VOL. 11, NO. 3, FEBRUARY 2016 ISSN 1819-6608
ARPN Journal of Engineering and Applied Sciences

www.arpnjournals.com

ERP SYSTEM SUCCESS MODELS: A LITERATURE REVIEW

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ABSTRACT

Organizations are tending to switch over from their legacy system to modernised information system now-a-days. A successful implementation of IS or ERP system is extremely important to future competitive strategy of an organization, but on the other hand the measurement such system's success is equally important and challenging task to any organization. The goal of success measurement model is to better evaluate, plan and implement ERP projects and help senior managers make better decisions. This paper presents review of all popular models. An attempt is also made here to highlight dimensions of various models, which will ultimately help to understand unique characteristics of these models. At the end of this work authors have tried to distinguish success factors and success indicators. Understanding of success factors and success indicators will help organisations to adopt appropriate implementation strategies leading to success of any IS or ERP system.

Keywords: ERP success model, success factors, success indicators.

1. INTRODUCTION

Enterprise Resource Planning (ERP) system is a system for the seamless integration of all the information flowing through the company such as accounting, finances, supply chain, human resources and customer information (Yang Jyh-Bin, Wu Chih-Tes, and Tsai Chiang-Huai, 2007). In this global competition, enterprises must make the best business resources on the configuration, which can help them to continue to survive and develop. However, limited literature has concentrated on measuring success of an ERP system. Although it is very important to measure the success of ERP system implementation projects since a lot of financial and human resources are invested. Couple of IS success models available in the literature are also used for measurement of ERP system success on the ground that ERP system is a kind of information system (IS). A Priori Model and The Revised Gable Model proposed by Gable Guy G., etc. are claimed as IS and ERP success model. Some models are used as IS success model and some of them are used as ERP success measurement model. An attempt is made in this paper to discuss all popular models of IS and ERP system success available in the literature. First section below discusses IS success models followed by ERP system success models. All the models including their area of applications and dimensions included in the model are summarised and presented in Table-1.

2. INFORMATION SYSTEM SUCCESS MODELS

2.1 DeLone-McLean (D and M) model by D and M (1992)

The most quoted model for success measurement in the field of information systems is the DeLone and McLean (D and M) model which moved to a user centred approach when trying to judge overall IS success. The D and M consists of six mutually dependent dimensions of success viz. System quality, information quality; use, user satisfaction, organisational impact and individual impact are the main dimensions. The D and M model is useful for the success measurement when the casual/ processual dependencies are important for the company which is doing the measurement (Kronbichler *et al*., 2010). Important social performers of this stage are end users, technical administration and IT executive personnel. The D and M model does not give direction on the measures to be used or on how to go about the assessment process (Edward Bernroider W.N., 2008). Meticulously the measurement of the interactions among the success variables is needed so that the effects of the self-governing variables with the dependent variable can be isolated. Secondly, the success variables should be selected based on experimental study. Thirdly, there is a necessity to reduce the number of measures for IS success and the measure should be stable. Fourthly, there must be more field-study research which discovers and incorporate measurement to study the impact of organizational variables. Lastly, there is necessity to further expand and validate the model so that the model can be used in other IS success measurement (Kwang Su Wei and Dr. Alain ChongYee Loong, 2009).

2.2 IS Function performance evaluation model by Saunders and Jones (1992)

Saunders and Jones (1992) included contingency dimensions in their research on the performance assessment of the IS system. They explores both the organizational variable and peculiar variables that might improve the success of IS system and projected an assessment model with term "IS Function Performance Evaluation Model". This research is based on theoretical model which can be developed to include both the effect of contingencies variables and the dimensions of success (Ifinedo Princely, 2006).

2.3 The Contingency Theory of IS assessment framework by Myers *et al*. (1997)

The structure of the "contingency theory of IS assessment" model was developed by Myers *et al*. (1997) on the base of Saunders and Jones's (1992) work. This structure expands the Saunders and Jones framework in the circumstance of the assessment of productivity and quality of the IS system. This model also distinguishes the pertinence of both contingency variables and the variables of IS success and rearranges the dimensions of success for the IS system to include the six dimensions of IS success which DeLone and McLean (1992) had involved. This model includes two new variables: Service Quality and Workgroup Impact (Ifinedo Princely, 2006).

2.4 The Seddon model by Seddon Peter B. (1997)

The Seddon Model contains two parts. The first part covers "Partial behavioural model of IS Use" and it distinguishes that potentials for IS Use play a large part in IS success. These potentials control how people look at IS systems success. The second part covers "IS Success Model" and it is very similar to the variables of the D and M Model (Seddon Peter B., 1997).

2.5 Extended Seddon Model of Information Systems Success by Seddon (1997)

Prior to DeLone and McLean survey most variables of organizational impact of IS appraised overall performance. Seddon preserves the term 'Organizational' to distinguish inside organizational impact, since the word 'Organizational' foretells internality when presented with 'External- Oriented'. This also fits in with Seddon's use of the term 'management of organizations'. Seddon Model (SM) includes the net benefits of information system use by groups and by organization's external environment are independent variables to the same extent as the net benefits of IS use by individuals, organizations and society are independent variables. Seddon elaborates that this is realistic because 'Groups' is a rational and logical aggregation in between individuals and organizations, and 'Organization's External Environment' is a natural step in between organization and society. Their extension to SM requires different recognition of two further stakeholders i.e. groups and organization's external atmosphere. After this exercise they employed the terms group impact and external impact to avoid any vagueness.

2.6 Updated DeLone McLean (D and M) Model by DeLone McLean (2003)

DeLone and McLean presented a reconstructed IS success model which presented the addition of service quality and the merging of individual impact and organizational impact on net benefits (DeLone and McLean, 2002,) in 2002. The 'use' was substituted by 'Intention to use' which imitates an attitude whereas 'use' imitates behaviour; this novel part of the model may determine some of the process versus causal concerns that Seddon (1997) has pointed out. The new model reveals that 'use' must precede 'user satisfaction' in a process sense, but positive experience with 'use' will guide to greater 'user satisfaction' in a causal sense. As a result, 'net benefits' will arise. The new construct 'Net benefits' is the merging of individual and organisational impact which were mentioned in the original D and M (1992) model (Kronbichler Stephan A., *et al*. 2010; DeLone, W.H. and McLean, E.R., 1992).

2.7 The Gable/A Priori model by Gable, Sedera and Chan (2003)

Guy G. Gable *et al*. (2003) completed an investigative inventory review which was used for model. They constructed a model which was used for IS and ERP system success measurement - the "A Priori Model". The "A Priori Model" was using 5 constructs and 42 sub-constructs. The aim of the test of the "A Priori model" demonstrated that the ERP success depends on the size of the organisation (Myers *et al.,* 1997).The D&M variables were used as the basis of the preliminary ES success model and were amalgamated with the associated measures from Sedera *et al.* (2003). Variables of the D and M model offered a holistic view across the miscellaneous roles within the organization and presented a classification of success variables. A key difference to D and M model is that the variable use was missing from the a priori model. The mapping effort of the two unlike variables made easy recognition and addition of other original variables related to ES. The modified model is the result of Gable *et al.*, (2003) research. It contents four quadrants, individual impact, organisational impact, information quality and system quality which are associated dimensions of the multidimensional phenomenon (Gable Guy G., Darshana Sedera, and Taizan Chan 2003). There are no processual dependencies among the variables. This model does not imply a causal/process model of success. The construct 'use' is omitted, satisfaction is treated as an overall measure of success (Kronbichler Stephan A. *et al*., 2010). Vendor/Consultant Quality and Workgroup Impact are not included in this model. Any ERP system success model should include a dimension related to WI (Princely Ifinedo, 2007).

2.8 The revised Gable model by Gable, Sedera, and Chan (2003)

The Revised Gable model has the four quadrants: (1) individual impact, (2) organizational impact, (3) information quality and (4) system quality. This model is applicable to measure IS and ERP system success (Gable Guy G., et.al., 2003).When estimating an ES, this model demonstrates picture of the organization's experience at a point in time. The impact dimensions are an assessment of profits that have pursued (or not) from the system. The quality dimensions replicate future potential. Together these four dimensions reproduce whole view of ES and its success. The revised ES success mode differs from the D and M in the following ways: (1) it illustrates a

measurement model and does not claim a causal/process model of success, (2) it skips the use Variable, (3) satisfaction is dealt as an overall evaluation of success, rather than as a variable of success, (4) new variables were added to reflect the current IS context and (5) it consists of additional measures to search a more holistic organizational impacts construct (Gable Guy G., Darshana Sedera, and Taizan Chan 2003). User satisfaction dimension has been removed in this model.

2.9 A Comprehensive model of project success by Westhuizen

Danie van der Westhuizen has presented a Comprehensive Model of project success in which he used D and M model of IS Success as a base model. The model presents the basis for an instrument to determine the dependent variable as project success. To contain complexity, the differences in the perceptions of stakeholders and different system types are not incorporated (Seddon P.B., Staples S., R. Patnayakuni, and M. Bowtell, 1999). The model attempts to walk the fine line between simplicity and complexity and usefulness and comprehensiveness. Westhuizen stated "Measuring software project success is not going to be easy!" The proposed model presents 10 dimensions preferred for measuring project success. The model does not consist of system types and stakeholder features. Enlarging the model to incorporate these features would add to the intricacy of the model.

2.10 A conceptual model by Kaiser and Frederik (2010)

Michael G. Kaiser and Frederik Ahlemann (2010) have created a model with high explanatory power and a valid measurement model. They revised the IS Success Model to accommodate a more illustrious view of a system's quality. In addition to the rather technical perspective of the D and M model, they included usability and functional quality. The individual impact has been surrogated by three benefits constructs for the workgroup, the individual and the organization using the system.

3. ERP SYSTEM SUCCESS MODELS

3.1 Balanced Scorecard (BSC) approaches by Rosemann and Wiese (1999)

Rosemann Michael and Jens Wiese (1999) proposed the Balanced Scorecard (BSC) and it is the supplementation of traditional financial measures with three additional perspectives; the customer perspective, the internal business process perspective and the learning and growth perspective. The BSC can be used for evaluation of these tasks and afterwards for the strategic planning of the future expansion of the system based on the assessment results. For the purpose of using the Balanced Scorecard to control the running of ERP system, the four standard perspectives of the novel model have to be adjusted to the specific object of an ERP system. For the purpose of using the Balanced Scorecard to control the running of ERP system, the four standard perspectives of the model have to be adjusted to the specific object of an ERP system. Because of the bottom-up approach measures should be considered so as to permit simple recognition of blockages linked with the system.

3.2 Shoh and Mrkus model by Soh and Markus (1995)

Soh and Markus (1995) Model illustrates how IT creates (or fails to create) business value. This model appends three points to ES success. First, it states that the necessary situation for a successful conclusion is not always adequate for success. Possibility and uncertainty can take part vital role in the result achieved. Second, this framework demonstrates the "IT investment to business value" technique as a sequence of three associated forms that correspond to the phases of IT investment, system development, execution and continuing operation. The conclusion of one phase became opening conditions for the subsequent phase. Thus decisions and actions in a phase may vary the potential for success afterward. Moreover because each phase involves diverse groups of populace, the framework directs concentration to communication intricacies that escort 'the hand- offs' from one phase to the subsequent phase. Third, the framework clarifies the results of each phase as resulting from relations among exterior circumstances. It means that both uncontrollable events and choiceful individual actions can control outcomes.

3.3 Markus and Tanis success measurement model by Markus and Tanis (2000)

Markus and Tanis (2000) strived to depict success based on their observations of ES (Kronbichler Stephan A., Herwig Ostermann, and Roland Staudinger, 2010). According to the Markus and Tanis there are different phases distinguished by key players, typical activities, distinguishing problems, performance metrics and a range of feasible results. The Markus and Tanis (2000) success measurement model can be applied for numerous success measurement approaches at diverse stages of an ERP project. It offered the possibility to make strategy and take actions if outcome is not as good as forecasted and to get enhanced outcomes in the subsequent stage because each outcome of a stage is affecting the next stage. This model presents a hypothetical structure for investigating backside and eventually the business value of ES. Although the framework of this model is too large in extent for direct experimental testing (Princely Ifinedo, 2006).

3.4 Ex-ante evaluation of ERP software by Stefanou CJ (2001)

Stefanou CJ (2001) has concentrated on the ex-ante evaluation and the selection process of ERP systems.

The distinction to the other models which are constituents of this study is that all of the models except the Markus and Tanis (2000) model centered on an ex-post evaluation which centers on an assessment of an present system. According to Stefanou CJ (2001) an ex-ante evaluation is necessary because of the fact that choosing an ERP system is a long time process which is extremely costly too. This model is divided into four phases. The first phase considers the business vision as a starting point for ERP attainment. For the selection of an appropriate system, a clear business vision is essential because it has to be clear which aims the execution of the novel system should achieve. Second phase comparing capabilities vs. needs, consists of the detailed evaluation and details of business requirements as per the ERP system's functionality. The next division of the second phase believes on the selection of ERP modules which is necessary to handle the business. In the third phase of ex-ante model costs and benefits occurring from the ERP implementation project are anticipated. The last phase of this model is "operation, maintenance and evolution" which means that modifications in the market and latest business channels ground in updates the executed software. This phase encompasses assessment of the costs and benefits which will happen in the future from operating, maintaining and extending the ERP system (Stefanou, 2001). This model demonstrates how corporations can appraise an intended ERP system implementation.

3.5 Task-Technology Fit (TTF) by Smyth (2001)

The Task-technology Fit (TTF) represents three main factors: task, technology (ERP system) and user. These three factors are affecting the acceptance of the system. ERP system is investigated as a tool used carrying out their tasks. Users use the technology to sustain them in performing of their tasks. Task-technology fit measures the degree to which a technology supports an individual in performing his or her portfolio of tasks. The framework clarifies the match between the functionality provided by the ERP system and the skills and attitudes of the individual users. In this model, perceived usefulness, user satisfaction and TTF are shown as main constructs that are the vital indicators of ERP system success.

3.6 ERP success a priori model by Sedera, Gable and Chan (2003)

An a priori model of ES success with 5 dimensions and 42 sub-constructs was tested. Validation of the model dimensions through investigative factor analysis identified four dimensions of ES success. Unlike the original D and M model, the a priori model is a measurement model for assessing ES success using five independent dimensions; Information Quality, System Quality, Individual Impact, Satisfaction, and Organizational Impact. Main deviation from the D and M model is the exclusion of the 'Use' dimension (Darshana Sedera, Guy Gable, Taizan Chan, 2003).

3.7 The Extended ERP Systems Success Measurement model by Ifinedo (2006)

Ifinedo extended the dimensions of success proposed by Gable *et al.* (2003). One new dimension which was additional to the model was the Consultant/Vendor Quality because the result of investigational facts revealed that organizations tend to correlate the quality of the providers of their software with its overall success of the organization (Ifinedo, 2005; Ifinedo and Nahar, 2006). Vendor / consultant quality measures the effect of exterior quality on the ERP systems success. Infinedo (2006) elucidated that the client will be in a better place to use the acquired software successfully in accomplishing organizational objectives when an agreement between externals and the executing firm survives. Ifinedo says when this is the case, success with the software increases. Measures for this variables are technical support provided, relationship with the firm or credibility and trustworthiness. An additional finding was that System Quality and Organizational Impact two most significant dimensions for ERP systems success. The main difference to the Gable *et al.* model is the two additional dimensions, vendor / consultant quality and workgroup impact.

3.8 Revised IS Success model by Chien and Tsaur, (2007)

Chien Shih-Wen and Tsaur Shu-Ming, (2007) have taken D and M IS success model as a base model with dimensions; Information quality, System quality, Service quality, User satisfaction, Intension to use, Benefit of use and Business value. They have proposed a fractional addition and respecification of the D and M model of IS success to ERP systems. Finally they have suggested that system quality, service quality and information quality are most important factors in success of ERP system. The D and M model (DeLone and McLean, 1992; 2003) was tested in different use cases like in 2007 by Chien and Tsaur who found out that system quality, service quality, and information quality seem to be the most important successful factors when they were investigating the success of ERP systems in Taiwanese high-tech industries.

3.9 ERP Success model by Chung, Mirosławand and Young (2008)

Chung BooYoung, Mirosław J. Skibniewski, and Young Hoon Kwak, (2008) have formulated the conceptual ERP success model supported on environment theories in the IS study area. D and M IS success model was used for categorizing success indicators. Finally, the basics of project management were incorporated into the model for investigating the success of ERP system implementation. This model is hypothetically good and can be helpful in providing better understanding regarding the success of ERP systems. This model is concentrated on identifying the factors for the ERP success from

implementation project and viewpoints of user adoption. The identified factors were scrutinized to explore their relationships with success indicators concerned with the redefined ERP success.

3.10 Modified ERP Systems Success model by Tsai and Chen (2008)

Tsai Wen-Hsien and Chen Shih-Wen (2008) proposed a success model using ten variables to measure ERP successes for post implementation ERP system. They have redefined the updated D and M Model (2003) of ERP system success and find that system quality and service quality are vital dimensions for measuring post implementation ERP system success.

Review of all popular models suggests that there are noticeable differences in the dimensions which are used for system success measurement .Most of models use system quality, information quality and user satisfaction as measure of system success, couple of models focus on impact of system on individual and organizational performances. Various underlying dimensions of these models are tabulated in Table-1 below.

Table-1. Summary of IS / ERP system success models.

S. No.	Model	Author	Year	Proposed area of Appli cation	Dimensions/ Phases included in model
1	DeLone-McLean (D and M) Model	DeLone-McLean	1992	IS	1.System quality, 2.information quality, 3.use, 4.user satisfaction, 5.individual impact 6.organisational impact
2	The IS function performance evaluation model	Saunders and Jones	1992	IS	1. IS function performance Dimensions, 2. Organizational Factors, 3. Perspective of is evaluator, 4. Selection and Prioritization of is performance dimensions, 5. Selection of measures for each dimension
3	The contingency theory of IS assessment framework	Myers *et al.*	1997	IS	1.System quality, 2.information quality, 3.use, 4.user satisfaction, 5.individual impact 6.organisational impact, 7.Work group impact
4	The Seddon Model	Peter B. Seddon	1997	IS	1. System quality, 2.information quality, 3. Perceived usefulness 4.User satisfaction, 5.Benefits to Individuals, 6. Benefits to organisation, 7. Benefits to society
5	The Extended Seddon Model	Peter B. Seddon	1997	IS	1. System quality, 2.information quality, 3. Perceived usefulness 4.User satisfaction, 5.Benefits to Individuals, 6. Benefits to groups i.e. organisation (Internal), 7. Benefits to organizations(External) society
6	Updated DeLone McLean(D and M)	DeLone-McLean	2003	IS	1.System quality, 2.information quality, 3.Service quality, 4.user satisfaction, 5.intention to use and use, 6.Net benefits
7	The Gable *et al.*/ A Priori Model	Gable *et al.*	2003	IS andERP	1. System quality, 2.information quality, 3. satisfaction,4.individual impact 5.organisational impact
8	The Revised Gable *et al.* Model	Gable *et al.*	2003	IS and ERP	1.individual impact 2.organisational impact 3.System quality, 4.information quality,
9	A comprehensive model of project success	Danie van der Westhuizen	---	IS	1.Quality of project management process, 2.Within Time, 3.Within budget, 4.Specified system quality, 5.Specified service quality, 6.Project stakeholder satisfactory, 7.user satisfactor, 8.intention to use, 9.use, 10.Net benefits
10	A conceptual IS Success model	Michael G. Kaiser	2010	IS	1. Information quality, 2.Usability, 3.Functional quality, 4.Technical quality, 5.service quality, 6.Use, 7.User satisfaction, 8.Individual benefits, 9.Workgroup benefits, 10.Organzational

					benefits.
11	Balanced Scorecard Approaches	Rosemann and Wiese	1999	ERP	1.Finacial/ Cost 2.Internal 3.Customer 4.Innovation & learning
12	Shoh and Markus Model	Shoh and Mrkus	1995	IS and ERP	1.IT expenditure, 2.IT assets, 3.IT Impact, 4.Organizational performance
13	Markus and Tanis Model	Markus and Tanis	2000	IS and ERP	1.Project chartering 2.The project (Configure and rollout) 3.Shakedown 4.Onward and Upward
14	Ex-ante evaluation of ERP software	Stefanou	2001	ERP	1. Business vision 2.ERP selection (Requirements and capabilities) 3.ERP implementation 4. ERP operation/ Maintenance/ Evolution 5. Evaluation (Strategic and Operational)
15	Task-Technology Fit (TTF)	Smyth	2001	ERP	1.Oragnisational Factors 2.Task 3.ERP 4.User 5.Percieved usefulness 6.User satisfaction 7.TTF 8.ERP success
16	ERP success a preori Model	Darshana Sedera, Gable	2003	ERP	1.System Quality, 2.Information Quality, 3.Satisfaction, 4.Individual Impact and 5.Organisational Impact
17	The extended ERP Systems Success measurement model	Ifinedo	2006	ERP	1.Vendor/Consultant quality 2.System quality, 3.information quality, 3.individual impact 4.Workgroup Impact 5.organisational impact
18	Revised IS success model	Chien Shih-Wen *et al*.	2007	IS and ERP	1. System quality, 2.information quality, 3.Service quality, 4.user satisfaction, 5.intention to use 6. Benefit of use 7.Business Value.
19	ERP success model	Boo Young Chung *et al*.	2008	ERP	1. User related Variables, 2. Project related Variables, 3.Subjective Norm, 4. Perceived usefulness, 5. Perceived ease of use, 6. Intension to use,7,Progress,8.Quality, ERP Benefits
20	Modified ERP Systems Success model	Wen-Hsien Tsai and Shih-Wen Chen	2008	ERP	1. System quality, 2.information quality, 3.Service quality, 4. Perceived ease of use 5.Percived usefulness, 6.Intension to use, 7.Attitude, 8.benefit of use, 9.user satisfaction, 10.Business Value

Synthesis of various models clearly indicates that there are few dimensions which are critical for the success of system (e.g. Human Supported Organizational Factors, Organizational Clarity and Vendor related factors) whereas there are few dimensions which provide a base for the measurement of success (e.g. System Quality, Information Quality, Organizational Impact, Project Success and Benefits of Use). First set of dimensions may be named as success factors whereas second set of dimensions may be named as success indicators. Organizations must understand such factors and indicators. They have to focus on factors which will eventually lead to success of systems.

4. CONCLUSIONS

This paper presents review of various IS / ERP system success models highlighting uniqueness of each of models and area of their applications. As the literature is full of variety of success models, selection of suitable model by researchers and practitioners for specific situation is not straight forward. This study will help them to select a model satisfying their specific needs. It is learnt from review of literature that there are few things on which success of any IS systems depends and there are few things which are measure of system success. Clear-cut distinction between the two is not previously available in the literature. Future research may be to arrive at two different set of variables namely success factors and success indicators. Focussing and working on success factors will improve the situation on success indicator front, eventually resulting in success of any information system.

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Appendix

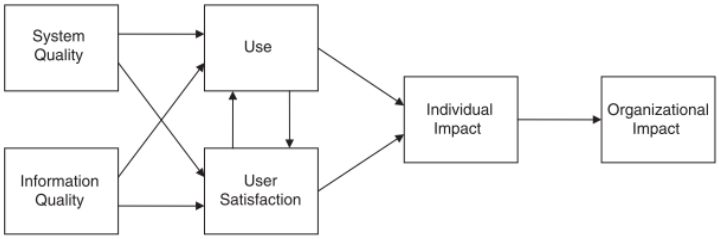

Figure-1. D and M Model by DeLone and McLean (1992).

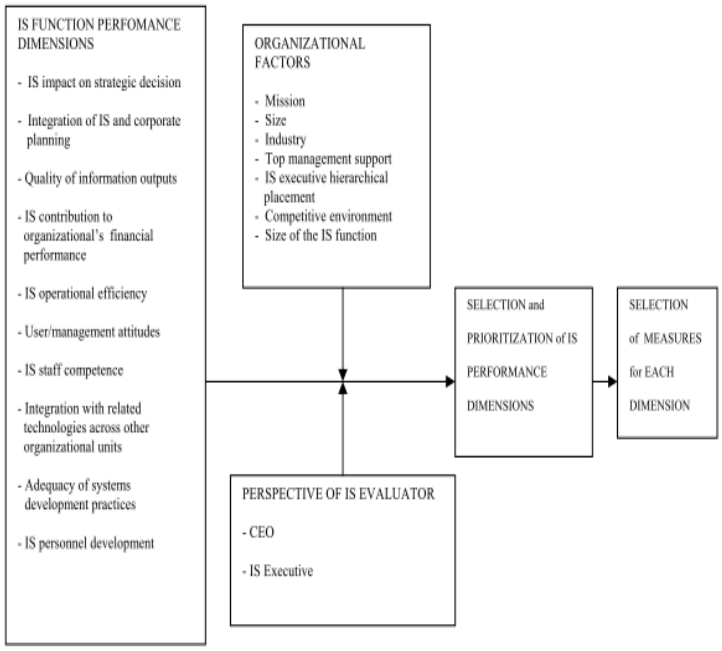

Figure-2. IS Function Evaluation model by Saunders and Jones (1992)?

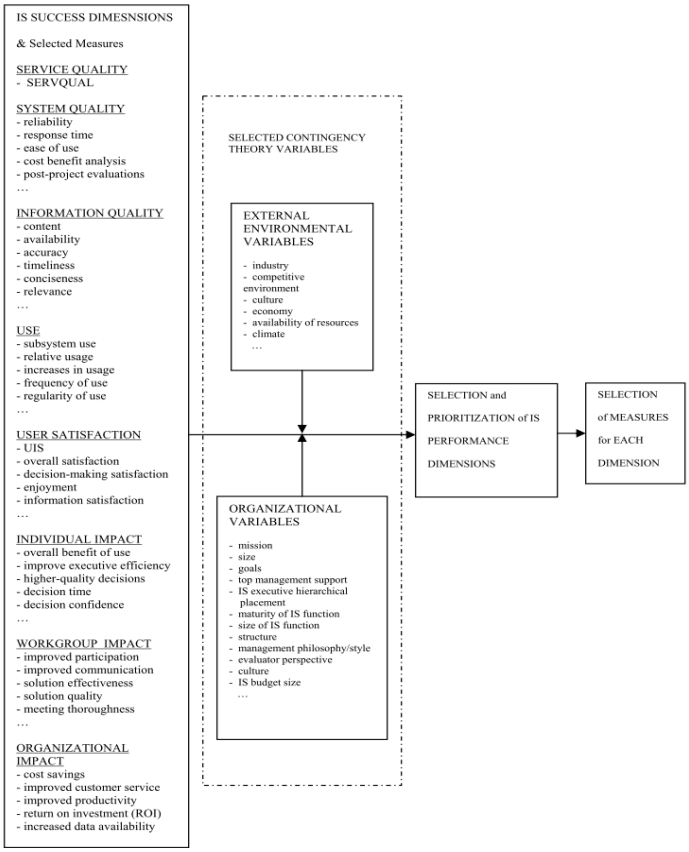

Figure-3. Contingency Theory of IS assessment by Myers *et al*. (1997).

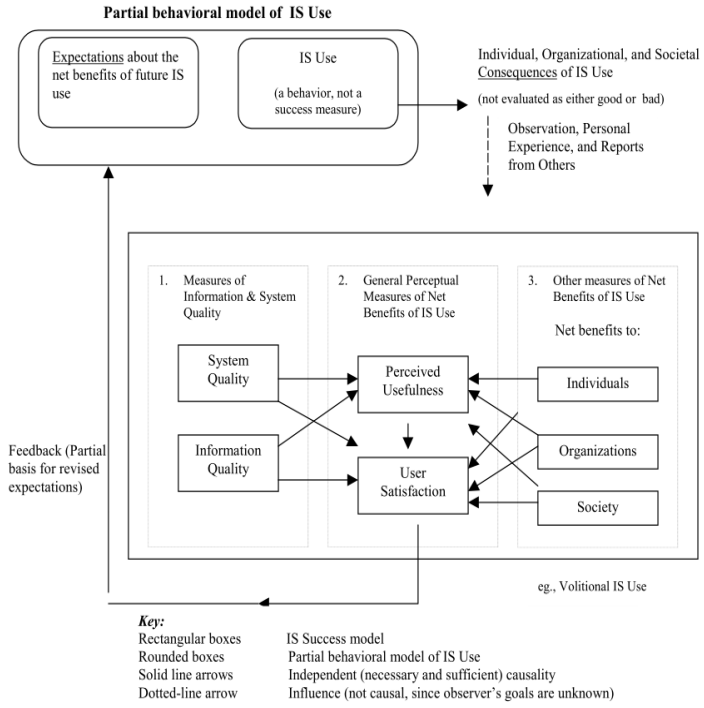

Figure-4. The Seddon model by Seddon Peter B. (1997).

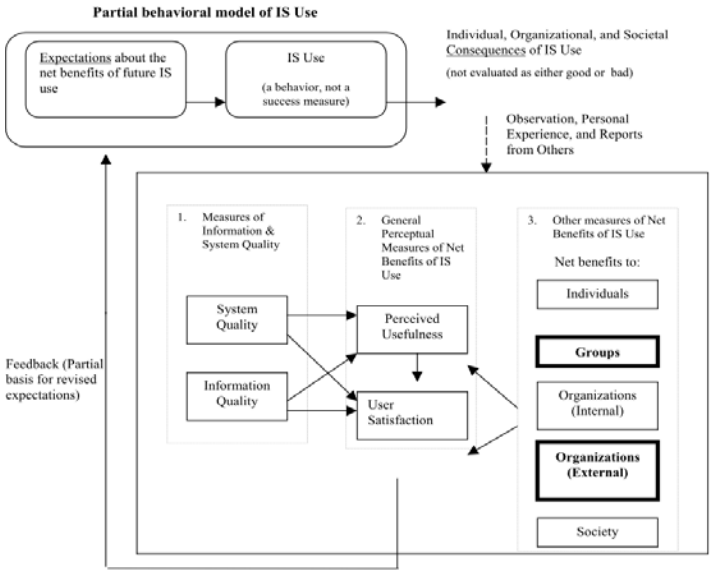

Figure- 5. Extended Seddon model of IS Success (1997).

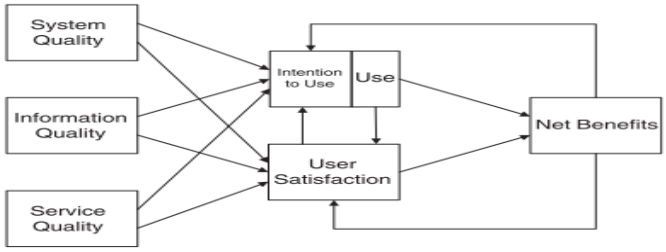

Figure-6. Updated D and M model by DeLone McLean (2003).

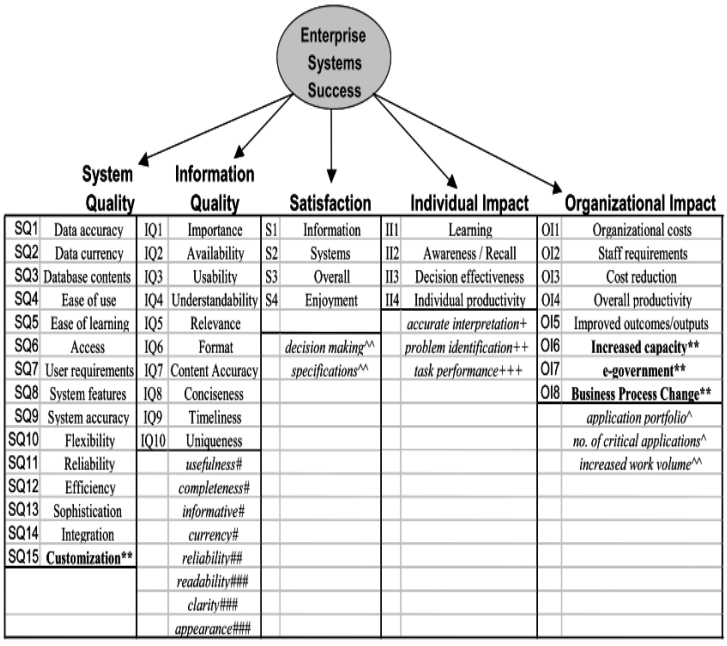

Figure-7. The Gable/A Priori model by Gable, Sedera and Chan (2003).

Figure-8. The Revised Gable model by Gable, Sedera and Chan (2003).

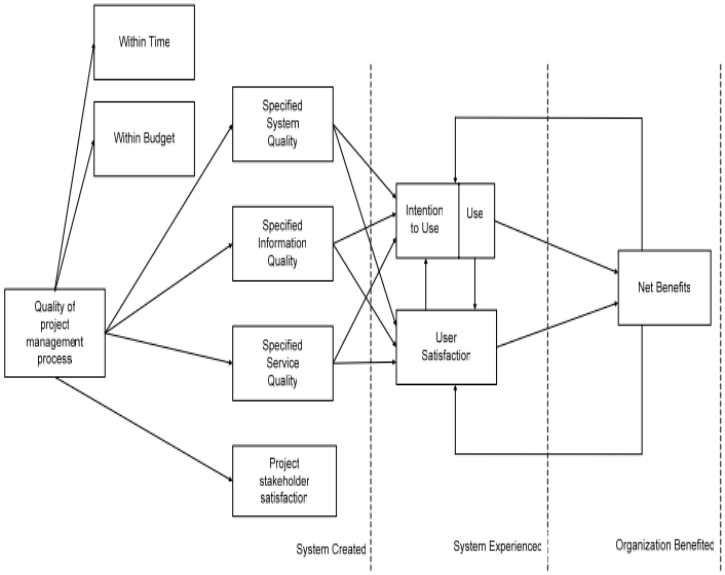

Figure-9. A Comprehensive model of Project Success by Westhuizen (n.d.).

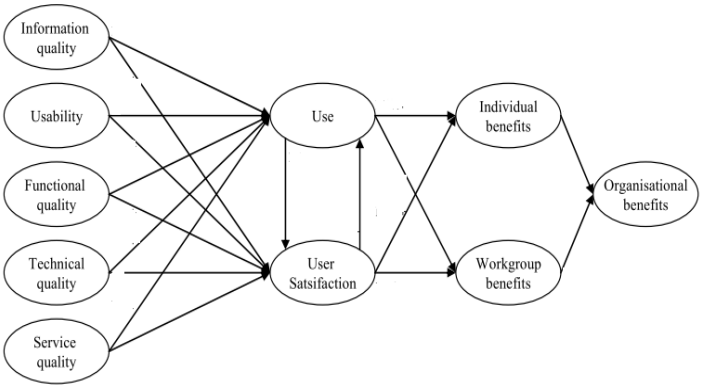

Figure-10. A Conceptual model by Kaiser and Frederik (2010).

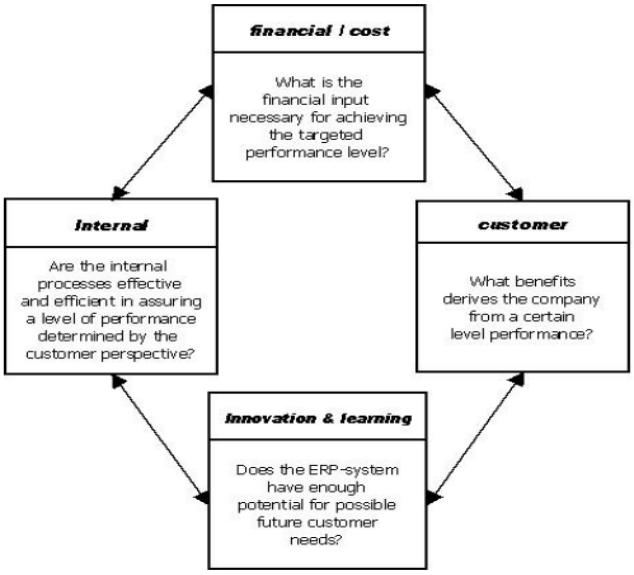

Figure-11. Balanced Scorecard (BSC) approaches by Rosemann and Wiese (1999).

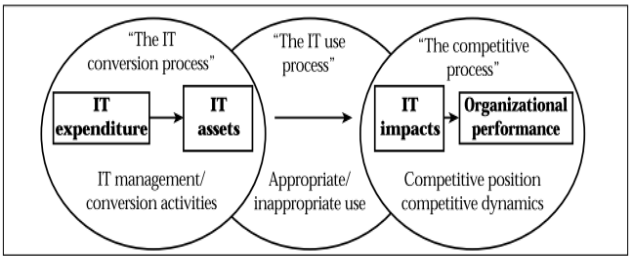

Figure-12. Shoh and Mrkus model by Soh and Markus (1995).

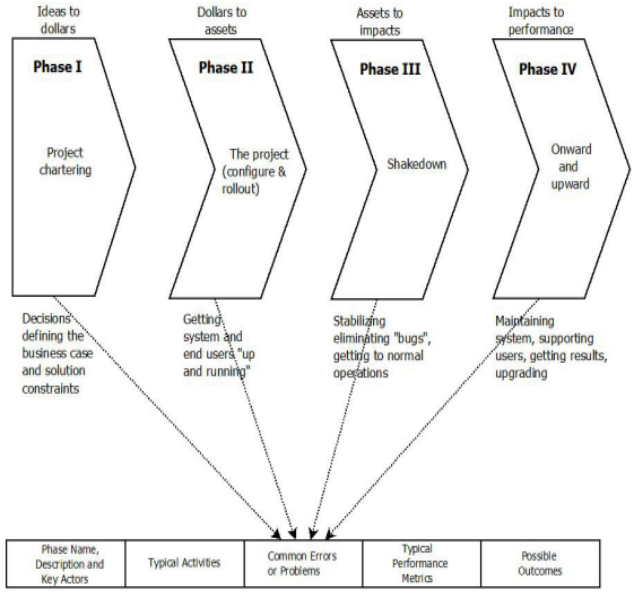

Figure-13. Markus and Tanis Success model by Markus and Tanis (2000).

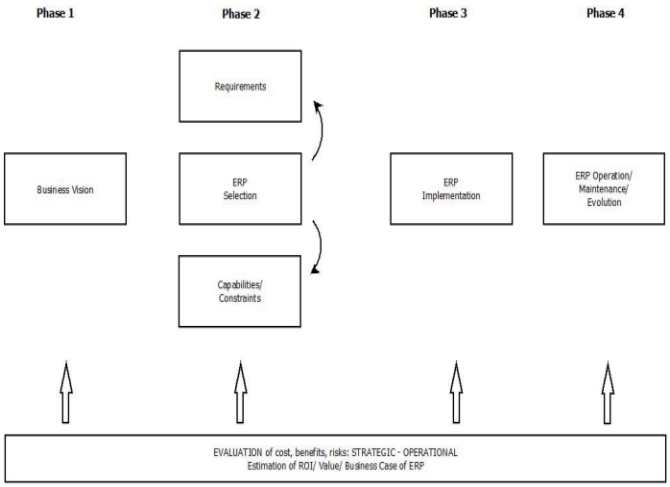

Figure-14. Ex-ante evaluation of ERP software by Stefanou CJ (2001).

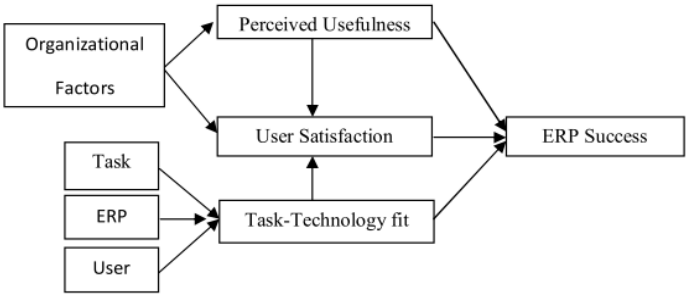

Figure-15. Task-Technology Fit (TTF) by Smyth (2001).

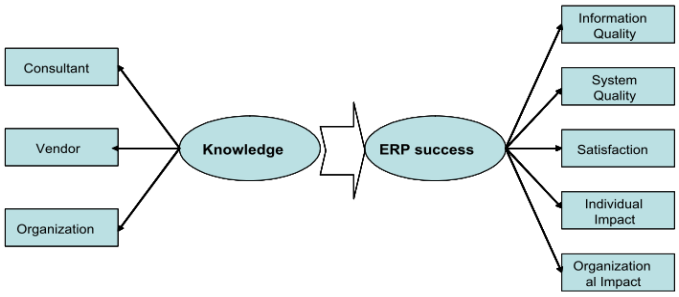

Figure-16. ERP Success a Priori model by Sedera, Gable & Chan (2003).

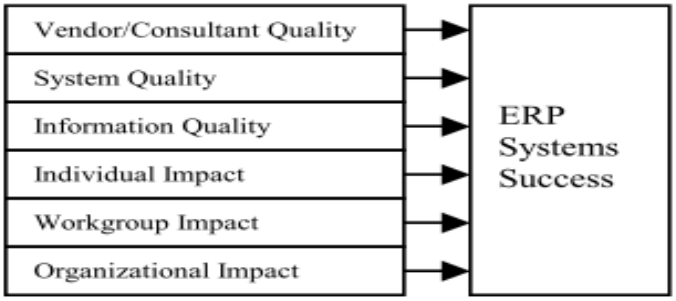

Figure-17. The Extended ERP Systems Success model by Ifinedo (2006).

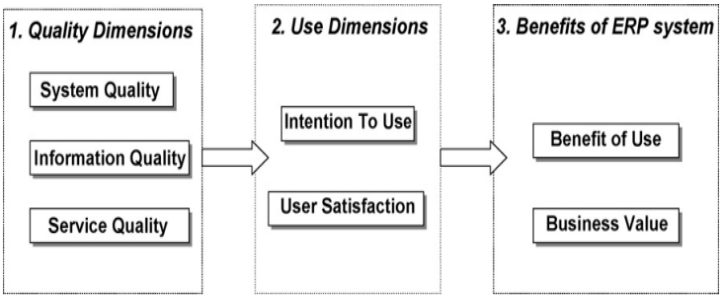

Figure-18. Revised IS Success model by Chien and Tsaur (2007).

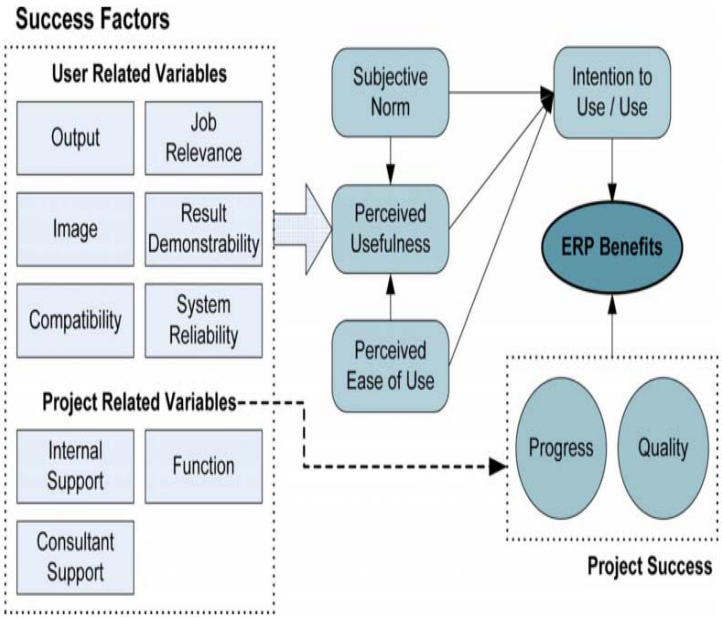

Figure-19. ERP Success model by Chung, Mirosławand and Young (2008).

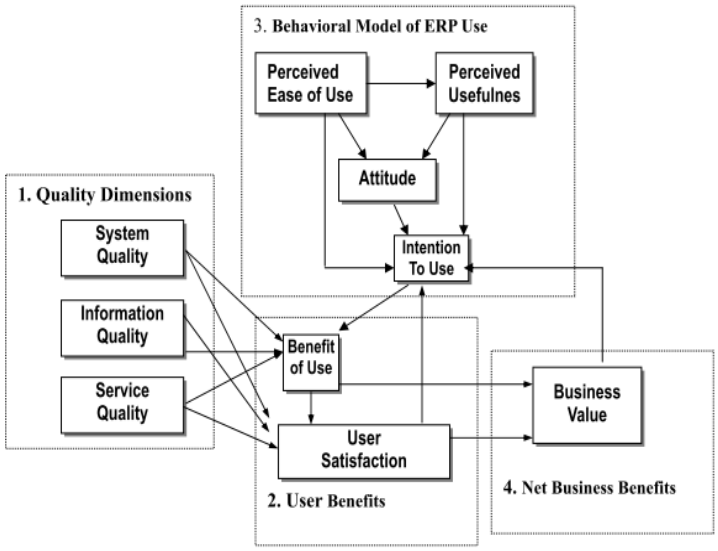

Figure-20. Modified ERP Systems Success model by Tsai and Chen (2008).