of an ERP project goes far beyond being accomplished on time and within budget, and even with all the user requirements implemented.

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