

Impact of Information Technology Management Practices on Customer Services

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Abstract—In order to survive and beat the competition in today's competitive and technologically challenged world, firms need to manage their information technology management strategies specifically. The present paper aims to study the impact of IT Management Practices on Customer Services. Despite of the huge incentives and increase in investment in customer relationship management technology, many firms have not been able to increase their customer satisfaction index ratings because of the fact that the extent to which IT Management Practices are applied creatively to critical tasks associated with customer service varies widely among firms. The objective of this research paper is to measure whether IT Management Practices differ among firms where IT has a major role in transforming marketing, operations or both, which gives the firm advantage by affecting their customer service. The natural benefit of validating such a percept is that it would allow us to define the appropriate IT Management Practices discussed in a literature for a given level of its influence on customer service. In the present paper IT Management Practices here are measured by different levels of IT Management Sophistication (i.e. the extent to which IT Planning, IT Organization, IT Control and IT Integration are carried out in a firm) and an IT Leader's role within a firm.

Index Terms—Customer Relationship Management, Customer Services, Information Technology impact on Marketing and Operation functions, Information Technology Leader's role, Information Technology Management Sophistication

I. INTRODUCTION

IT is revolutionizing all the living ways. It is changing all aspects of life and life style. IT applications impact task productivity, task innovation, consumer satisfaction and management control. The developing countries are increasingly deploying IT to solve their developmental problems by investing in it from their own sources. The growth of any company in addition to Capital, intelligent human resources and good production techniques is now highly dependable on the use of Information Technology Management Practices specifically. IT Management Strategies enable organizations to conduct business in radically different and more effective ways. The commercialization of the internet and the steady stream of innovations have created a seismic challenge in the business environment. New channels of supply and distribution are emerging. New electronic marketplace and exchanges are being created. The infrastructure of firms and the industries within

which they operate have been permanently altered. This is a fast moving global phenomenon for established companies; the resulting challenges have been deep and pervasive. In many cases, the changes have threatened not just a firm's competitiveness but also its survival. Executives bear an enormous burden as they attempt to understand the challenges, keep abreast of events and make intelligent decisions and plan. The objective of this paper is to provide better understanding of the influence of technologies on business decision and also focuses on today's challenges from the point of view of the executives who are grappling with them.

In today's competitive world of business everyone is adopting new strategy and revisiting their strategy to stay ahead of their competitors. As Information technology system has made advancement at many levels and its use at business level may not be surprising but has varying effects. Some companies that have integrated their strategy with information technology have achieved their objectives at their desired level whereas some have failed in their attempt to do so.

The scenario in the world of business is changing every now and then with the new entrants in the market making sincere attempts to make it to the top. Any organization to survive or compete in the industry needs to formulate its strategy keeping in view the market condition and competitors. Chew E.K and Gottschalk (2009) states that strategy is about creating a competitively differentiated position to win customers in the market place. Yannis and Treacy mentioned that senior executives, strategic planners and information system managers are now a days formulating policies to include Information Technology to achieve competitive advantage in the industry market so the technology offers a great array of capabilities at lower costs that has motivated the companies to utilize the technology for better decision making process. Information Technology is useful in trying to improve the efficiency and effectiveness of current organization and maneuver the others in the competition. The components of corporate strategy which include internal competitive and business portfolio strategy are affected by information Technology that improves the efficiency of the firms operation. It has become necessary in today's competitive climate for every business organization to utilize the Information technology in its operations to achieve the objectives in scheduled time.

There are numerous examples of firms in various industries that have used IT to impact Customer Service by (i) Transforming Marketing, Operations, or both (2) offering new products and (3) Providing online access to new services and products. By sharing information, cutting costs, reducing cycle times and improving customer satisfaction, these firms have credited their IT-enabled product initiatives with keeping them firmly in place at the top of their industries despite tremendous competition. Many firms have come to realize that it can cost four to ten times more to obtain a new customer than to retain an existing one. In many firms, IT gives major transforming advantage in marketing, operations, or both by (1) Providing the sales force with a wide array of handheld and Laptop computers that enable the firms to collect detailed customer and market data or (2) managing the entire order fulfillment process, including demand planning. Recently many firms have used web Information Systems for customer service and for creating a "supply web". The supply web allows the participants in the web to publish information about their products, prices, and availability directly on the internet. This arrangement encourages open markets and value-added services that are inconceivable in a world of closed trading partner relationship. So one of the central objectives in my research is to gauge whether IT Management practices differ among firms where IT has the potential to transform marketing, operations, or both, which give the firms advantage by impacting their customer service. The natural benefit of validating such a percept is that it would allow us to define the appropriate IT Management Practices for a given level of its influence on customer service. Moreover it will be shown that significant differences exist in the IT management practices among firms and that these differences are dependent on the degree to which IT plays a role in transforming customer services in these firms.

II. THEORETICAL BACKGROUND

The various types of theoretical basis for all the constructs on IT's Impact on customer services topology along with the brief review of Literature is presented here. A customer service topology for classification of firms depends on the range of Marketing and/or Operation activities that are transformed by IT. Besides theoretical justification for the arguments that the thrust of this impact is strongly influenced by IT management practices is also provided here.

A. IT's Impact on Customer Services

It is a known fact that embedding more technology in the product and services has profoundly changed many industries standard of competition in producing goods and services [20]. More and more service firms (such as Banks & broker-age firms) are providing IT-based service options to their customers. These services are expected to bring benefits such as improved product and services quality, improved customer satisfaction, higher productivity and improved financial

performance [49]. T. R. Furey [24] suggested that IT practices could help enhance custom service by increasing convenience collecting service performance information for management use and offering extra services. Fitzsimmons and Fitzsimmons [23] defined several competitive roles of IT in services, including creation of barriers to entry, productivity enhancement, and revenue generation. Service delivery via the advent of new products & options for various channels of delivery through IT applications has emerged as an important attribute in satisfying customer. In addition, it has also been reported that more than 70 percent of the defection of customers in the financial services sector is due to dissatisfaction with the quality of service delivered [13]. Now by increasing IT investment in CRM (customer relationship management) technologies and by embedding IT in Marketing and Operations function, firms can reach out to their external entities and provide value added services [32].

In Table 1 the researcher will present ways in which IT can enable marketing and Operation functions of the firms via Customer Relationship Management (CRM) application. CRM is a major part of many firms e-commerce strategy. CRM applications are becoming more multifunction. CRM products are classified as either operational (e.g., for improving customer service, for online marketing, and for automating the sales force), Analytical (e.g., for building a CRM data ware house analyzing customer & Service data and continuously improving customer relationship) or collaboration (e.g., for building web & online communities, business to business customer exchange & personalization services [50]). These applications automate customer service operations to cut cost of sales, boost revenue and collect better customer data to improve support and increase selling opportunities. They govern marketing, operations, service, and sales force departments as well as tracking customer sales histories and call center data. For example, on the customer focus front, these applications enable firms in automating (1) sales force processes to reduce information asymmetry and delays and to improve efficiency, (2) call centers and integrating customer databases to reduce the total cost of ownership of call centers and by head-count reduction, (3) E-mail interactions with customers to improve customer service and service efficiency and to integrate E-mail, telephone, and Web interfaces and (4) customer responses and profiles, tracking marketing campaigns through various media across a number of channels, and managing quote and proposal processes from negotiations to closing. On the operation focus front, these applications can enable firms in (1) using database information and supplier pipeline processes to forecast demand more accurately and create viable scheduling applications, (2) reducing overall production costs by streamlining the flow of goods through production processes and by improving information flow, and (3) improving lead time, increasing quality, and enabling more customization at a lower cost.

In contrast, many firms still view customer service as little more than a complaint department. It should be noted that many

things go into customer service-including personal interaction, product availability, quality, cost, ambiance-and technology may or may not always be involved. When technology is involved, it may play a supporting role, a direct role, a coordination role, and/or a role in restoring customer confidence (especially when it's combined with training and other organizational changes) [46]. In addition, when IT is mismanaged, it can deter rather than enhance customer service [3]. Even when used as intended, IT is not always customer-friendly. For example, some CRM applications are meant to help businesses track interactions with customers, which does not necessarily translate into better service [46].

application in customer services, marketing automation and online sales and promotion.

Operation Focus refers to those firms that have the potential to use IT to transform production and Operation activities that are considered necessary to directly produce new products, improve quality and provide various channels of delivery to meet customer's expectation. Also see Table-1 for the examples of the operation focus CRM applications in supply chain management, order management and field service.

TABLE I
ELEMENTS OF CUSTOMER RELATIONSHIP MANAGEMENT APPLICATIONS

Customer Focus	
Customer Service	<i>by providing customers and partners with easy access to accurate in-depth information directly over the internet or through customer service, call centers, and technical support organizations</i>
Marketing Automation	<i>by using lead generations, lead qualification, data analysis, campaign management ,and encyclopedia software products</i>
Online Sales	<i>by enabling online business-to-business and business-to-consumer sales using contacts, opportunities, products configuration, and quotation software products for creating new retail channels; empowering existing distribution channels and sales people to sell complex, configure-to-order products.</i>
Operation Focus	
Supply chain Management	<i>by facilitating the information flow throughout the supply chain from raw materials suppliers to retailers for better and more efficient inventory and production management, and faster response to customer demand</i>
Order Management	<i>by enhancing the speed and accuracy of order processing and fulfillment for superior purchasing experience for customers and business partners</i>
Field Service	<i>by using dispatch, spare part inventory, and repair depot software products</i>

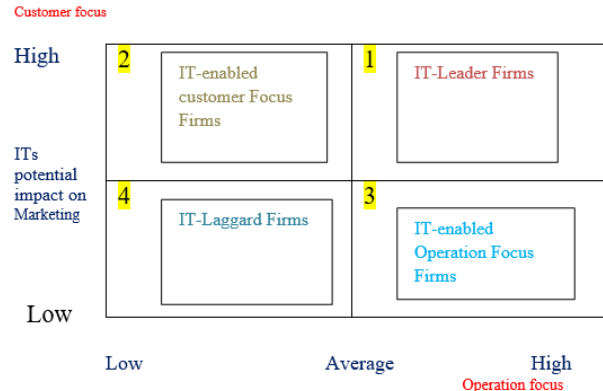


Fig. 1. Customer service technology

Quadrant 1 classifies firms that have an above average level potential for IT to impact their marketing and operation functions. We call these firms “IT-leader” firms. “IT -enabled customer focus” firms in quadrant 2 have the same level potential for IT to impact their marketing but have a less than average level potential for IT to impact their operation functions. “IT- enabled operation focus” firms (quadrant 3) have a less than average level IT potential for IT to impact their marketing and have an above average level potential for IT to impact their operations functions. “IT-laggard” firms (quadrant 4) have a less than average level potential for IT to impact their marketing and operation functions.

Based on the customer service topology shown in Fig.1 IT-leader firms are those that have the potential to make dramatic transformations in the marketing and operations area and to be positioned strongly relative to the competition. IT-enabled customer focus firms are those firms that have the potential to use IT to differentiate their products and services to meet the needs of focused markets and customers. IT-enabled operations focus firms are those where marketing and customer service are relatively unimportant but where major IT investments can potentially be made in operations to offer new products and to increase integrations, control costs, and catch up with the IT-leader firms. Finally, IT-laggard firms are those that are potentially outmaneuvered on both dimensions vis-à-vis the industry leaders. In short, IT can play very different roles in various firms. In some firms, it can have a predominantly operational focus, while in others it can have primarily a customer focus, or it can have both or neither.

B. Customer Service Topology

Applegate et.al suggested that: (1) IT has the potential to impact different industries & firms in fundamentally different ways (2) some firms use IT to transform their marketing and / or Operation functions (3) IT's impact on both Marketing and Operation is high among the key planners within a particular industry and in firms where IT plays a strategic role. Fig 1 identifies how IT's potential impact on customer services may vary depending upon the range of marketing and / or operations activities that are transformed (automated) by firms, which are labeled as Customer focus verses Operation focus dimensions.

Customer Focus refers to those firms that have the potential to use IT to transform marketing and customer service activities that are considered necessary to directly meet customer's expectations in marketing products and offering extra services. See Table-1 for the example of customer focus CRM

III. IT MANAGEMENT PRACTICES

New competitive and technological challenges faced by firms have resulted in escalating complexity in IT Management. [2]. Effective IT management requires a set of coordinated efforts associated with planning, organizing, controlling and directing the introduction and use of IT resources within a firm. A number of other studies have also suggested that the role of IT within a firm significantly influences IT planning & management control systems and the rank and the role of the IT leader [31, 44]. IT Management practices are defined here as the level of IT Management Sophistication & IT leader's role in a firm. The research related to IT management sophistication and the role of the IT-leader forms the basis for this study.

IV. IT MANAGEMENT SOPHISTICATION

IT management sophistication has traditionally been used to characterize a firm's evolution in its management orientation, planning, organization and control aspects of its IT function [34, 39, 43]. In some firms the lack of clear organizational processes for effective IT management prevent them from using IT strategically [89]. Greater IT management sophistication is characterized by the IT manager being aware of the firm's long term strategic plans the firm's future strategic plans being explicitly considered during IT planning [17, 22] and IT performance being evaluated based on contribution to the overall firm's objectives, and not exclusively on cost savings [17]. Concurrently, in firms with a high level of IT management sophistication, top management may be expected to have greater knowledge about IT and participate more actively during IT planning [31]. This in turn would suggest that the IT function in a firm with higher levels of IT management sophistication would have evolved from the data processing orientation into the strategic IT orientation [34, 41].

The following four paragraphs provides the theoretical reason for the four criteria identified for measuring IT management sophistication.

A. IT Planning

As firms move toward a higher sophistication in IT management, the nature of the IT Planning changes from a computing plan with a technology management focus to a long-range strategic plan with a data resource management focus [19, 42]. The Primary objectives of IT planning are then to (1) align the IT Plans with the firms business plan, (2) address key aspects of business strategy [53], and (3) extend the infusion and diffusion of IT within the firm .new concerns are: what information systems do the firm's business strategy demand; what strategic opportunities are presented by IT how should IT priorities be set.

B. IT Control

Control of IT activities has changed drastically during the past two decades from being loose/informal, project, and technically based to being more tight/refined and managerially

based. New methods of controls are based on benefits and technical standards and are based on the organizational goals rather than cost [12]. As firms move towards higher IT Management sophistication they became more confident in managing computing as other resources, the application development positively pursue economic benefits & IT managers seek to manage the balance between short-term delivery and investment for the future [22]. Firms with high level of IT Management can derive significant benefit from strategic use of IT by (1) establishing mechanism to permit key line managers to exercise controls over budgeting, priority setting and resource planning for IT function. (2) and clearly defining the role and responsibilities of IT function. New concerns are: how much should firms spend on IT; how should IT proposals be evaluated; and how should the responsibility and authority for IT direction, development, and operations be set.

C. IT Organization

In the early stages data processing firms could organize IT activities autonomously because early applications were limited to transaction-oriented functions requiring only limited user awareness and involvement. The increasing trend toward distributed client-server computing and ERP systems require that user's idea be given special attention in planning and implementation of IT applications [6]. Consequently, the direction, development and operations may be co-located in the hands of business units and IT organizations and may be customized to meet specific business unit needs [14, 15]. IT departments are likely to (1) be much flatter with specialized sub units organized around technologies and business needs (2) respond better to changing user needs by better alignment between user areas and the IT functions, and (3) leverage IT investment more effectively. New concerns are: how will IT affect the firm's organizational structure, and should IT have a director and what should be his or her roles and responsibilities.

D. IT Integration

Traditional management strategy for automation has been a bottom-up approach, in which various functional areas were automated on an application-by-application basis, without consideration for integration and optimization at the firm level. As firms move towards greater IT management sophistication it should (1) Institutionalize a formal top-down planning process for linking information systems strategy to business needs (2) transfer the technology to a wider spectrum of applications and (3) contribute to a high degree of technology integration for better exploitation of IT within the firm [17, 44]. The end result of the change in IT management perspective from a local bottom-up approach to global top-down approaches is a high degree of system integration, where systems are tightly interwoven and there is no overlap. Intertwining systems with suppliers and business customers allow firms to make dramatic improvements in their business processes which ultimately lock in profitable relationships with their suppliers and customers for

a long time to come. Integrated firms (1) use IT to create new products and services (2) use IT to alter linkage with suppliers and customers (3) Use IT to establish new standards of performance in their industries (4) display more proactive orientation toward IT, and (5) have the ability to deliver consolidated information to customer [31]. Integration is often achieved by employing processes to identify and exploit IT opportunities. This often requires basic change in business practices and culture [31]. The challenges for integrated firms in IT management sophistication are adaptation to, adopt of, and integration of new technologies [17, 22].

E. IT Leader's Role

Cash et al. [17], contended that while “for some firms, IT activities represent an area of great strategic importance, for other firms they play, and appropriately will continue to play a cost-effective, useful but distinctly supportive role. It is inappropriate for firms with supportive IT to expect that the same amount of senior management strategic thinking should be devoted to the IT organization as in firms of the former type.” When IT served a strictly supportive function in firms, it was appropriate for the IT leader to be a technical expert and competent manager. In the “information era” of the 21st century, however, the IT leader has to form the linkage between IT and other executives of a firm [1, 51].

According to Earl [22], firms in each of the four cells of the strategic grid need different types of IT leaders to manage their IT function [39]. In a firm where IT plays primarily a “support” role, it may be accepted to have an IT leader who spends the lion's share of his or her time interacting with the employees within the IT organization. In these firms, neither current nor future IT activities are critical to the smooth operation of the firm. IT is viewed as playing the traditional back-office-support role without any potential for dramatically altering an organization's current or future operations or direction. However, in firms where IT has a “strategic orientation” and where IT is critical in achieving corporate objectives, IT leaders should have multidimensional roles, as they are critically dependent on the smooth functioning of the IT activity. They should have business, strategic and political skills and a conceptual and visionary mind. A ‘factory’ situation requires a strong hands-on, performance-oriented IT Leader with technical and management skills. These firms are heavily dependent on their existing day-to-day IT operations and even a temporary disruption in service could have severe operational consequences.” Turnaround” firms should look for strong, visionary champions who have an excellent understanding of the business and are proactive as their IT leader. Support firms can tolerate service-oriented technical leaders with a hands-on, internal style. While existing applications may provide operational support in these firms, they may not be critical to the firm's current operations. However, the impact of the applications under development is considered vital to achieving the firm's strategic objectives.

V. RESEARCH QUESTION AND FUTURE DIRECTIONS

The analysis of the literature revealed that the research being done on the IT Management practices is largely focused on Technology at this point. This seems quite reasonable as the IT has not yet been realized. Once the technology matures, The IT Management research will need to broaden into the fields of Management & Operations among others. The review of the literature yielded some important findings that can focus the research efforts of scholars. These include

- The IT Sophistication is not well represented in the management Literature
- IT Sophistication standards and research are dominated by work done or disseminated in Europe and Asia.
- The coverage of IT Management driven business model is scant
- Little work has been done on issues related to the legal and governance frameworks that will regulate the IT Management sophistication.

These findings lead to a set of questions that need to be answered in future research. These research questions include:

- What are the appropriate theories of the IT Management Practices and Operations
- How does the IT Fit in to the “Big Data” Movement
- How will information systems working with IT Management data overcome the inherent complexity and data volume in order to provide useful decision support.
- What are the IT Business models that will drive global business and commerce.

VI. SUMMARY

The study will provide evidences for differences in IT Management Practices in firms where IT has the potential to impact marketing and /or operation functions of firms in order to increase custom services. Assessing the potential for using IT strategically in custom service by moving away from customer as exploitable income source to treating them as assets to be nurtured is useful for the firms as a whole and for the individual business units and functions within them.

VII. CONCLUSION

In order to improve customer services, firms require a significant and higher level of general Management and IT leader's involvement in IT Planning, IT Control, IT Organization, and IT Integration. Since Proper IT Management Practices can potentially impact customer satisfaction ratings and can potentially lead to increased customer retention, service providers such as those in the financial service sector must. 1) Define specific goals and objectives for improving customer service. 2) Understand what attributes customers are looking for while using IT based services. 3) Design IT based service to

provide customers with personalized experiences. 4) Define metrics to be used by project manager to measure customer perception of the service.

REFERENCES

- [1] Applegate, L. M., and Elam, J.J. New information systems leaders: a changing role in a changing world. *MIS Quarterly*, Vol.16, No.4, Dec. 1992, pp. 469-490.
- [2] Applegate, L.M.; McFarlan, F.W.; and Mckenney, J.L. *Corporate Information Systems Management: The issues facing Senior Executives*, 4th ed. Chicago: Irwin, 1996.
- [3] Asbrand, D.A. profitable synchronicity. *Datamation*, datamation.earthweb.com Sept. 1997.
- [4] Ballam, Laura. Strategies for managing customer expectations. Nov.2015.
- [5] Bakos, Y. The emerging role of electronic marketplaces on the internet. *Communications of the ACM*, Vol.41, No.8, 1998, pp. 35-42.
- [6] Bancroft, N.; and Sprengel, A. implementing SAP R/3: How to introduce a Large System into a large Organization, 2d ed. Englewood Cliffs, NJ: Prentice hall, 1997, Chapter 6.7, and 11.
- [7] Boynton, A., and Zmud, R.W. Information Technology planning in the 1990s. *MIS Quarterly*, Vol.11, No.1, Mar. 1987, pp. 59-71.
- [8] Boynton, A.C.; Jacobs, G.C.; and Zmud, R.W. Whose responsibility is IT management? *Sloan Management Review* (summer 1992), pp.32-38.
- [9] Boynton, A.C.; Zmud, R.W.; and Jacobs, G.C. The influence of IT management practice on IT use in large organizations. *MIS Quarterly*, Vol.18, No.3, Sept. 1994, pp.299-318.
- [10] Bradley, S.P.; Hausman, J.A.; and Nolan, R.L. *Globalization Technology and competition: The fusion of computers and Telecommunications in the 1990s*. Boston: Harvard Business School Press, 1993.
- [11] Bassellier, G., (2001). Information Technology competence of Business Managers: A Definition and Research Model. *Journal of Management Information System*.
- [12] Benamati, J.A (2001). Rapid Information Technology change, Coping Mechanism and the Emerging Technologies Group. *Journal of Management Information Systems*.
- [13] Bowen, J.W., and Hedges, R.B. Increasing Service Quality in Retail Banking. *Journal of Retail Banking*, Vol.15, No.3, 1993, pp.21-28.
- [14] Brown, C. Examining the emergence of hybrid IS governance solutions: evidence from a single site. *Information Systems Research*, Vol.8, No.1, Mar 1997, pp.69-94
- [15] Brown, C., and Magill, S.L. Alignment of the IS functions with the enterprise: toward a model of antecedents. *MIS Quarterly*, Vol.18, No.4, Dec 1994, pp.371-403.
- [16] Cholin, (2005). Study of the application of information technology for effective access to resource in Indian universities libraries. *The International Information & library Review*.
- [17] Cash, J.L.; McFarlan, F.W.; McKenney, J.L.; and Applegate, L.M. *Corporate Information systems management: Text and Cases*, 3d ed. Homewood, IL: Richard D. Irwin, 1992.
- [18] Chan, Y.E.; Huff, S.L.; Barclay, D.W.; and Copeland, D.G. Business strategic orientation, information systems strategic orientation and strategic alignment. *Information Systems Research*, Vol.8, No.2, Jun 1997, pp.125-150
- [19] Cron, W., and Sobol, M. The relationship between computerization and performance: a strategy for maximizing economic benefits of computerization. *Information & management*, Vol.6, 1983, pp. 171-181.
- [20] Darling, C.B., and Semich, J.W. Wal-Mart's IT secret: Extreme Integration. *Datamation*, datamation.earthweb.com Nov. 1996, pp.48-58.
- [21] Davis, B. More Projects, less time. *Information Week*. Jun. 14, 1999, pp.42-56
- [22] Earl, M.J. *Management Strategies for Information Technology*. Englewood cliffs, NJ: Prentice Hall, 1989.
- [23] Fitzsimmons, J.A., and Fitzsimmons, M.J. *Service Management: Operations, Strategy, and Information Technology*, 2d ed. New York: Irwin/McGraw-Hill, 1997.
- [24] Furey, T.R. How information power can improve service quality: planning review, Vol.19, No.3, 1991, pp.24-26.
- [25] Gottschalk, P. (2007). *Business in Dynamics in Information Technology*. Norway: idea computing
- [26] Gupta, Y.P.; Karimi, J.; and Somers, T.M. Alignment of a firm's competitive strategy and information technology management sophistication: the missing link. *IEEE Transactions on engineering Management*, Vol.44, No. 4, 1997, pp.399-413.
- [27] Haber, L. Building Truck stops on the web. *Datamation*, datamation.earthweb.com (July 1997).
- [28] Heskett, J.T.; Sasser, W.E.; and Schesinger, L.A. *the service Profit Chain*. New York: The free press, 1997.
- [29] Irani, Z.A. (2001). The propagation of Technology Management taxonomies for Evaluating Investments in Information. *Journal of Management Information Systems*.
- [30] James, U. Monday.; Grace, O. Akinola.; and oluwatobilola, K. aladeraji. Strategic management & firms performance: A study of selected manufacturing companies in Nigeria. *European Journal of Business & Management*, Vol.7, No.2, 2015.
- [31] Johnston, H.R., and Carrico, S.R. Developing capabilities to use information strategically. *MIS Quarterly*, Vol.12, No.1, Mar. 1998, pp.37-50.
- [32] Kay, E. Caring for customers on the web. *Datamation*, datamation.earthweb.com .Jul 1999.
- [33] Krishnan, M.S.; Ramaswamy, V.; Meyers, M.C.; and Damien, P. Customer satisfaction for financial services: the role of products, services, and information technology. *Management Sciences*, Vol.45, No.9, Sept. 1999, pp.1194-1209.
- [34] Karimi, J.; Gupta, Y.P.; and Somers, T.M. Impact of competitive strategy and information technology maturity on firm's strategic response to globalization. *Journal of Management Information Systems*, Vol.12, No.4, Spring 1996, pp.83-116.
- [35] Lohse, G.L., and Spiller, P. Electronic shopping. *Communications of the ACM*, Vol.41, No.7, 1998, pp. 81-87.
- [36] Mehmood, M.A. (2004). Special Issue: Impacts of Information Technology Investment on Organizational Performance. *Journal of Management Information Systems*
- [37] Morton. (1998). *Information Technology and Corporate Strategy*. Planning. *Datamation*, datamation.earthweb.com Jul 1999.
- [38] Medlin, B.D. 2004. Skills crucial to the Information Technology professionals in the global business environment: an empirical study in the United states. *Internal Journal of Human Resources Development and Management*
- [39] McFarlan, R.W. Information technology changes the way you compete. *Harvard Business Review*, Vol.62, No.3, May-June 1984, pp.98-103.
- [40] Priyadarshani, D.S. (2004). *Management Information System*. New Delhi: New Age International.
- [41] McNurlin, B.C., and Sprague, R.H. *Information Systems Management in Practice*, 4th ed. Englewood Cliffs, NJ: Prentice Hall, 1997
- [42] Nolan, R.L. managing the advanced stages: Key research issue. *Seventy-fifth Anniversary Colloquium Series*, Division of Research, Harvard business School, Jul. 1983, pp. 10-13,
- [43] Nolan, R.L. managing the crises in data processing. *Harvard business Review*, Vol.57, No.2, March-April 1979, pp.115-126.
- [44] Premkumar, G., and King, W.R. An empirical assessment of information systems planning and the role of information systems in organizations. *Journal of Management Information systems*, Vol.9, No.2 ,fall 1992, pp.99-125.
- [45] Sabherwal, R., and kiris , P. The alignment between organizational critical success factors and information technology capability in academic institutions. *Decision Sciences*, Vol.25, No.2, 1994, pp. 301-330
- [46] Sweat, J., and Hibbard, J. Customer disservice. *Information Week*, June 21, 1999, pp.65-78.
- [47] Senn, J. A. Using information technology to compete in a new Europe. *Business*, Vol.40, No.2, April-June 1990, pp.45-50
- [48] Tenenbaum, J.M. WISs and electronic commerce. *Communications of the ACM*, Vol.41, No.7, ul.1998, pp. 89-90.
- [49] Turel, O., (2008). In Justice We Trust: Predicting User acceptance of E-Customer Services. *Journal of Management Information Systems*
- [50] Trepper, C. Customer care goes end-to-end. *Information week*, May 15, 2000, pp.55-73.
- [51] Watson, R. Influences on the IS Manager's perceptions of Key issues: Information scanning and the relationship with CEO. *MIS Quarterly*, Vol.14, No.2, 1990 pp. 217-232.

[52] Yong Cai, J.Z (2012) . Research on e-business value creation: an integration of e-business process view and task technology fit. *International Journal of Networking and Virtual Organizations*.

[53] Zviran, Relationships between organizational and Information Systems objectives: some empirical evidence. *Journal of Management Information Systems*, vol.7, no.1, summer 1990, pp. 65-84.