

Analyzing the Status Quo of Enterprise Resource Planning implementation in SMEs

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Abstract

Enterprise Resource Planning (ERP) techniques attained very important reputation in the last 10 years. Nevertheless, with the developing pace of execution, it has also been observed that expanding number of executions blunders as well as unaffordable maintenances. SME industry is an exceptional industry for the fact that large percentage of construction sectors it's possible to categories them as small as well as Medium sized Enterprise (SMEs). This study assesses how applicable the ERP is to construction industry. It as well estimates a manuscript founded on enterprise data techniques as well as mirrors it to ERP via the case revision of segmental household industrialist. Concerning the investigation, the article founded on enterprise information system appears to be minor, inexpensive as well as more extra segmental by design. Assumed that assembling took place by the use of Commercial off the Shelf Software (COTS), this as well may need the not as much of awareness as well as information technology skills from the operators, decreasing the upskilling the economic importance too. Founded on the information, the script founded technique looks as feasible substitute to ERP for the construction sector. Although a number of studies have been conducted over the past two decades in order to address these issues, but there is still a gap in the current literature review, therefore the aim of this paper was to theoretically assess, the status quo of ERP implementation in small and medium enterprise. The results of critical analysis of the current literature clearly demonstrate that there are gaps related to lack of exploring the SME.

Keywords

Small and Medium Size Enterprise; Enterprise Resources Planning,

1. Introduction

Enterprise resource planning (ERP) is the assimilated administration of fundamental industry progressions, frequently in material period as well as arbitrated by software and technology. Beginning of ERP The Gartner Group primary utilized the contraction ERP in the 1990s Esteves-Sousa, J., & Pastor-Collado, J (2000) to encompass on the competences of material requirements planning (MRP), as well as the advanced industrialized supply preparation as well as supercomputer assimilated industrial. Not entirely ERP packages established on or after a industrialized core; ERP merchants commenced accumulating their bundles with economics and bookkeeping, repairs, as well as HR mechanisms. Zhang Z (2005). Through the mid-1990s ERP coordination handled altogether essential business areas. Administrations as well as non-revenue establishments similarly commenced to utilise ERP systems O'Leary D (2000).

Enterprise resource planning (ERP) a widespread diversified of ERP software packages are used by establishments in unlike segments. ERP remains the successor of Material Necessity Planning (MRP) (from the 1970s) as well as Material Required Planning II (MRP II) (from the 1980s). It remains frequently used for the reason of the constant requests that corporations acquire from their providers as well as/or suppliers in their extended supply chain so as to afford them with inter technique connections (Gefen D 2005). Gefen D (2005) defined ERP as ‘an assimilated enterprise computing technique that remains intended to systematize the movement of material, info, as well as monetary possessions amongst entirely functions inside an enterprise on a mutual database.’ Galy, E, and Saucedo MJ (2014) ,on the other has well as, acknowledged ERP as an enterprise-wide package that synchronise enterprise progressions into a single shared database.

Gattiker, TF., and Dale LG (2005) said likewise distinct ERP as an extensive software package that assimilates the enterprise functions by using a common info flow. Swanson, EB. and Ramiller, NC (2004) pointed out that ERP has remain used to incorporate the fluctuating operations in a enterprise association; though in today’s SCM, networks of providers as well as customers are extremely vital unlike in the past as well as the old type of ERP packages are inadequate in the current trade economy. There are assorted ERP solution providers in the trade, some of them are costly with a lot of unlike modules, as well as some of them are inexpensive as well as courtesy only on singular operations like bookkeeping or production planning. Furthermore, nevertheless of its features as well as coverage, ERP software can’t fully fulfil the necessities as well as expectations of a assumed corporation, largely for the reason every corporation runs its enterprise with dissimilar practices, approaches as well as mile stones. That remains, ERP merchants use unlike hardware platforms, databases, as well as operation techniques. Thus, corporations should conduct apriori necessities analysis to make sure that the selected ERP technique suits their necessities at the highest level possible. However, ERP execution remains not easy. The writings displays that nearly 90 percent of ERP assignments were accomplished late as well as/ or surpassed pre-determined budget bounds . Ram, Jiwat; Corkindale, David; Wu, Ming-Lu (2013)

Ram, Jiwat; Corkindale, David; Wu, Ming-Lu (2013) mentioned In spite of its numerous gains, as well as entirely the decent intentions, occasionally ERP executions flop. Actually, recent history illustrate that a third of entirely ERP executions were dismissed before successful completion. Consequently, sourcing of ERP solutions remains one of the greatest vital success factors. Relatedly, there seem to be two unlike ways to get/ acquire ERP: standard or custom built. The standard package involves very slight if any significant customization. That remains, the corporate progression **assumes** to the ERP software as unlike to having ERP software adapt to a corporation’s specific progressions.

As stated by to Holland and Light (1999), there are numerous serious success issues for ERP execution, of which approximately of them are at the tactical level as well as others at tactical level. Legacy techniques, enterprise visualization, ERP approach, top supervision sustenance as well as assignment schedule are among the tactical factors, whereas client discussion, personnel, software configuration, client approval, monitoring/feedback, communication as well as troubleshooting are midst the tactical factors . Ram, Jiwat; Corkindale, David; Wu, Ming-Lu (2013) .Before

ERP, numerous large-scale worldwide corporations were challenged with difficulties in their operations such as assimilation of enterprise progressions.

As stated by Markus, ML, & Tanis, C.(2000) ERP delivers a driven advantage for the reason of vital info remains produced, mutual, as well as managed in an assimilated manner. ERP custom guarantees the decline in costs, progression of resource controls, as well as expansion of conclusion quality, or, in additional words, thinner more rationalized enterprise operations (Communications of the ACM, 2000; cited by Newell et al., 2003). Some of the previous research has likewise discovered that profitable returns in info technologies, such as ERP techniques, benefits to boost/assure a corporation's driven posture Ram, Jiwat; Corkindale, David; Wu, Ming-Lu (2013) In difference to its positive effects, ERP execution might likewise cause difficulties. The dream of fruitful ERP execution cans occasionally turn into a terrifying experience if executives as well as managers are not fully devoted to the assignment. One of the difficulties with ERP techniques remains to keep it updated. That remains maintenance as well as present up-to-date of the software remains often expensive, time consuming as well as destructive.

There are likewise indirect charges of having an ERP technique that doesn't fit well—incompatible to the current enterprise progressions as well as techniques midst departments, as contrasting to integrating—might rise the separate nature of the interdepartmental associations Zhu, Y., Li, Y., Wang, W., & Chen, J. (2010). This issue can be lessened with a carefully crafted as well as executed execution progression, where departmental necessities as well as necessities are cautiously prioritized as well as implemented.

ERP techniques have remain well-thought-outs vital for acquiring as well as maintaining driven benefit in the worldwide trade below ever increasing competition. ERP techniques incorporate as well as upkeep entirely the major progressions of a corporation such as bookkeeping, give funds, industrialized as well as HR administration, by as long as a amalgamated podium of database as well as enterprise applications Markus, ML, & Tanis, C.(2000). Due to these circumstances ERP remains most popular selections to gain driven benefit in multifarious production techniques. With this admiration the writings thrive of numerous lessons on ERP techniques from numerous approaches. Though, in spite of the practical as well as academic wellbeing in ERP, numerous enterprises still super from not existence able to expand the predictable benefits from it, even initial accomplishment of ERP technique execution. It has remained debated in writings that the original execution achievement, on its own does not assure the prosperous use of ERP after go-live

2. ERP evolution

Throughout the 1990s, the trade for consistent ERP techniques expanded massively. Numerous businesses have implemented ERP, in most instances with the aid of devoted enterprise consultants. ERP techniques mirror a new stage in the informatization of establishments, integrating numerous enterprise progressions within as well as among businesses. With these businesses generally seek to healthier administration control on top of multifaceted enterprise progressions, a growing efficiency as well as cooperativeness as well as a decrease of production as well as transaction charges (Holland as well as Light, 2001). In this reverence, ERP was supported as well as well received as highly promising.

Though, after this original as well as very encouraging stage, ever from the time when the end of the 1990s the eagerness over ERP was earnestly tempered, due to the considerable beyond of time-as well as money budgets, technical dissatisfactions, the loss of control on top of enterprise progressions as well as associational side effects Ifinedo, P. Extending the Gable et al. (2006) As a replacement for of a highly encouraging technology, ERP look as if its highly demanding technology. Complications related with ERP are, at smallest in part, credited to an irony of the social as well as cultural side of ERP Liang, H., Saraf, H., Hu, Q. and Xue, Y. (2007). This outstanding expansion showed a thoughtful non-conformist amongst the association as well as its Enterprise Technique as well as proposes that the role of knowledge can be overturned from prominent to subsequent associational alteration.

We more stipulate this progression of wisdom making in orientation to the virtualization of the association determined by ERP. In our attention upon the common defining of technology as well as association philosophy, we syndicate a physique of writings denoting to the 'Social Shaping of Technology' Liang, H., Saraf, H., Hu, Q. and Xue, Y. (2007) with models of association culture Liu, L.N., Feng, Y.Q., Hu, Q. and Huang, X.J. (2011) In the additional part, we change to the associational framework of the industrialised corporation as well as the administration of the associational alterations subsequent the verdict to work about MRP. After that we scrutinize the allegations for the team's labour hired at the bring together lines. In the assumption of this article, we deliberate (in line with our theoretical framework) how in this case the alteration of ERP can be realized as progression of logic making as well as how it added up to a virtualization of the association. We will contend why the progression in which the ERP technique was brush up involved in our view a outmost significance alteration in the signification of the ERP technique itself.

2.1 Assessment of ERP profitable returns

A shared approach to gauge profitable returns remains Return of Profitable returns (ROI). Calculating of RO is remains complete by separating return on an profitable returns with cost tangled in the profitable returns; the effects are then showed as a fraction. If consequential percentage has a positive or negative worth shows if the profitable returns remains lucrative or not articulated in a ROI value. ROI calculation remains often viewed as vague as well as unfinished, for the reason of ROI remains exactly profitable as well as only consider the revenue as well as costs for profitable returns Liang, H., Saraf, H., Hu, Q. and Xue, Y. (2007). It provides a good general idea of a assignment's returns as well as costs to a beneficial accomplishment ration. However, this ration does consider time as well as threat which are two vital fundamentals that would be portion of a comprehensive profitable calculation Liang, H., Saraf, H., Hu, Q. and Xue, Y. (2007) As for Liu, L.N., Feng, Y.Q., Hu, Q. and Huang, X.J. (2011) calculating ROI of ERP remains contested from the time when it has to ration both solid as well as soft values as well as search the association amongst them as well as the ERP technique. Additional mechanism for valuation of profitable returns remains the Cost Benefit Analysis (CBA). CBA can be performed when businesses or persons in businesses deliberates amongst profitable returns choices. It affords an entirely-inclusive impression of Benefits (benefit) as well as Costs (expenses) connected to the profitable returns, the outcome of the revision remains a monetary estimate of the Net Benefits of the profitable returns. When bearing in mind unlike profitable returns choices, these tend to only consider the benefits as well as costs accompanying to them, but CBA aims at considering entirely costs as well as benefits. As stated by to

Ward, Allan, C., Dungan, A. and Peetz, D. (2010) it remains contested if businesses use CBA to calculate as well as evaluate IT profitable returns, if cost primary remains assignment as well as then it easily turn out to be that proceeds are familiarized to cover costs sustained by either allow too much for or miscalculate.

This phenomenon remains embedded in that it remains complex to evaluate an particular value on the assistances, as well as that the person making the assessment can be coloured by their own opinions about the assignment. To deal with this issue, Ward, Allan, C., Dungan, A. and Peetz, D. (2010) consequently recommended a reverse examination progression for IT profitable returns, where valuation of the values (Benefits) remains carried out before assessment of costs (Costs) remains completed.

Approximating TCO for IT assignments remains often a very tough task when assignments include not just IT, but likewise influence enterprise progressions the enterprise at large as well as the surrounding that the association works in . Evaluating ERP actions or accomplishment can likewise be completed by Key Accomplishment Indicators (KPI). KPI remains a combination of selected accomplishment indicators to estimate an action or task or explanation accomplishment, as well as they are either detailed or in-depth scrutinized info, but these instead give a general picture of what remains significant. KPI's thus define a gathering of target values which the association can ration in contradiction of , for example, monetary, progression created-, value created- or practice-created indicators Sedera, Darshana, Guy Gable, and Taizan Chan (2004)

The profitable revision tools for profitable returns (ROI, TCO as well as CBA) consider only hard, monetary values into consideration, as well as should consequently not be used as the only evidence to validate ERP profitable returns. There remains agreement in the writings about assessment of ERPs as well as that approximation of its value remains a difficult question, likewise ascertain that estimated value likewise varies depending on the position of the one that brand s the assessment have. Sedera, Darshana, Guy Gable, and Taizan Chan (2004) reasons that there are three major explanations why the assessment remains issue tic to implement: 1) Whether an profitable returns remains successful or not depends on the original expectations, 2) IT profitable returns carry both soft as well as hard values, as well as that both these groups must be reflected throughout an assessment, as well as 3) IT remains imperative for most enterprises today, as well as thus plaited into the businesses' enterprise progressions.

3. Overview of the worldwide construction Sector

The worldwide construction trade has been challenging profitable issues through the previous four years. Nevertheless, even as the United States endures to board off the viewpoint of a double-dip downturn as well as European nations are anguish the debt predicament; occasions are present in upcoming for global providers in upcoming states, predominantly individuals rich in properties? Best R (2012) There remains much speech-making on accomplishments; nonetheless there has been little investigation that makes associations amongst numerous states. These article determinations primarily deliberate the tendency of the global construction trade as well as the new structures of the Chinese construction Sector. A writing review on accomplishment rations has been systematically accompanied as well as described in preceding articles Ali, A.S. and Rahmat, I. (2010), though, a brief instantaneous of the key issues remains provided in this article. Service providers are moving their attention to new as well as upcoming trades,

which can be comprehended in the Top 225's local income failures. Internationwide revenue fell 6.6% to \$94.18 billion in Europe. This move in courtesy remains most important to disturbance for major internationwide service providers (Reina & Tulacz, 2011). Chinese service providers "are suitable bigger contestants," as stated by Yves Gabriel, CEO of Bouygues Construction, "We are majorly challenging [with Chinese service providers] in Africa for the instant, but these corporations might perhaps come in Europe in the forthcoming". Chinese construction enterprises have accounted for 51 amongst the world's top 225 international wide constructors. The total international wide revenue of these 51 The Chinese construction Sector's fulfilments requires being well-thought-out in positions of its international wide method. (Reina & Tulacz, 2011).

Traditionally, before 1979 the internationalization of Chinese construction enterprises invented from the Chinese State's Profitable as well as Technical Aid packages. These actions continuously providing monetary contributions to additional upcoming states as well as this was majorly for party-political determinations. Nevertheless, assignment backing initiated from the Chinese government through these period as well as consequently Chinese construction originalities did not contribute in any conclusion creation actions. As outcome of the government direction approach in conclusion making the internationwide of these enterprises can be well thought-out to be unreceptive Ali, A.S. and Rahmat, I. (2010).

3.1 Sector structure

Primarily, the Chinese construction trade remains extremely large as well as increase has remained fast. By 2007, the Gross Return Value (GOV) of the Chinese construction Sector was over\$806 billion (NBSC, 2008). Afterward the concurrence to WTO in 2001, the yearly growth proportion of the GOV rose meaningfully, from 10% to more than 20% (Zhang & London, 2010). Before amalgamation of the WTO employment charges in the Chinese construction Sector was in a weakening. (Zhang & London, 2010). The upsurge might be produced by the "profitable obtainable" sustenance method whereby the Chinese state make available approximately tax as well as monetary sustenance to the enterprises complicated in the internationwide trade. In computation, the equivalent of knowledge requirements uninterruptedly enhanced. (Zhang & London, 2010).

3.2 Policy objectives for the Construction Sector

The construction segment remains envisioned to play a major role in profitable increase, in accumulation to manufacturing structures that increase to productivity as well as quality of lifespan. From the time when construction remains labor-intensive, when the sector remains operational at maximum volume, outsized segments of the country's effort strength are vigorous, determines that construction action or task follows profitable increase

Chang, T. and Nieh, C. (2004). The World Monetary institutions categorizes cost-cutting of states as short revenue, central revenue (sectioned into subordinate intermediate and Upper middle), as well as in height revenue. Another mutual standard of classification founded on expansion stage of the state was used main by Chang, T. and Nieh, C. (2004).

4. Gap Analysis

To begin with the critical assessment analysis of the existing literature review of the existing studies, the ICIS I web of science data base was used with Enterprise Resources Planning was used as key words. The time frame was from 2000 to 2017. The search only focused on the peer reviewed articles published in English, falling in certain subject areas. The search resulted in 400 documents which were toughly assessed and selected by means of title, and abstract with the purpose of developing additional boundaries, and eliminating incorrect or unrelated entries. (Screening phase). Throughout this phase, groups if inclusions and segregation standard standards were established against which individually every single journal article was evaluated. Precisely articles assessed are those, which focused on ERP implementation in SME. It should be pointed out that studies that did not meet these requirements were not taken into account. At this stage, produced 180 studies focusing of ERP implementation in manufacturing, FMCG, Construction, Computer, and services industries. These studies were labelled on the basis of set standards, for example in this paper the studies that were assesses were selected based on the citation. To this end, the table below shows the 15 based studies that were critically analyzed.

Authors		Sectors /Industry					Classification				
		Manufacturing	FMCG	Constructions	Computer	Services	State	Corporation Size		Research Methodology	
								Large scale	SME	Qualitative	Quantitative
01	Sudhamn Parthasarathy				x		india		x	x	
02	Mohammed Arif			x			United Kingdom		x		X
03	Babak Shirazi		x				Iran		x		x
04	Kaveh M. Cyrus	x					Itay		x		X
05	Mina Moeinedini		x				Iran	X			X
06	Samwel Matende				x		Kenya	x		x	
07	Abiot Sinamo Boltena			x			Ithopia		x		X
08	Valerie Botta					x	France	x		x	
09	Amin Y. Noamana					x	Kingdom of Saudi Arabia	x		x	
10	Wei-Wen Wu	x					Taiwan	x		x	
11	Mahendrawathi ER	x					Bali, Indonesia	x		x	
12	Shree Ranjanl	x					India	x			x
13	Huseyin Selcuk Kilic					x	Turkish	x		x	
14	Ignation Madanhire	x					Zimbabwe	x			X
15	Eric T.G. Wang	x					United States	x			X

5. Conclusion

The aim of this research was to explore the Status Quo of ERP implementation in SME, with the view of unpacking the issues to the owners for them to make sound decisions to improve their processes in order to meet their customer's requirements. This study assessed how applicable the ERP is to SME industry. It as well estimated a manuscript founded on enterprise data techniques as well as mirrored it to ERP via the case revision of segmental household industrialist. Concerning the investigation, the article founded on enterprise information system appears to be minor, inexpensive as well as more extra segmental by design. Assumed that assembling took place by the use of Commercial off the Shelf Software (COTS), this as well may needed the not as much of awareness as well as information technology skills from the operators, decreasing the upskilling the economic importance too. Founded on the information, the script founded technique looks as feasible substitute to ERP for the construction sector. Although a number of studies had been conducted over the past two decade in order to address these issues, but there was still a gap in the current literature review, therefore the aim of this paper was to theoretically assess, the status quo of ERP implementation in small and medium enterprise. The results of critical analysis of the current literature clearly demonstrated that there were gaps related to lack of exploring the SME.

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