Empirical study on obstacles in Information System Success

Bikram Pal Kaur
Computer Science and Engineering Department,
Chandigarh Engineering Colleges.
Landran Mohali, Punjab, India.
dhaliwal_bikram@yahoo.com

Dr. Himanshu Aggrawal
Computer Science and Engineering department,
Punjabi University,
Patiala, Punjab, India
himagrawal@rediffmail.com

ABSTRACT

To gain better competitive advantage in the market, the organization are using information systems. Most of the organizations either have established the information system or they upgrade their information system. But still there are lots of hurdles for gaining information system success. There have been a large number of analyses of critical success factors of information system projects in the literature, but there is shortfall in research efforts in studying failures globally and particularly in India. Therefore this paper attempts to study empirically the obstacles coming in Information system success. A questionnaire survey has been conducted to know the failures factors for not updating the information system timely. The survey has been done on two prominent telecommunication organization, one having successful IS (Reliance Communication) due to its continuous updation with respect to time, industry and executives other (Puncom, Mohali) don't have. As India is the second largest country in terms of mobile users in the world therefore the study of this industry is strategically and economically important due to its high potential for the growth of the country.

KEYWORDS

Information system (IS)	*Critical success factors (CSFs)*
continuous updation	*Indian telecommunication Industry*

INTRODUCTION

Information system is a suite having different software modules that integrates different functional departments in an organization. It provides the support for collaborating the different departments from planning, manufacturing to customer service, and finally to achieve the business goals. The market of various corporate information systems has grown tremendously. However, the implementation process of information systems is not only complex, but also organizationally disturbing and resource exhaustive. Many information system implementation projects gains incomplete success or the failures. The causes of failures are comprehensive which can be attributed to insufficient planning, stabilization, requirements and continuous updation of the system both at the business and project levels. Incompetent project management, minimum support from the corporate management etc. are also the contributory failure factors. The complexity in information system implementation has attracted much attention both from academic researchers and industrial practitioners. The reason behind this is that most of the studies conducted focus themselves on the success factors and neglect failure factors. Therefore study of the failures is equally important and yet not highlighted.

In this paper, the author attempted to discover the underlying critical success and failure factors of an information system projects if they are not updated continuously. A questionnaire survey of two information systems of telecommunication industry was conducted and analyzed.

LITERATURE REVIEW

The study [1] suggests that during the past two decades, investment in Information technology and Information system have increased significantly in the private and public sector organization whereas the rate of failure remains quite high.

The various factors responsible for IS failures [2] are:

- **Lack of top management commitment to the project;**
- Poor user commitment;
- Inadequate user involvement;
- Requirements not well understood;
- Failure to manage the expectation of users;
- Changing scope;
- Lack in skills;
- New technology;
- Insufficient Staffing;
- Lack of organizations' commitment to a systems development methodology;
- Poor estimation techniques;
- Inadequate people management skills;
- Failure to adapt to business change;
- Failure to manage the plan.

The S**tandish Group prepared a report of a survey in which 365 [3] IS executives** participated. The reports suggests that IS/IT failures were covered up, ignored, and/or rationalized by IS/IT personnel. They advocate that the CEO's role in IS/IT planning and development should be:

- ✓ Quantify the business value of the IT by measuring its overall economic value to the business.
- ✓ Recentralize control of IT spending while maintaining flexibility.
- ✓ Communicate the results one expects in clear
- ✓ Financial terms.
- ✓ Keep the IT architecture/infrastructure simple.
- ✓ Be firm on rigorous pilot testing.
- ✓ Make sure that the new system has the capacity to handle the required number of transactions that need to be processed.
- ✓ Closely monitor what IT suppliers are using to run their own businesses.
- ✓ Avoid succumbing to hasty decisions based on the urgency of the situation.

New requirements are influencing the business processes as the business needs are changing very fast. Therefore to keep pace with the global market and to achieve the competitive advantage, the company has to react immediately and improve the quality of the adopted IS...

Turban et al. [4] reviews yearly Datamation (a leading practitioner journal of information systems) and then suggests why IS are important for a business organization.

The information systems are required for the following reasons:

- **For the business process reengineering.**
- **To meet the company's goals and objectives.**
- **Better decision making.**
- **For the development of the productivity.**
- **Enhancing the quality of the product.**
- **Building the competitive edge.**
- **Retention of change management environment.**
- **Creation of Research and Innovation environment.**

According to Turban et al. [4], the IS projects can be classified into four categories:

1) **Commercial e.g. customer relationship management (CRM), e-commerce, knowledge management**
2) **Strategic e.g. re-engineering, information architecture**
3) **Organizational e.g. centralization vs. decentralization, outsourcing, resource management;**
4) **Technological e.g. database, internet and intranet.**

Diniz [5], proposed a three dimensional model for the evaluation of virtual business environments from the user's perspective by doing the case study of three banks in a Brazil. The studies include the services offered, functionality, reliability, security of transactions on the sites and also the user's transaction quality. This evaluation approach is useful to known the quality of the sites used for Internet banking.

All the studies predict that during the past two decades, investment in Information technology and Information system have increased significantly in the organization. But the rate of failure remains quite high. Therefore an attempt is made to prepare the continuous updation model for the prediction of the success or failure of the organization taking into consideration the telecom sector. The current empirical study is particularly important as it may contribute in forming a model for the Indian telecom industry.

OBJECTIVES AND SCOPE OF THE STUDY

- **To study the causes of failures of ISs due continuous non-up gradation of IS.**
- **To study the critical success factors of continuous up gradation of IS especially for the Indian telecom industry.**

The objective of study is to analyze the failure and success factors of Information System due to non-up gradation and also pinpoint the most important factors. Also, the study focuses on testing the relevance of the factors existing in literature in the Indian Telecom Industry.

In view of the certain constraints like time and money, the study is confined to the two organizations, namely, Reliance Communication Chandigarh, Punjab Communication Limited, Puncom, and Mohali.

These enterprises are selected because they have extremely good business performance and high

Table 1.Sampling Plan

Organization	Management Level	Population	Sample	Actual Response	%age of response size
Puncom	Top Level	14	11	10	90.90
	Middle Level	20	14	13	92.85
	Lower Level	210	146	136	93.15
	Total	244	171	159	92.30
Reliance	Top Level	12	10	9	90
	Middle Level	42	32	29	90.62
	Lower Level	77	57	42	73.68.
	Total	131	89	80	84.76
	Grand Total	**375**	**270**	**239**	**88.53**

Employment generators and early adopters of IT with functional ISs. This industry is strategically and economically important for the growth of the country as India is the second largest country in using the mobile services in the world. Among these organizations, Reliance Communication is an upstream company concerned with telecommunication products and services. The other companies is also a telecommunication unit having manufacturing unit as well as service unit and are responsible for supplying finished products to consumers, i.e. the downstream company.

RESEARCH METHODOLOGY

A) For the Organization

a) Universe of study: Telecommunication industry comprises of Reliance Communication, Vodafone, Essar, Idea, and Bharti-Airtel.

b) Sample Selection: Reliance Communication Chandigarh, and Punjab Communication Ltd (Puncom) Mohali.

B) For the Respondents

a) Universe of study: All managers working at the three levels of the selected organizations.

b) Sample Selection: A number of respondents based on proportional stratified sampling from all of these organizations are selected. The respondents are identified from various levels / business functions in each organization such as top management, ARE management, functional heads, and ARE staff and users. The primary data is collected via questionnaires cum interviews with the selected respondents. Statistical Package for the Social Sciences (SPSS) statistical tool is used for the statistical analysis. The norms are formalized for the choice of respondents from the participating organizations on the basis of detailed discussions with a number of academicians, researchers and industrial experts. It is observed that increase in sample size will affect the results only marginally, whereas effort for it is considerable. The sample size from a stratum is determined on the basis of the following criterion:

70% of the population where sample size > 100
50% of the population where sample size < 100.

4.1 Data collection tools

Primary data has been collected through a questionnaire-cum-interview method from the selected respondents. The questionnaire is designed based on the literature survey, and detailed discussion with many academicians, professionals and industry experts.

INTRODUCTORY CONTINUOUS UPDATION COMPONENT

27 variables related to continuous updation of IS are selected for the study relating to failure and success factors of Information System. Quantitative analysis is performed by using various testing models, Anova F, T-tests are applied to check importance and to identify CFF & CSF between Puncom & Reliance.

Continuous Updation System

The analysis had been made on the basis of the mean scores. The responses of the managers of the two companies differ significantly in terms of their mean scores. Among these companies, Reliance Communication Ltd. has been pioneer in continuous updating full-fledged Information System (IS) with fully automated procedures, processes and practices. The Puncom has a function-wise domestic IS, that is not well-integrated. IS is only being used as a support tool by the Puncom managers. The Figure.1 explains the mean scores of both the companies.

From the mean scores, it can be depicted in Puncom there is very less up gradation in the ttechnology innovative factors that leads to its IS failure. Their market research at the global level is very low which its critical failure factor becomes. The project planning, monitoring factors are also very slow which leads to the failure of IS. However employee's awareness, knowledge, understands of advanced technology and methodology is found to be

sufficient in Puncom. This high managerial expectations are prevalent in Puncom because the company has been the player among the public sector telecommunication and managers of the company strongly feel that tremendous improvement in IS functioning should be done by updating the in-house IS to global IS.

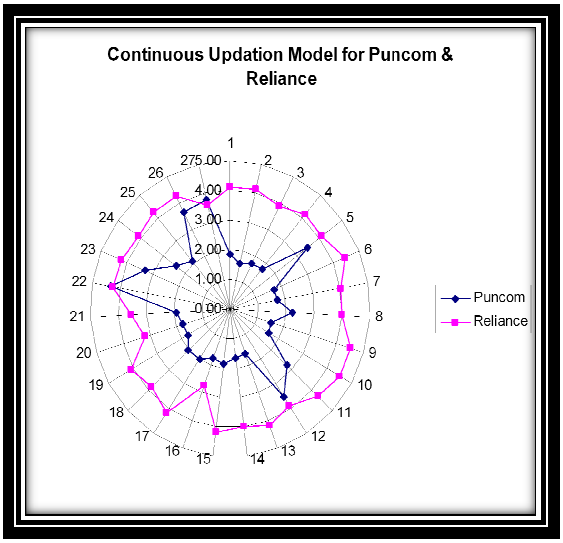

Figure: 1: Continuous Updation Model

The mean scores, also depicts that the managers of Reliance give maximum importance to the 'Marketing related' factors which leads to its IS success. However on other hand, the managers of Reliance do not have such high aspirations as the company has already has fully fledged Information System implemented. The global IS continuous updation in Reliance is found to be efficient as it has a potential for the decision making process.

5.1 Validity of the model

This has been tested by performing the following tests:

5.1.1 Measures of goodness

5.1.1.1 Content validity

The various views/sub-views and the factors / variables has been identified on the basis of extensive survey and study of literature.

The users of the Information systems has attained at the three levels of the management in the two participant organizations with rigorous consultation and discussions. This revealed that the questionnaire has been comprehensive and useful for the organizations.

5.1.1.2 Scale reliability

Reliability of the scale has been studied for Continuous Updation using Alpha method of scale reliability. The Cronbach's Alpha was calculated for both Puncom & Reliance which is discussed in detail in Table 2

As depicted from the table 2, the value of the Cronbach's Alpha was found to be greater than the standardized value of 0.6.This means the data is reliable. Hence both Puncom & Reliance had attained value of 0.811 & 0.822 respectively and overall 0.985. This establishes the reliability of the scale.

Table 2. Reliability of scale

	Puncom Reliance		Cronbach's Alpha Reliability		
Continuous Updation Process	**No. of item**	**No. of item**	PunCom	Reliance	Overall
	27	27	.811	.822	0.985

5.2 Continuous Updation Process for Information System

The respondent has been divided into three levels i.e. top level, middle level and operational level. Responses to factors and variable has given in the tabular form and also explained graphically. A conclusion has been drawn from these tables and graphs. Firstly the data have been tested by using mean Scores at top management, middle management and lower management level has been tabulated in table 3 and Figure 3 and Figure 4 for Puncom and Reliance. The responses of the managers of two companies differ significantly in terms of From Table 5.2 it was analyzed that the mean score of Puncom are near to 2 whereas in Reliance the overall mean is greater than or equal to 4. Further on the basis of mean score overall average of extremely important factors were identified in both the companies mean score. From the above results it had been concluded that Reliance has been sincere in continuously updating fully fledged Information System with fully automated procedures processes and practices .This shows that the variable identified as in table 3 are first planned then executed in the right direction whereas in Puncom there is a need for flexible model and still a huge scope of improvement & integration is possible.

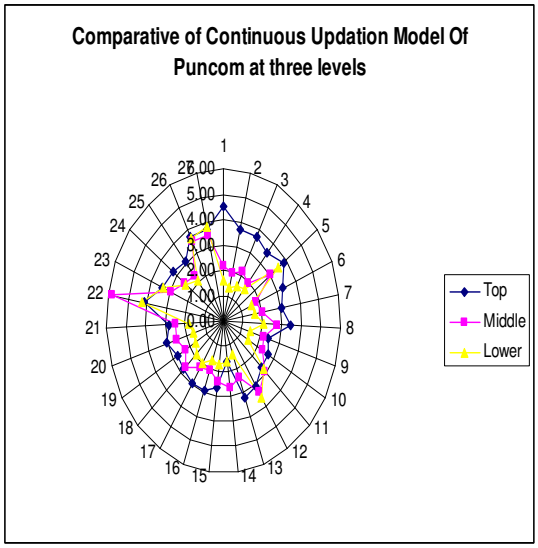

Figure 2 Comparative of Continuous Updation Model of Puncom at three levels

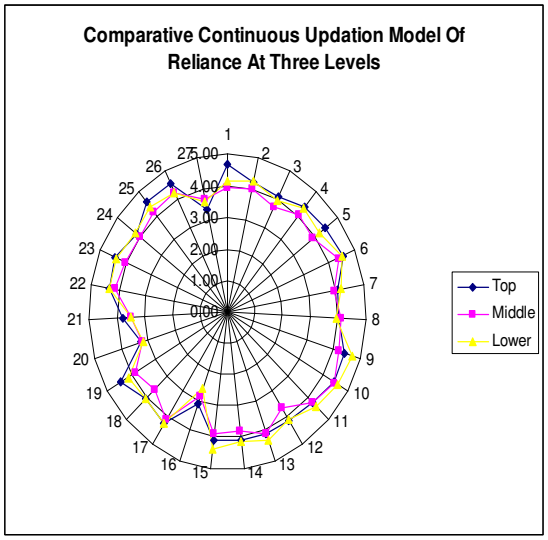

Figure 3 Comparative of Continuous Updation Model of Reliance at three levels

Table 4 Mean Scores (Puncom, Reliance,)

S. No.	Factor	Puncom				Reliance			
		Top	Middle	Lower	Tota	Top	Middle	Lower	Total
1	Price	4.50	2.15	1.63	1.85	4.67	3.93	4.12	4.11
2	Brand Image	3.70	1.92	1.38	1.57	4.22	4.00	4.26	4.16
3	Selection of	3.70	2.15	1.54	1.72	4.11	3.72	3.95	3.89
4	Market Position	3.50	1.92	1.64	1.78	4.33	4.03	4.26	4.19
5	Online and	3.80	3.00	3.47	3.45	4.44	3.86	4.19	4.10
6	Sales force	3.30	1.85	1.55	1.69	4.56	4.34	4.50	4.45
7	Delivery of	3.00	2.08	1.63	1.75	4.00	3.90	4.17	4.05
8	Flexibility to	3.40	2.77	2.07	2.21	4.00	4.10	3.95	4.01
9	Support	2.40	2.15	1.43	1.55	4.44	4.24	4.71	4.51
10	Quality to	2.60	2.31	1.44	1.58	4.44	4.45	4.60	4.53
11	Quality to	2.70	2.92	2.78	2.79	4.22	4.21	4.40	4.31
12	Quality of	3.10	3.31	3.60	3.54	4.11	3.59	4.05	3.89
13	RD centre	3.20	2.38	1.38	1.58	4.11	4.10	4.29	4.20
14	Market research	1.60	2.62	1.57	1.66	4.11	3.79	4.14	4.01
15	Market	2.60	2.38	1.73	1.84	4.11	3.90	4.38	4.18
16	Authority of	2.90	2.08	1.67	1.78	3.11	2.83	2.60	2.74
17	Clarity of	2.90	2.15	1.93	2.01	4.22	4.07	4.24	4.18
18	Formal and	2.80	2.69	1.90	2.03	4.00	3.59	4.00	3.85
19	Quality &	2.70	2.23	1.63	1.75	4.44	3.86	4.14	4.08
20	Information	3.00	2.54	1.60	1.76	3.22	3.21	3.14	3.18
21	Firm assests	2.80	2.46	1.79	1.91	3.78	3.48	3.50	3.53
22	Organizational	4.10	5.85	4.21	4.34	4.33	4.14	4.33	4.26
23	Marketing	3.40	2.92	3.35	3.31	4.44	4.03	4.33	4.24
24	Technological	3.20	2.54	2.38	2.44	4.11	3.93	4.14	4.06
25	Innovational	3.00	2.31	2.03	2.11	4.56	4.14	4.33	4.29
26	Marketing	3.70	3.54	3.67	3.66	4.56	4.21	4.24	4.26
27	Low cost	3.70	3.46	3.85	3.81	3.33	3.66	3.57	3.58

Factors	Top-Top		Middle-Middle		Lower-Lower	
	t	Sig. (2-tailed)	t	Sig.(2-tailed)	t	Sig. (2-tailed)
Price of IS	.383	.708	6.773	.000**	19.232	.000**
Brand actual	1.237	.241	7.372	.000**	22.930	.000**
Selection of services /products	.927	.371	5.059	.000**	16.023	.000**
Market Position	2.041	.063	7.941	.000**	27.152	.000**
Online and offline promotion/advertising and offline	2.421	.027*	3.595	.001**	6.613	.000**
Sales force	2.576	.022*	9.302	.000**	22.304	.000**
Delivery of products/services	2.301	.036*	5.395	.000**	23.431	.000**
Flexibility to support optimization of business procedure	1.309	.210	4.831	.000**	11.050	.000**
Support dynamically changing process	4.372	.001**	6.834	.000**	33.494	.000**
Quality to support products or services	3.945	.001**	8.092	.000**	29.347	.000**
Quality to support business efficiency and staff productivity	3.787	.002**	5.154	.000**	15.176	.000**
Quality of Communication in different	1.796	.090	.890	.386	2.889	.005**
RD centre	1.899	.075	4.870	.000**	21.763	.000**
Market research at global level for up to date IS.	6.049	.000**	4.276	.000**	17.938	.000**
Market research at global level for up to date IS (or worldwide) electronic presence of brands	3.640	.003**	3.744	.002**	18.968	.000**
Authority of the project manager actual	.459	.652	2.497	.025	9.459	.000**
Clarity of organizational goals	2.816	.012*	6.167	.000**	16.733	.000**
Formal and strict rules for employees	2.979	.009**	4.162	.000**	13.818	.000**
Quality & commitment of	3.712	.002**	5.871	.000**	16.739	.000**
Information exchange between the IS team and	.598	.558	2.493	.020	13.064	.000**
Firm assests actual	2.392	.030*	3.730	.001**	14.451	.000**
Organizational assets	.814	.428	-.746	.470	.929	.357
Marketing assets	3.576	.003**	5.098	.000**	9.458	.000**
Technological assets	2.705	.021*	5.910	.000**	13.323	.000**
Innovational differentiation	4.050	.001**	6.587	.000**	13.870	.000**
Marketing differentiation	2.988	.010*	2.093	.045*	3.300	.002**
Low cost strategy actual					-1.995	.052

Table 5

Table 5 t test for 3 levels of puncom and reliance

For the significant finding the difference in the three levels are calculated by using T-test as depicted in a table.4.

Hypothesis1 (H1): There is a significant difference in the levels individually(Top of Puncom to Top of Reliance, Middle of Puncom to Middle of Reliance, Lower of Puncom to Lower of Reliance) of the selected companies on the basis of mean scores (T-test).

Table 4 examined the differences existing in the two companies in context to ISs continuous updation activities... If the value of the significance is more than 0.05 those variables are not significantly contributing towards the model, it was found that the variables selected by application of T test at three different level of both the companies showed that the variables contributing are significantly different therefore alternate hypothesis is accepted. At various level variables identified are

Top Level: Online and offline promotion/advertising through IS, Sales force, Delivery of products/services, Support dynamically changing process, Quality to support products or services, Quality to support business efficiency and staff productivity, Research and development in the organization, national wide, actual, Clarity of organizational goals to employees, Formal and strict rules for employees to follow, Quality & commitment of Business & Product consultant of IS, firm assets, Marketing assets, Technological assets, Innovational differentiation, Marketing assets factors contributes significantly in the study .

Middle Level: Price, Brand Image, Selection of services/products, Market Position, Online and offline promotion/advertising and offline promotion/advertising, Sales force, Delivery of products/services, Flexibility to support optimization of business proc, Support dynamically changing process, Quality to support products or services, Quality to support business efficiency and staff productivity, Quality of Communication in different organizational units comm. actual, Research and development in the organization, Market research at global level for up to date IS at global level for up to date IS, Market research at global level for up to date IS (or worldwide) electronic presence of brands, Authority of the

project manager, Clarity of organizational goals to employees, Formal and strict rules for employees to follow, Quality & commitment of Business & Product consultant of IS, Information exchange between the

IS team and other employee, firm assets actual, Marketing assets, Technological assets, Innovational differentiation, Marketing differentiation factors contributes significantly in the study**.**

Operational Level: Price , Brand Image, Selection of services/products, Market Position, Online and offline promotion/advertising and offline promotion/advertising, Sales force, Delivery of products/services, Flexibility to support optimization of business proc, Support dynamically changing process, Quality to support products or services, Quality to support business efficiency and staff productivity, Quality of Communication in different organizational units, Research and development in the organizational , Market research at global level for up to date IS at global level for up to date IS, Market research at global level for up to date ISs(or worldwide) electronic presence of brands, Authority of the project manager, Clarity of organizational goals to employees, Formal and strict rules for employees to follow factors contributes significantly in the study.

Following are the observation for the three levels of Puncom and Reliance

(a) In Reliance, Chandigarh a full-fledged ERP based IS is in place and is fully operational and their business largely depends on it. The manual procedures, practices and processes have been largely replaced by the IS and the day-to-day working of managers is through the IS only.

(b) In Puncom, Mohali, some functional managers are the users of IS but not all the managers are well acquainted to using an IS. IT is more a support tool rather than a driver in the company. The in-house IS exists but more as function-wise and level-wise information systems that are not very well integrated.

Table 6 F scores of reliance and puncom

Factors	Reliance		Factors	Puncom	
	F	Sig.		F	Sig.
Price of IS	3.557	.033*	Price of IS	66.345	.000
Brand Image	1.069	.348	Brand Image	71.503	.000
Selection of services/pro	.835	.438	Selection of	45.282	.000
Market Position	1.839	.166	Market Position	29.930	.000
Online and offline promotion/a	3.443	.037*	Online and offline promotion/	5.930	.003
Sales force	.428	.653	Sales force	26.967	.000
Delivery of products/ser	1.611	.206	Delivery of products/s	12.781	.000
Flexibility to support optimization of business	.242	.786	Flexibility to support optimizatio n of	8.801	.000
Support dynamically changing	3.728	.028*	Support dynamicall y	12.301	.000
Quality of Communicat	.569	.568	Quality of Communic	18.331	.000
Quality to support	.718	.491	Quality to support	.262	.770
Quality of Communicat	3.348	.040*	Quality of Communic	1.072	.345
Research and	.462	.632	Research and	28.141	.000
Market research at	1.391	.255	Market research	10.205	.000
Market research at	3.041	.054	Market research	5.129	.007
Authority of the project manager	4.263	.018*	Authority of the project	12.756	.000
Clarity of organization	.335	.717	Clarity of organizati	7.137	.001
Formal and strict rules	1.997	.143	Formal and strict	14.894	.000
Quality & commitment	1.791	.174	Quality & commitme	13.560	.000
Information exchange	.086	.917	Informatio n	23.343	.000
Firm assets actual	.510	.602	Firm assets	14.762	.000
Organizational assets	.607	.548	Organizati onal	2.941	.056
Marketing assets	2.328	.104	Marketing assets	3.886	.023
Technologic al assets	.589	.557	Technolog ical assets	12.410	.000
Innovational differentiatio	.730	.485	Innovation al	9.005	.000
Marketing differentiatio	.395	.675	Marketing differentiat	.346	.708
Low cost strategy	.483	.619	Low cost strategy	4.152	.018

H2: Puncom & Reliance (Level-wise comparisons based on one way Anova F-Test) are significantly different in IS system Continuous Updation (ANOVA)

Table 6 examined the differences existing in the two companies in context to ISs continuous updation activities... If the value of the significance is more than 0.05 those variables are not significantly contributing towards the model ,it was found that the variables like Quality to support business efficiency and staff productivity, Marketing assets, Organizational assets, Clarity of organizational goals to employees are neither contributing in Reliance nor in Puncom. So these are excluded from the present study. Further variables whose significance

value is less than 0.05 were considered relevant for developing IS model as shown in table 6.

This proved that the model is significantly different in Reliance and Puncom as the alternate hypothesis was rejected.

Reliance Communication

Following factors play a great role in the Critical Success factors of IS in Reliance.

The various marketing related factors like information of the competitive services, prices and promotion of the products for the encouragement of the customers to purchase and negotiate through the IS in the global market is existing in IS.

In general, IS playing a great role in the online services for the delivery of products and services. IS supports various dynamically changing processes of the organization.

Quality of communication existing in the different organizational units through IS is very high. Every employee is answerable for their own domain of work through IS.

Authority of the project manager for updating the employees regarding the organizational goals from time to time is the normal activity of the Reliance.

This company provides a large services and product selection as the customers are more likely to find what they are looking for from the IS of Reliance.

Online and offline promotion/advertising have been encouraged through global IS because the majority of online vendors needed their trade immediately. An online ordering service allowed them to place an order at any time without waiting for a sales person.

Reliance has integrated their Information system with the web sites having their back-end operation, thus allowing customers to keep track of product availability and provide accurate information about it on their web sites.

Business clients also needed assurance that goods are available and would be delivered on time. It offers a services and products delivery anywhere in the world within 48-72 hours.

Employees follow the formal and strict rules for IS implementation.

The consultants of IS find to be highly committed to quality and the business product. Regular information exchange between the IS team and other employee leads to the success for IS failures.

Research and development centre is existing in the organization.

Market research at global level for up to date IS is in vogue. Nationwide (or worldwide) electronic presence of brands is available which is the continuously updated.

Puncom

Following factors play a great role in the Critical Failure Factors in IS of Puncom

- The various marketing related factors like information of the competitive services, prices and promotion of the products for the encouragement of the customers to purchase and negotiate through the IS in the global market is found to be missing.
- In general, a brand starts lagging in the global market and hence customer awareness declines. Due to non availability of the online services through IS for the delivery of products /services is missing as the organization is a public undertaking in which a lot of formal paper work is required to be processed in parallel.
- Sales force (marketing, promoting online services).Puncom rely on sales force rather than on the IS. Puncom should use its sales force, which had strong relationships with vendors, to encourage them to place orders through an online system.
- Puncom needs to form long-term relationship with vendors for facilitating the transition from the old to the new system, with strong customer support provided through the company's sales force and online training. Puncom required its vendors to change their purchasing system and practices.
- While vendors had to put more effort into learning how to use a new system to place online orders themselves, the sales force put more time and effort into developing marketing programs for them.
- Flexibility to support optimization of business processes using global IS is the requirement of current market. IS must support dynamically changing process to give the competitive advantage. But Puncom's IS lags in it.
- Quality of Communication in different organizational units is lacking in the in-house IS of Puncom.
- Research and development in the organization's R & D centre actual is just on cards and is not properly functional.
- Market research at global level for up to date IS is lagging.
- Worldwide electronic presence of brands is

missing.

- Authority of the project manager for implementing the new IS is lacking.
- No clarity of organizational goals to employees.
- Firm assets regarding the global ARE need to be employed in the organization.

RECOMMENDATIONS

Due to the high rate of failures of IS, it has been found that the organization which is lagging in IS online services, online customers, there is a real challenge in conducting business in the global market. They are not able to compete with other online competitors, therefore to convince customers to shop online or use online services some international standardized based IS for handing their business is required only then the company can have good business performance.
The researchers also observed that, Reliance is having a service-oriented culture than Puncom. Reliance encourages personal communication with customer services or sale personnel and develops relationships with them, and in return, their interests will be looked after in forms of extra care, extra service, and even discount.
This explains that the organization focusing its effort on customer service and customer relationships or human-touch activities. By providing a call center, sales support, and online chat, customers could have or maintain.

Direct communication with a company and feel that online shopping/business purchasing from Reliance is more personal and less individualistic processes. Besides this there is tremendous potential of further growth due to the introduction of 3G and Internet based Technology by the Reliance.

The study of this sector is of great importance for the employability, economic and business.

CONCLUSION

The study has identified and examined CSFs and CFFs related to continuous updation in the information system. The organizations must be highly concerned about that online security and privacy, their brand name recognition and reputation, customer support, relationship and delivery. Organizations need to understand the behavior of online customers.

The researchers found that all successful companies put effort into collecting customer profiles and conducting market research in order to understand their target customers. Organizations must support fully integrated IS development. As the survey is based on private(Reliance) versus public(Puncom)sector organizations, this studies concludes that the private sector organization are illustrious in their strength for gaining competitive advantage by having effective IS and hence the public sector organization must try to replicate the same.

This CSFs and CFFs guideline could also be applied to other developing countries with similar business and Information System related infrastructures and national culture mostly in developing countries.

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