

**INFORMATION SYSTEM'S CAPABILITY AND INFLUENCE IN THE MODERN TECHNOLOGY
DRIVEN ORGANIZATION USING BUSINESS PROCESS AS AN INTERMEDIARY FACTOR IN THE
CONTEMPORARY TECHNOLOGY ORIENTED ORGANIZATION**

Cailassame N.S.N

*Ph. D Scholar, Department of Management Studies, School of Management, Pondicherry University
Puducherry.*

T. Nambirajan

*Professor, Department of Management Studies, School of Management, Pondicherry University
Puducherry.*

Abstract

Information System (IS) has become very crucial in running an organization in a successful way. Companies are investing millions in IS in order to stay competitive and earn profits. There are so many studies which has dwelled on the importance of IS and its impact on the organizational performance. While most of the studies have taken the overall organizational performance as the dependent variable and System Quality, Service quality, Information Quality and user satisfaction as the independent variable. After a reviewing numerous studies we have found that Business performance should be included between the independent variable and dependent variable as this acts as bridge between these two and also influence the success of the IS.

Keywords:*Information System, System Quality, Service quality, Information Quality, User satisfaction, Business Process, Organizational Performance.*

1. Introduction

Recent robust development in computing technology and the entry of internet has generated lot of interest on Information System among the industrialist and academicians in the recent past. In the current digital world it has become the order of day that even a common man can't pass a day without the influence of IS. While organizations are spending millions on IS, it has attracted lot of researchers to understand the influence rather impact of IS on organizational Performance. While lot of studies has been undertaken to understand the importance of IS in an organization and how it influences its performance, the result has shown mixed reaction. There are few which states that Is has considerably increased the organizational performance on the other side there are research which had found that IS doesn't seem to have any major impact on the bottom line of the organization.

In due course of study many models has been proposed by various researchers on IS and its influence on organizational performance. Among them DeLone and McLean has proposed inter relationship among six IS implementation variables as success measures. Which was highly accepted and also criticized for few shortcomings. After analyzing the shortcoming of their previous findings DeLone and McLean proposed new model in 2012.

There are other models like Technology Acceptance Model, Resource Based View Model, Balanced Score Card Model are proposed and these models played significance on their own depending on the organization and the operating environment. While most of the studies has been carried out in late nineties and early 2000 which was the period the technology revolution happened through internet and the same time industry understood the power of computing and communications for the success of the business.

2. Various Models

2.1 Technology Acceptance Model (TAM)

This model is based on the Ajzen and Fishbein's theory of reasoned action (TRA) (Fig., 1). It states that any individual or organization accepts the technology based on the usefulness. The usefulness is based on two parameters namely

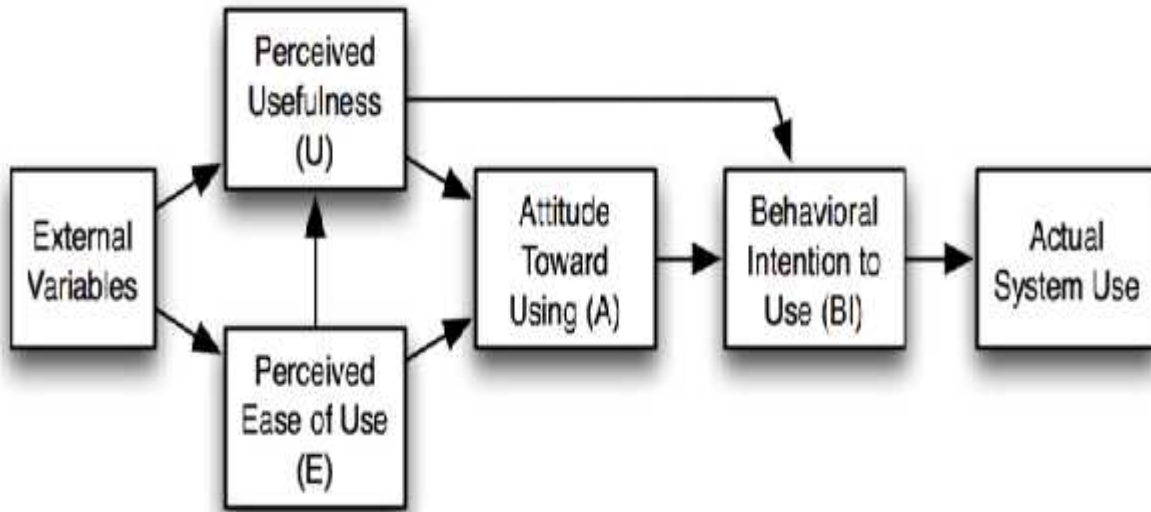


Figure 1.The Technology Acceptance Model

- **Perceived usefulness (PU)** – This defines how a user defines that the particular system could be useful for him for the better job performance.
- **Perceived ease-of-use (PEOU)** – This is all about the users belief how the system could ease his job and improves his productivity .

2.2 Resource based View

This model insists that any organization to be competitive and to be differentiated from its competitor, should poses some unique resources which would be hard for the competitors to imitate and those resource will act as differentiator between its competitors. Those resources should fall in the criteria defined as VRIN.

Namely

V- Valuable: Any resource which is going to add value to the organization and which will place the firm in a strategically advantage position .

R- Rare: Resource should be rare while adding value to the organization and competitors wouldn't able to identify or find it in general .

I -In-imitable : Anything which is not imitable by the competitors and adds value or differentiator of the organizational performance.

N- Non substitutable Not only it is enough that the resource is rare and in-imitable it should be also non substitutable by the competitors.

One theory suggests that the construct resource can be classified into resource and capabilities: Where in the resource is something which can be traded and may not be specific to the organization. While capability is something which is unique to the organization in utilizing the resource and differentiating among the competitors.

2.3 Information Systems Success Model

(IS success model or DeLone and McLean IS success model)

Information System model is developed by DeLone and McLean and it is commonly known as *IS success model* or *DeLone and McLean IS success model*. Figure 2 depicts the IS success model with Information Quality, System Quality, use, user satisfaction, individual impact and organizational impact as its factors

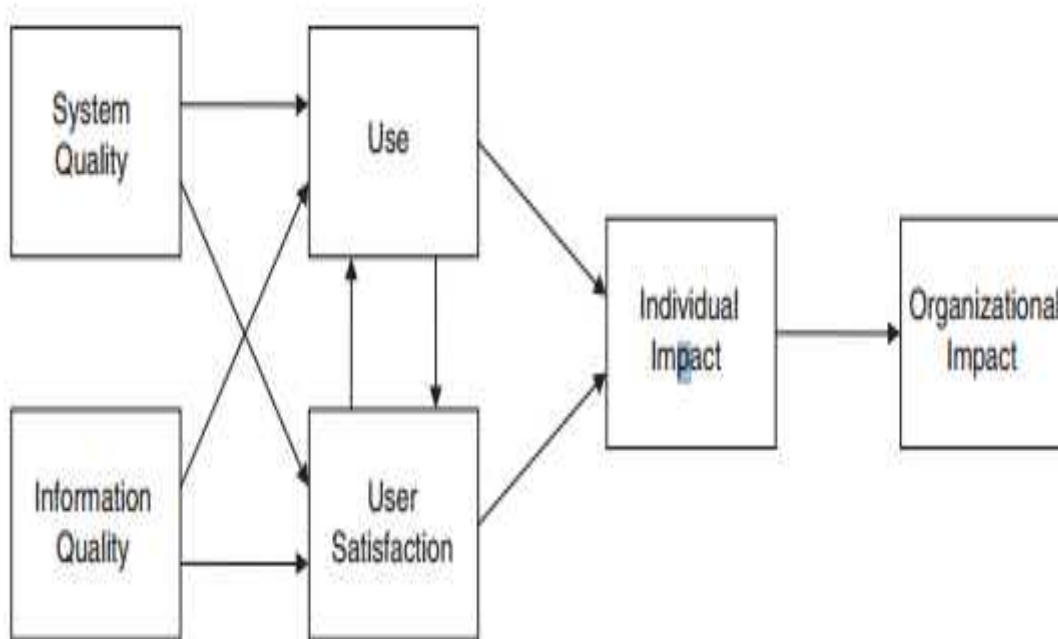


Figure 2. IS Success Model

Information quality

Information quality refers to the quality of outputs the information system produces (DeLone and McLean, 1992), which can be in the form of reports or online screens. The four dimensions of information quality: accuracy, completeness, consistency, and currency.

Service quality

The construct service quality means how far the system is able to meet the customers normal expectations for service and their perceptions of service performance. The service quality construct was measured by four indicators: reliability, responsiveness, assurance, and empathy.

Organizational Impact

Organizational impact represents the overall impact of the IS to an organization by having its IT resources on right place to create economic value and to increase the operational efficiencies and create competitive advantage (Melville et al., 2004).

User Satisfaction

User satisfaction refers to the individual user of the system and how he is satisfied with the usage of the system and its influence on the productiveness in his job

As the IS success model has been widely accepted simultaneously it also drew lot of criticism for not including service as a construct and for not taking into consideration the intention of user for using the system, since the usage determines the success of any system. After reviving these Delone and Mclean came out of a new model as given below Figure 3.

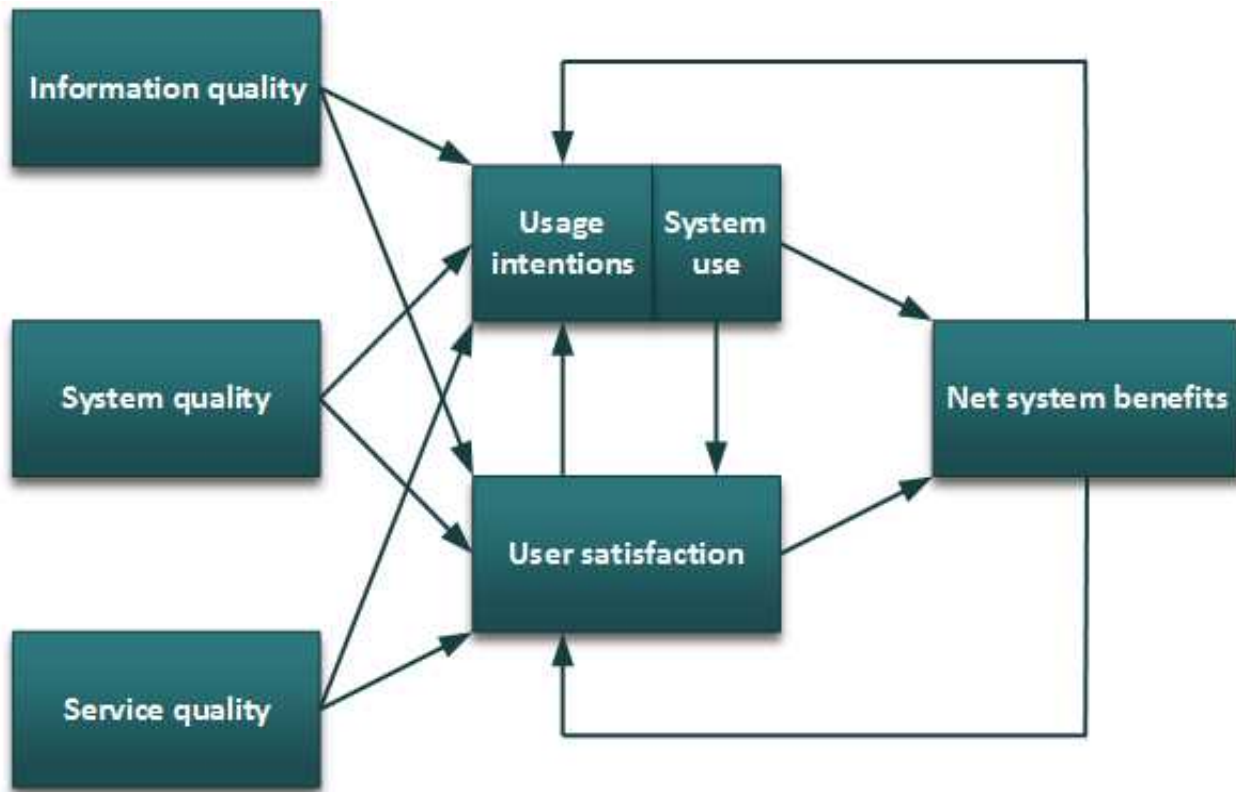


Figure 3. Revised IS Success Model

Net system benefits

The net benefit is something which depicts how far the IS adds value to the organization and its users. Net system benefits are affected by system use and by user satisfaction with the system. In their own right, system benefits are posited to influence both user satisfaction and a user’s intentions to use the system.

System use/usage intentions

The impact of system in an organization depends on the usage of the system by the intended user and how the user is intended to use the system by releasing the usefulness of the system.

The D&M dimensions provided the platform for almost all subsequent IS success frameworks that attempted to measure the impact of IS on organizational performance. The six dimensions kept motivating researchers partly or as a whole and became subject to further modifications and concluded that the model with the general success dimensions were consistent.

3. Proposed Model.

Authors propose the model shown in figure 4 depicting the IS capability and influence in the modern technology driven organization using business process as an intermediary factor in the contemporary technology oriented business environment

In our model we have taken the cue from the Delone and Mclean model. From our extensive review of literature on the IS and organizational performance, it has been found that numerous studies are carried out in the late

nineties and early 2000. Then the organizations were considering IS as an value adding resource and as an differentiator among its competitors. But now the whole gamut of industry has shifted drastically wherein IS has become the heart of any organization.

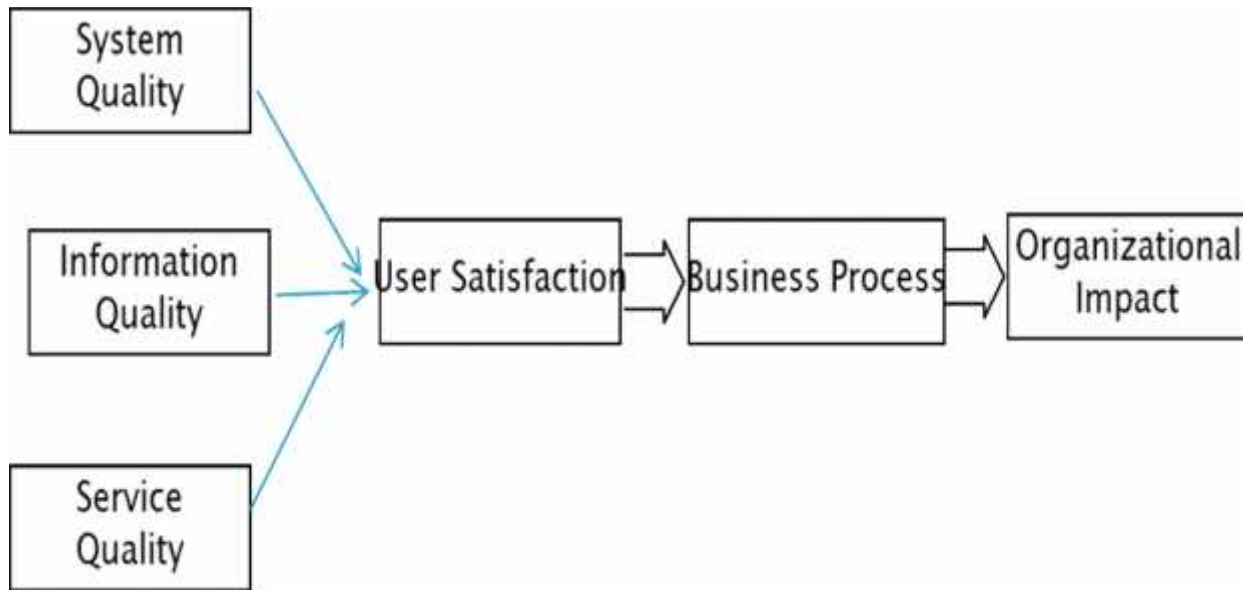


Figure 4: IS capability and influence in the modern technology driven organization using business process as an intermediary factor in the contemporary technology oriented business environment

While considering the IS and the organizational performance its imperative that the effectiveness of the organization could only be achieved by having good coordination and communication between different business process.

A business process is an activity or set of activities that will accomplish a specific organizational goal. The system can enhance the potential of the organization, only if the system is used effectively online with its goals. Six critical activities or process areas within the value chain are process planning and support, supplier relations, production and operations, product and service.

Business process Management helps the organizations to be more efficient, effective and capable of adopting to the changes than a the traditional hierarchical management approach. Business processes helps in reducing the cost and increasing the revenue generation of an organization. Business Process Management is seen as a strategic assets of an organization.

The authors are of view that in the current techno savvy business environment it has become essential to align the business process with the organizational goals with the help of IS.

Conclusion

Since business process plays crucial role in the long term and sustained success of any organization, the IS should be aligned with the business process. We would recommend that more empirical studies can be carried out to find how IS has impacted business process and in term its influence on organizational performance.

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