

Critical Success Factors for ERP Implementation: A Classification



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In recent years research on ERP implementation has gained prominence because ERP, in most cases, has resulted in improving the efficiency and productivity of the user company. However, the decision to implement ERP alone is not a recipe of success, a lot depends on the planning and quality of implementation. Several factors are found to have an important role in the success of ERP implementation. In the ERP literature these factors are commonly described as Critical Success Factors (CSF). Several researchers have contributed to the body of literature pertaining to these CSF. However, the research in this area is still fragmented and unorganized. Hence, there is a need to identify and classify the relevant success factors, which is paramount for the success of ERP implementation. In this work we have classified various CSFs identified from literature in seven broad categories. This may help the practitioners and researchers in getting a quick understanding of these CSFs.

1. Introduction

In recent years research on ERP implementation has gained prominence because ERP, in most cases, has resulted in improving the efficiency and productivity of the user company. However, the decision to implement ERP alone is not a recipe of success, a lot depends on the planning and quality of implementation. Several factors are found to have an important role in the success of ERP implementation. In the ERP literature these factors are commonly described as Critical Success Factors (CSF). Several researchers have contributed to the body of literature pertaining to these CSF. However, the research in this area is still fragmented and unorganized. Cologero, in his article named “Who is to blame for ERP Failure?” [1] States that though ERP software implementations reduce the costs of the firm and can contribute to the company’s sustainability, an ERP implementation failure can even lead to bankruptcy of the company. Thus this is natural that the researchers, from time to time, seem to have taken special interest in to the Critical Success Factors (CSFs) that contribute to the success of an ERP implementation. There are large number of publications on the CSFs for ERP implementation in various Academic Journals, Conference proceedings, Doctoral and Masters Theses dissertations that were published in recent years.

ERP implementation is tricky and complex phenomenon and many firms had to encounter failure [2]. There are many reasons for the failure of an ERP implementation and the most prominent among them could be the disparity between the estimated budget and the cost overrun that occurred during the software implementation process [3]. Cologero also spoke about the schedule overrun that has been a prominent reason that denied the successful implementation of ERPs by many firms. It is to be noted that ERP implementation requires a strong support from the Strategic management support which will ensure the timely allocation of financial and human resources for changing requirements of ERP implementation projects.

According to Freund [4] (1988), a Critical Success Factors as those things that must be done for a company to be successful. CSFs for ERP implementation success would then be those important steps and measures that must be identified and executed. The identification of CSFs for ERP implementation success has not been an unexplored arena. Prior studies have been reporting different sets of CSFs for the same. There have been efforts to develop Taxonomies of CSFs and that developed by Al-Mashari et al. [5] is an example of the same. We have identified efforts to segregate the CSFs into Strategic and Tactical factors [6] as well. Our attempt in this paper is to extend the research to a more comprehensive way which is inclusive of all such factors that can be logically categorized into a conclusive classification. We propose a classification in this paper while including the relevant research work reported till date i.e., 2014. We organized this paper by allocating an individual section for the Research methodology, Data presentation and results, Discussion & conclusion, Limitations & Implications.

2. Methodology of Research

We conducted an in depth and all-inclusive search with each of the keywords ‘Critical Success factors’, ‘Success factors’, ‘Critical Factors for Success’ searched along with ‘Enterprise Resource Planning’. The search is done on Google Scholar, an academic publication database. Relevant literature published in Journals between 1995 and 2014 was taken in to consideration for the analysis. ERP is quite an established topic of research and we focused only on CSFs as our research questions concentrated on the identification of most relevant CSFs for successful implementation of ERP software in firms and the corresponding implications to Indian scenario. The scope of this research is wide as it spanned relatively a very long duration of time (about 19 years) in which the articles published in various journals were taken into account. We observed

that Information technology management and Information Systems Research are the themes of the journals in which ERP research articles were published in a large number.

We scrutinized the large number of articles we could obtain from the academic journals and excluded many of them. The inclusion criteria are that the articles should have been published in English and the methodology should consist of either a quantitative or qualitative approach to the research. The articles should also mention the geographical regions where the ERP software implementation was done. We did not take into consideration the conference proceedings as certain conference proceedings were later developed into journal publications. Moreover due to the large number of journal publications that we could obtain, we were satisfied with the quantity and quality of the data we had in hand. Nevertheless we have considered a couple of PhD theses and a few conference publications for referring to the then trends during the initial stages of data collection.

Table 1 Distribution of Articles by Regions/Countries

USA	Europe & UK	Australia & Denmark	China & South Asia	Middle East
Amoako & Salam(2004)	Akkermans & Helden (2002)	Ho & Lin (2004)	Davison (2002)	Davison (2002)
Ehie & Medsen(20050)	Allen et.al (2002)	Kraemmerand et al (2003)	Hong & Kim (2002)	Al-Mashari & Al-Mudimigh (2003)
Gattiker & Goodhue (2002)	Botta et.al (2006)	Parr& Shanks(2000)	Law & Ngai (2001)	Park & Hwang (2013)
Mabert et al. (2000)	Holland & Light (1999)	Xu et.al (2002)	Reimers (2003)	
Motwani et al (2005)	Skok & Legge (2002)	Zhao et.al (2002)	Xue et.al (2005)	
Nah et.al.(2001)	Van Everdingen et.al (2000)		Zhang et.al (2003)	
Sarkar & Lee (2003)	Ward et.al (2005)			
Somers & Nelson (2000)				
Somers & Nelson (2004)				
Sumner (1993)				
Sun & Yazdani (2005)				
Trimmer et.al (2002)				
Umble et al (2003)				
Verville & Halingten (2002)				

A total of 38 journal articles are considered for this work and the researchers have worked on ERP software implemented in various geographical regions (Table 1) and published their work in many journals in various years. Nah et.al [13] have identified and classified the factors affecting the successful implementation of ERP software in firms. The information in the following table is extracted from Nah et.al's work and we understood that even though the researchers considered publications spanning the period before 2003, we could identify similar factors and features in ERP implementations that were studied even recently. Hence we decided to use and categorize our finding based on the 11 CSFs identified by Nah et.al [13].

3. Data presentation & Results

We reviewed 38 articles across various journals. Again the researchers have worked on ERP software implemented in various geographical regions (Table 1) and published their work in many journals .The cases studied were the firms from the USA, Europe & UK, Australia & Denmark, South Asian countries including China & India, Countries from the Middle East and Gulf. A few articles discussing cases from India are discussed very recently [7].

We summarized the list of CSFs identified in various publications (see References section) .Nah et al. (2003) have identified major part of these CSFs which were observed repeatedly in many of the research works published even later to 2003.The broad category of the factors are 'Appropriate business and information technology legacy systems, Business plan and vision, Business process reengineering (BPR),Change management culture and program, Communication related, ERP teamwork and composition, Monitoring and evaluation of performance, Project champion, Project management, Software development, testing, and troubleshooting, Top management support. In addition to these 11 factors which we took as a guidance to classify the CSFs, we could also identify a few more factors and the classification is given along with the details of the articles in which these CSFs were mentioned. Top Management Support or Strategic Management Support, Change Management, Training and Education were the most commonly observed CSFs in most of the studies. The details of each of these success factors is given below. The most commonly observed CSFs are given preference and the ordering is based on the most commonly observed CSFs.

CSF 1: Strategic or Top Management Support (TMS)

Top Management Support (TMS henceforth) is one of the most commonly observed CSF in ERP implementation literature. The senior management should have an understanding of their role in driving the ERP project to success and hence they have a wider role spanning over the longest period of time during the ERP implementation. The top management has the authority to support the project with the required resources and planning. They are also expected to provide cushion for the disruptions that the project team may encounter if any. In general the mechanisms that are encountered for dealing with unexpected difficulties during any critical project implementation are to be followed by the senior management personnel. According to Holland and Light [8], the Top management's disposition and inclination for the success of the project will play a key role in the overall success of ERP for the firm and hence this become a top priority CSF. Table 2 gives details of the academic research which consider ERP success factors related to CSF1.

Table 2 ERP Success Factors Categorized as CSF1 (TMS) and the Respective Articles in which they were Identified

		USA	Europe & UK	Australia & Denmark	China & South Asia	MiddleEast
CSF1: Strategic or Top management support (TMS)	Business plan	[Motwani et al (2005),Nah et.al.(2001)]	[Holland & Light (1999)] [Ward et.al (2005)]	[Kraemmerand et al (2003)]	[Reimers (2003)] [Law & Ngai (2001)]	
	Total commitment				[Zhang et.al (2003)] [Law & Ngai (2001)]	
	Top management support	[Ehie & Medsen(2005),Mabert et al. (2000),Motwani et al (2005), ,Nah et.al.(2001),,Sarkar & Lee (2003), Somers & Nelson (2004),Sumner (1993), Trimmer et.al (2002),Umble et al (2003)]	[Akkermans & Helden (2002),Holland & Light (1999),] [Allen et.al (2002),Ward et.al (2005)]	[Parr & Shanks(2000),,, Xu et.al (2002)] [Kraemmerand et al (2003)]	[,Reimers (2003),, Zhang et.al (2003), [Law & Ngai (2001)]	[Al-Mashari & Al-Mudimigh (2003)]

CSF 2: Communication and Change Management (C&CM)

In our opinion Communication and Change Management stands on par with TMS in terms of importance and the frequency of occurrence in research publications. A detailed curriculum for implementing ERP and the necessary training programs to educate the same are to be formulated. This involves choosing a Project Champion from each department & team. The details of resources for training i.e., data sheets, presentations, demonstration videos and computer based training modules are to be communicated to the concerned employees at the earliest. As on-site training i.e, training in real time had been gaining momentum, the web based training modules should also be explained to employees in advance. As per Robey [9] the planning for such efficient change management and communication involves incorporation of business practices of the company it to the content of the training programs.

Table 3 ERP Success Factors Categorized as CSF2 (C&CM) and the Respective Articles in which they were Identified

		USA	Europe & UK	Australia & Denmark	China & South Asia	MiddleEast
CSF2: Communication and Change Management (C&CM)	Change management culture & Programme	[Nah et.al.(2001)]				
	Change management	Motwani et al (2005),Somers & Nelson (2004), Umble et al (2003)]	[Botta et.al (2006),Skok & Legge (2002)] [Ward et.al (2005)]	[,Xu et.al (2002)]		[Al-Mashari & Al-Mudimigh (2003)]
	User participation & involvement		[Ward et.al (2005)]	[Kraemmerand et al (2003)]	[Zhang et.al (2003),Zhao et.al (2002),] [Law & Ngai (2001)]	[Davison (2002)]
	User Commitment to change			[Parr & Shanks(2000),]		
	Training IT work force in new skills	[Sumner (2013)]				
	Training & education	[Mabert et al. (2000), Motwani et al (2005), Somers &	[Botta et.al (2006),Holland & Light (1),]	[Ho & Lin (2004),Xu et.al (2002)]	[,Reimers (2003),Xue et.al (2005), Zhang et.al	[Davison (2002),Al-Mashari &

		Nelson (2000), Somers & Nelson (2004), Sumner (), Trimmer et.al (2002), Umble et al (2003)]	[Allen et.al (2002), Ward et.al (2005)]	[Kraemmerand et al (2003)]	(2003), Zhao et.al (2002),]	Al-Mudimigh (2003)]
	Clarity in training & education strategy	[Mabert et al. (2000)]				
	Training on BPR	[Somers & Nelson (2004)]			[Davison (2002)]	
	Communication	[7, Nah et.al.(2001), Somers & Nelson (2000)]	[Botta et.al (2006), Holland & Light (1)] [Ward et.al (2005)]	[Kraemmerand et al (2003)]	[Law & Ngai (2001)]	[Al-Mashari & Al-Mudimigh (2003)]
	Quality of communication across departments	[Somers & Nelson (2000), Somers & Nelson (2004)]	[Akkermans & Helden (2002)]		[Reimers (2003)]	
	Effective and regular communication to concerned employees	[Mabert et al. (2000), Somers & Nelson (2000)]			[Law & Ngai (2001)]	
	Honest communication	[Motwani et al (2005), Sarkar & Lee (2003)]				

CSF 3: Project Management (PM)

The CSF Project Management has been cited very frequently in studies and this has been cited with emphasis on the fact that the ERP implementation processes are complex and exhaustive. This requires a careful project management module to be in place when ERP implementation is required. Effective planning and project management will allow the firms to manage the resources efficiently and with purpose. Goals, Objectives and timelines are essential for success in ERP implementation and hence this CSF is also studied by researchers across various regions. This CSF is prominently observed across various academic studies and we could identify more than 20 different factors which could be put into this category (see Table 4).

Table 4 ERP Success Factors Categorized as CSF3 (PM) and the Respective Articles in which they were Identified

		USA	Europe & UK	Australia & Denmark	China & South Asia	Middle East
CSF 3: Project management (PM)	ERP implementation methodology		[Holland & Light (2001)]			
	Phased vs. Big Bang mode of implementation		[Ward et.al (2005)]		[Reimers (2003)]	
	Implementing accelerated strategy	[Mabert et al. (2000)]				
	In depth understanding of the important issues relating to ERP implementations					
	Careful selection of appropriate package	[Somers & Nelson (2004),]	[Akkermans & Helden (2002), Botta et.al (2006), Van Everdingen et.al (2000)]		[Law & Ngai (2001)]	[Davison (2002)]
	ERP teamwork and composition (Personnel)	[Nah et.al.(2001), Umble et al (2003)]	[Holland & Light (1)] [Ward et.al (2005)]		[Law & Ngai (2001)]	[Davison (2002)]
	Directing committee	[Mabert et al. (2000), Somers & Nelson (2000), Somers & Nelson (2004)]			[Reimers (2003)] [Law & Ngai (2001)]	
	Project team	[Somers & Nelson ([Akkermans		[Reimers	

capability	[2004],Umble et al (2003)]	& Helden (2002),]		(2003),Xue et.al (2005)] [Law & Ngai (2001)]	
Endowed decision makers			[Parr & Shanks(2000),] [Kraemmerand et al (2003)]		
Choosing the right employees	[Trimmer et.al (2002)]				
Employee confidence	[Trimmer et.al (2002)]			[Reimers (2003)]	
Business and technical knowledge of consultants	[Somers & Nelson (2004),Sumner (), Trimmer et.al (2002)]	[Allen et.al (2002)]	[Kraemmerand et al (2003)]	[Law & Ngai (2001)]	
Balanced implementation team	[Sarkar & Lee (2003)]		[Parr & Shanks(2000),,] [Kraemmerand et al (2003)]		
Handling consultants		[Skok & Legge (2002)]		[Reimers (2003)]	
Staff retaining		[Skok & Legge (2002)]			
Employee/personnel relations		[Allen et.al (2002)]	[Xu et.al (2002)]		
Monitoring and evaluation of performance	[Ehie & Medsen(2005),Nah et.al.(2001),Somers & Nelson (2000)]				
clear milestones	[Mabert et al. (2000)]				
Focused performance measures	[Motwani et al (2005),Umble et al (2003)]		[Kraemmerand et al (2003)]		[Al-Mashari & Al-Mudimigh (2003)]
Client approval		[Holland & Light (1)] [Allen et.al (2002)]		[Reimers (2003)]	
Monitoring and feedback		[Holland & Light (1)] [Allen et.al (2002)]		[Reimers (2003)]	
Project champion	[Nah et.al.(2001),, Motwani et al (2005),Somers & Nelson (2000),Somers & Nelson (2004)]	[Akkermans & Helden (2002)]	[Parr & Shanks(2000),,]	[Reimers (2003)]	
Project management	[Motwani et al (2005),Nah et.al.(2001),Somers & Nelson (2000), Somers & Nelson (2004),Umble et al (2003)]	[Akkermans & Helden (2002),] [,Ward et.al (2005)]		[Reimers (2003),,Zhang et.al (2003),]	[Davison (2002)]
Clear and defined project plan	[6,16,Mabert et al. (2000), , Somers & Nelson (2000),Somers & Nelson (2004),Umble et al (2003)]	[Akkermans & Helden (2002),Holland & Light (1),] [Allen et.al (2002)]	[Ho & Lin (2004),Parr & Shanks(2000),] [Kraemmerand et al (2003)]	[Reimers (2003),]	[Davison (2002)]
Lesser scope			[Parr & Shanks(2000),]		
Evade scope creep					[Al-Mashari & Al-Mudimigh (2003)]
Implementation expenses	[Trimmer et.al (2002)]				

	Accurate deadlines for implementation are set	[Somers & Nelson (2000)]				
	Convincing expectations on ROI					
	Management of expectations	[Somers & Nelson (2004)]	[Akkermans & Helden (2002)]			
	Cooperation across departments	[Somers & Nelson (2004)]	[Akkermans & Helden (2002)]			
	Dedicated resources	[Somers & Nelson (2004)]				
	Knowledge management	[Sun & Yazdani (2005)]	[Allen et.al (2002)]			[Al-Mashari & Al-Mudimigh (2003)]
	Handling conflicts in ERP projects		[Skok & Legge (2002)] [Ward et.al (2005)]			
	Clear and simple project organization					

CSF 4: ERP Vendor Selection (VS)

ERP Vendor selection has been a very critical factor for the success of ERP in a firm. In fact vendor selection will form one of the very important primary steps in the process of ERP implementation. The factors to be considered include the Vendor's reputation, Core business area, financial strength, support offered, technical strength and capabilities, mission and vision etc. Bingi et al [10], Zhang et.al [11] emphasize on the same. Table 5 puts forward the details of the academic research which consider ERP success factors related to CSF4.

Table 5 ERP Success Factors Categorized as CSF4 (VS) and the Respective Articles in which they were identified

		USA	Europe & UK	Australia & Denmark	China & South Asia	MiddleEast
CSF4: ERP Vendor Selection (VS)	ERP vendor	[Somers & Nelson (2000), Trimmer et.al (2002)]				
	Vendor-customer cooperation	[Somers & Nelson (2004)]				[Davison (2002)]
	Vendor support	[Somers & Nelson (2000), Somers & Nelson (2004), Trimmer et.al (2002)]	[Akkermans & Helden (2002)]		[Zhang et.al (2003), Zhao et.al (2002)]	

CSF 5: ERP Fitness to Business Processes (FIT)

According to Davenport [12], the fitness between the firm's business processes and the way the ERP is designed will play a critical role in the success of ERP implementations. The match between the practices followed in the firm and the processes adopted by the ERP will determine how quickly the ERP can be assimilated in to the system. Greater the fitness the easier for the organization and people to adopt to the system as there would be lesser requirement for any further business process reengineering. Factors which check if business process/rules are well understood, Business Process Reengineering, Negligible customization, Alignment between business strategy & IT strategy, fit between software and hardware ,use of vendors' customization tools, Fit between ERP and business process etc. were put in this category(see Table 6).

Table 6 ERP Success Factors Categorized as CSF5 (FIT) and the Respective Articles in which they were identified

		USA	Europe & UK	Australia & Denmark	China & South Asia	MiddleEast
CSF 5: ERP Fitness to Business processes (FIT)	Justification upon factors of cost	[Sumner (2013)]	[Ward et.al (2005)]			
	Business process/rules are well understood		[Ward et.al (2005)]	[Ho & Lin (2004)]		
	Business Process Reengineering	[Ehie & Medsen (2005), Motwani et al (2005), Nah et.al.(2001), Somers & Nelson (2000), Somers	[Botta et.al (2006), Holland & Light (1), Skok & Legge (2002),] [Allen et.al	[Kraemmerand et al (2003)]	[Xue et.al (2005), Zhang et.al (2003),] [Davison (2002), Hong &	[Davison (2002)]

		& Nelson (2004), Sumner (2002), Trimmer et.al (2002)]	(2002), Ward et.al (2005)]		Kim (2002), Law & Ngai (2001), 66]	
	Negligible customization	[36] [Mabert et al. (2000), 4, Somers & Nelson (2004)]		[Parr & Shanks (2000),]	[Hong & Kim (2002)]	
	Alignment between business strategy & IT strategy	[Somers & Nelson (2000)]		[Ho & Lin (2004)]		[Al-Mashari & Al-Mudimigh (2003)]
	Fit between software And hardware				[Zhang et.al (2003)] [Law & Ngai (2001)]	
	Use of vendors' customization tools	[Somers & Nelson (2004)]				
	Fit between ERP and business process	[Somers & Nelson (2000)]	[Van Everdingen et.al (2000)]		[Hong & Kim (2002)] [Hong & Kim (2002), Law & Ngai (2001), 66]	[Davison (2002)]

CSF 6: Culture and Country Specific Factors (CUL)

The National culture affects organizational culture and hence will affect the way in which the ERP is implemented. Also organizational procedures are also determined by the country and the law of the land. The data output requirements, reporting procedures vary across countries and the ERP should match these norms and rules. From our literature review, we identified factors (see Table 7) like Organizational culture and political arrangements, Understanding corporate culture, Decision-making process or styles, National culture, Country-related or Region specific functional requirements toning into this category.

Table 7 ERP Success Factors Categorized as CSF6 (CUL) and the Respective Articles in which they were identified

		USA	Europe & UK	Australia & Denmark	China & South Asia	MiddleEast
CSF 6: Culture and Country specific factors (CUL)	Organizational culture and political arrangements		[Allen et.al (2002)]	[Ho & Lin (2004)] [Kraemmerand et al (2003)]		
	Understanding corporate culture				[Davison (2002)]	
	Decision-making process or style s				[Reimers (2003)]	
	National culture		[Van Everdingen et.al (2000)]		[Xue et.al (2005), Zhang et.al (2003),] [Davison (2002)]	
	Country-related functional requirements				[Hong & Kim (2002), Xue et.al (2005)] [Davison (2002), 66]	

CSF 7: Technological Factors (TF)

Technical factors include data management [13], legacy systems compatibility, data validation etc. Zhang et al. mentioned that the data accuracy if achieved quickly can positively affect the success of the ERP implementation process. It is reasonable to understand without contradictions that the data output and input are to be validated and verified regularly. The data model followed by the ERP software should be compatible with the legacy system and if not the necessary adjustments are to be done to make it certain that valid data is given as output. The Technological Factors (TF) include Data management, Data analysis and conversion, Data accuracy, Data quality control, Organizational characteristics, technology/infrastructure already existing, Prior Organizational experience of IT or change management projects of a similar scale, Software development, testing and troubleshooting, Defining the choices of architecture, Integration, Software configuration, Troubleshooting. (See Table 8)

Table 8 ERP Success Factors Categorized as CSF7 (TF) and the Respective Articles in which they were identified

	USA	Europe & UK	Australia & Denmark	China & South Asia	MiddleEast
Data management	[Sun &				

	Yazdani (2005)]				
Data analysis and conversion	[Somers & Nelson (2004)]				[Davison (2002)]
Data accuracy	[Umble et al (2003)]			[„Zhang et.al (2003),]	
Data quality control			[Xu et.al (2002)]		
Organizational characteristics		[Botta et.al (2006)]			
technology/infrastructure already existing	[Ehie & Medsen (2005)]	[Botta et.al (2006),Mabert et al. (2000)] [Allen et.al (2002)]	[Ho & Lin (2004)]		[Davison (2002)]
Prior Organizational experience of IT or change management projects of a similar scale		[Allen et.al (2002)]			
Software development, testing, and troubleshooting	[Nah et.al.(2001)]				
Defining the choices of architecture	[Somers & Nelson (2004)]				
Integration	[Trimmer et.al (2002)]	[Botta et.al (2006)]		[Reimers (2003),Zhao et.al (2002)]	
Software configuration		[Holland & Light (1),] [Allen et.al (2002)]			
Troubleshooting		[Holland & Light (2001)] [Allen et.al (2002)]			

4. Business Implications & limitations in the Indian Scenario

These factors can be identified in the case studies which were done very recently in 2013 and hence this study takes a prominent role in identification of the critical success factors which if achieved and observed successfully would improve the chances of obtaining success in ERP implementation processes. Shashank Saini et.al [14] studied Indian SMEs to identify the CSFs affecting the success of ERP implementations. They have segregated these factors in to Technological, Organizational and People factors. Nevertheless the factors which appeared relevant in our study were bearing importance in their empirical study as well. Thus this study we conducted can safely be extended to Indian SMEs with higher confidence.

We identified many CSFs for successful implementation of ERP. Some of these factors are fundamental for ERP implementation and hence could be found in most of the journal publications we reviewed for this work. The identification and understanding of these CSFs is a result of the amount financial and human resources spent and risk encountered by the firms in developed countries while they tried to succeed in ERP implementation. This will ease the learning of firms in developing countries while these provide a checklist and caution the firms against the most common pitfalls which may prove fatal not only for the ERP success but also for the organization. This work will also caution the firms which are newly implementing ERP by indicating that the software implementation is a comprehensive, complex and a time consuming task. Hence necessary top management support is to be provided right from the start of the ERP planning process and that support should continue till the implementation is complete. This work will also emphasize that appropriate planning and decision making will play a key role in ERP implementation success. These CSFs are linked to each other and in fact one can find that some CSFs have a stronger relationship between them than the others. This implies that firms should observe necessary caution while putting efforts to satisfy these CSFs.

The limitations of a study based on identification of CSF for ERP implementation is that the theory is evolving from the cases under consideration and the existence of the same factors (influencing these companies) cannot be guaranteed in every company. Also this work is comprehensive but not exhaustive. Hence generalization of the CSFs has been a problem in studies like this. We caution the readers to keep note that this research pertains to literature published till 2014 and to keep track of other future researches published in ways similar to the methodology adopted in this paper. Since many of the cases are from the USA and Europe, which are the developed Nations, the applicability of the same to developing countries like India is a reasonable question. But we do not have enough literature support of the ERP cases from India and we look forward to identifying the cases and comprehensively validating the results for Indian scenario.

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