Application Of Information Technology In Business

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Abstract—**The role of Information Technology in business environment is ever increasing. The application of IT is beneficial and profitable to the organizations. This paper reviews the importance of IT and specific business sectors where it has utmost importance.**

Keywords—*Information Technology; application of IT; business sectors; beneficial; profitable*

I.   OVERVIEW

As Tallon [1] stated that in contemporary business world, Information Technology plays a vital role in business [1]. Even after several studies, the best application of IT in business is yet to be explored. IT is applicable in almost every domain such as communication, business, social, political and economic. It is rightly said that the digital technology has transformed our world by enabling a smooth and flexible business process [2]. The application of IT is important in business process redesigning [3]. Thus, organization needs to invest in IT to enhance profit [4]. The association between IT and business is beneficial to both. Application of IT also helps business in profitability. Therefore we can say that both IT and business processes are complementary to each other which results cost effective communication solutions [5]. Moreover, IT is necessary for providing cost effective solutions [6].

II.   RESEARCH METHODOLOGY

A.   Review Centric

After collecting a wide variety of information through different articles and journals available in the University of Bridgeport digital Library and from google scholar, a detailed research paper is prepared which consists of the results from different experiments and the recommendations in this regard. In this research paper, data was collected from several marketing journals, survey results, research publications and articles.

B.   Research Process

Our review centric research process follows the three phases of: (1) brainstorming; (2) narrowing down; (3) evaluation. Figure 1 depicts a synopsis of the relationship of Information Technology and different business domains used in this study. "IT

assimilation is regarded as an important outcome in the efforts of firms to leverage the potential of information technologies in their business activities and strategies [7].

"The capability of information technology to improve management decisions with better information had also been demonstrated. For example, computer applications designed to inventory all the parts used in specific manufacturing settings reportedly enabled managers to reduce inventory, purchasing and design costs, while also reducing the time needed to meet production and delivery targets [8]."

III.   APPLICATION OF IT IN BUSINESS

The business-centric framework articulates three compelling reasons why information technology (IT) matters in business: (1) IT continually transform industry and society, (2) executive decisions about IT investments, governance, and strategy are critical to organizational success, and (3) deriving value from increasingly available data trails defines effective decision making in the digital economy [9]. In a broader sense, information technology management can be conceptualized as a problem of coordinating the relationship between the business domain and the IT domain [10].

This research paper discusses the importance of IT in several business domains such as communication, e-commerce, CRM and MIS. The below model shows the relationship of IT and 4 specific business domains.
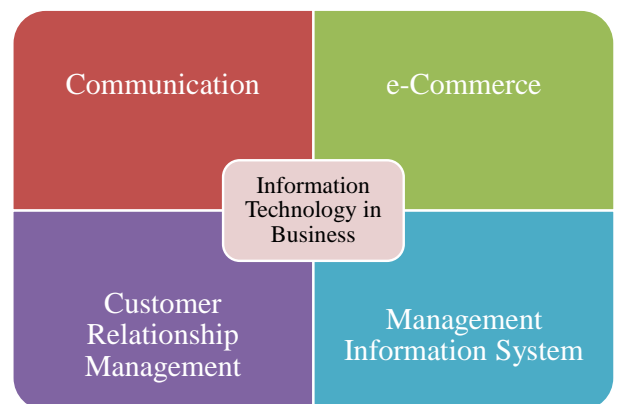

Figure 1: Application of Information Technology in Business. This model is the pictorial representation of the specific domains where Information Technology is applied and has several advantages. This model also

shows the relationship of IT in different business areas.

A. Communication

The term information technology refers to the computing and communications technology used to obtain, store, organize, manipulate, and exchange information. The definition includes computer hardware and software, as well as the telecommunications devices and computer-based networks that connect them [11]. Effective communication is important in everywhere – such as in society, academics, organization, entertainment etc. Effective business communication is the application of proper communication in business and getting feedback from others. Application of IT in business communication makes it clear, standard and concise. Therefore, some international companies are using advanced communication and information technology to manage virtually, rather than sending a traditional expatriate into the foreign location [12]. The combination of communication and information technology has changed our social communication to socio – technical communication [13]. Information and communication technology, also known as ICT, has reduced the cost and increased the abilities to connect with others irrespective of organization boundaries [14].

B. E-Commerce

Two major trends have characterized the modern business landscape: the advancement of e-commerce technologies and the rapid global expansion of firms [15]. E-commerce is defined as electronic commercial transactions between buyers and sellers. The foundation of e-commerce is in building and maintaining trusted relationships. To put customer confidence at risk is to put every element of your company's online business strategy at risk [16]. E-Commerce is the communication medium of buyer and selling organization [17]. It offers service through internet [18].

It has become a new business paradigm now [19]. The emergence of e-commerce helps to save time by offering distance selling and automated transactions. Also, it creates a medium of direct communication between buyers and consumers [20].
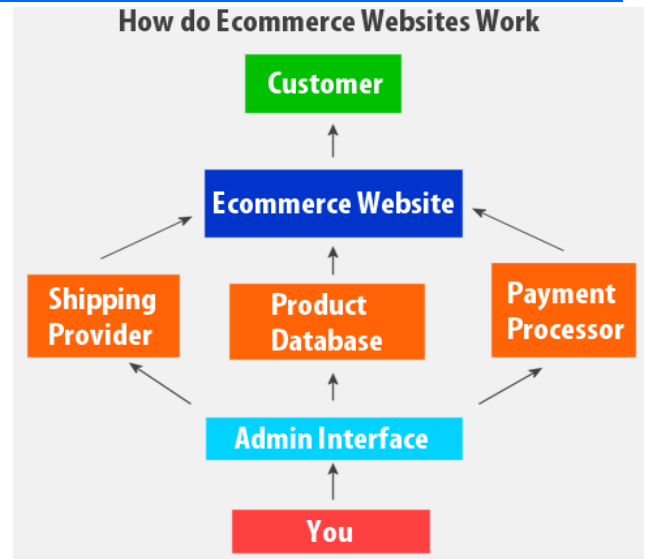

Fig. 2. *How do Ecommerce websites work [21]*

C. Customer Relationship Management

CRM is defined as the strategic – technology based tool to create relationships with specific customers.[22] The objective of CRM is to retain valuable customers. It creates a customer database which consists of information about customer and their feedback. It also helps sales people to gain the optimum outcome of their selling activities [23]. Moreover, CRM gives a choice to the customer how to be served cost efficiently and effectively in the business [24]. CRM creates a strong customer-firm relationship [25].

The study and practice of customer relationship management (CRM) has experienced explosive growth over the past decade. Extant research provides two sets of insights into the relationship between a firm's CRM investments and its performance. The first set focuses on CRM as expenses [26].

D. Management Information System

The MIS can be defined as a set of facilities and personnel for collecting, sorting, retrieving and processing information which is used, or desired, by one or more managers, in the performance of their duties [27]. MIS helps to communicate in the organization and judge the performance [28]. MIS is the application of information system in business management [29]. It offers optimized data processing and data decision system [30]. MIS helps management by providing report and solution to problems [31].

MIS is the system to communicate within organization and evaluate the performance of the organization. The main objective of MIS is to optimize data processing system and data decision system. It records the transaction based organizational data for the management to make strategic organizational decisions. It also helps to create a database, supports in decision making by the management and to resolve the organizational issues [32]. In brief, MIS records the transaction based organizational data for the

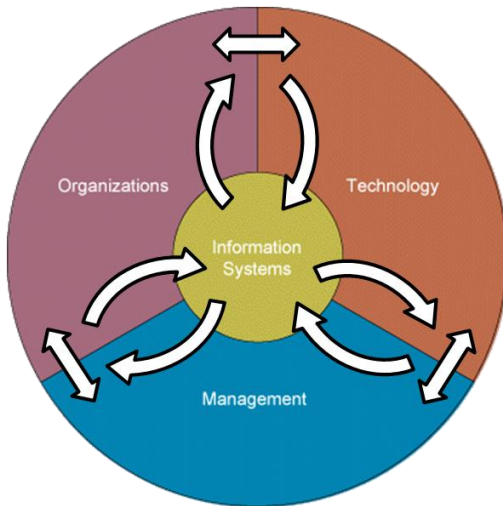management to make strategic organizational decisions [33].

Fig. 3. *Relationship of MIS with Organizations, Technology and Management [34]*

IV. DISCUSS MODEL

In reviewing the literature, there are a broad range of applicable areas beyond the scope of Application of IT in Business Model that possibly influenced by the IT tools and techniques. Several studies from both academics and practitioners have identified factors impacting effectiveness and success in business domains (Figure 1) and are likely to have influenced for in the long term.
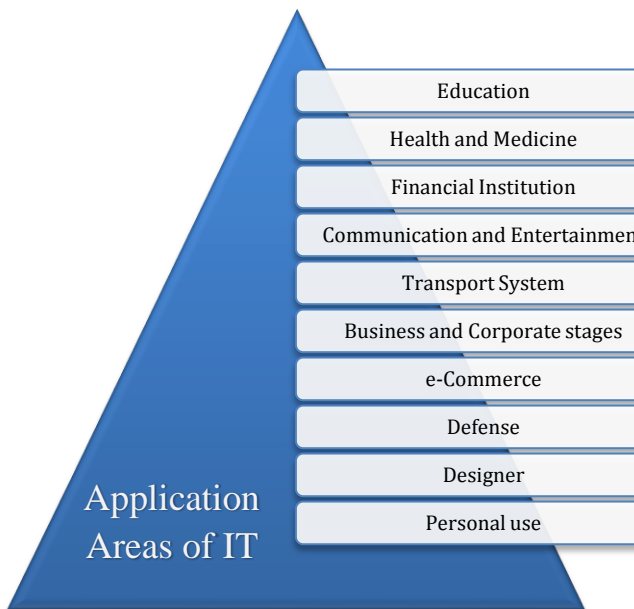

Fig. 4. Application areas of Information Technology

The digital technology has changed our communication style in commerce, society, economy and politics [2]. The application of IT helps business processes to reduce costs of coordination [5]. The economic benefits of IT applications in business cannot be overlooked. IT offers cost efficient solutions to business [6]. This economic benefit of IT should be measured to realize its benefits in SBUs and overall in

the industry. Given the diverse factors identified by the literature, our goal is to study the factors where the contribution of Information Technology is major and then incorporate the model (Figure 1).

V. RESTULT AND FINDINGS

The rapid expansion of information technology in a wide variety of manufacturing and service type organizations suggests a growing involvement of manpower resources of the firm within or in relation to computer based systems. Personnel at all levels of the organization are called upon to exercise varying levels of conceptual ability, understanding and technical competency regarding introduction or emergence of information systems within their organizations. These necessities highlight the potential needs or problems of preparing manpower resources in the functional requirements of their jobs as well as for newer, innovative approaches in management technique emerging in this area [35].

The new communications technology, for instance, provides the software firms (in developing countries) to take advantage of more productive communications patterns with clients and joint venture partners; software and related information services to clients and foreign coproducers can be transferred at a low cost using the telecommunications infrastructure [36].

The information systems, for example, can help markets be more efficient by increasing the amount of available information, and can lower certain barriers to entry while raising others. Thus, they can cause a shift in the structure of entire industries [37].
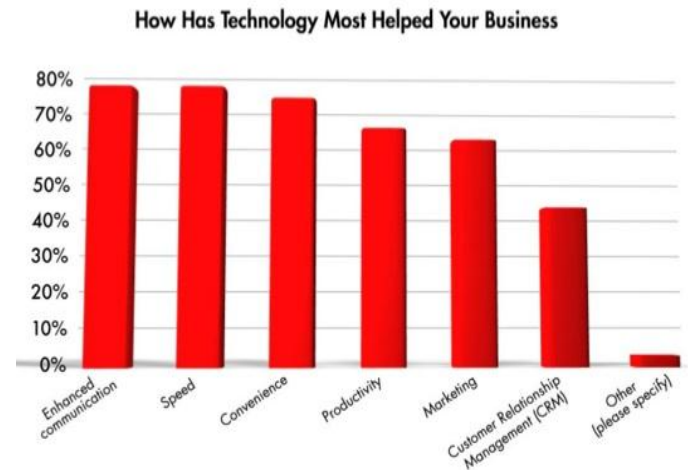

Fig. 5. How technology is useful in business [38]

Many business schools are re-examining management education, and many view advanced information technology as an enabler of innovative and effective learning. How best to approach technology – mediated learning is unclear [39]. Changes in the business landscape are affecting employee skill requirements, as well as the tools and techniques used in education. These changes are characterized by shifts in market demands, technology, and growing competition from both traditional and nontraditional sources. Because an employee's skill, innovation, and

expertise form the cornerstone of profitability and economic growth, demand for both a highly educated work force and the continual development of employee skills has increased [39].

This observation is reinforced by the shares of IT-investment relative to other investment as well as the sector wise money invested. Looking at the total IT investment in the economy, service industries are responsible for the largest and ever growing share of total expenditure on IT in the economy [40].

To conclude, the organizational context adjoining the expansion and practice of information technology continues to attract the attention of many practitioners and researchers. Nonetheless, these areas have been criticized for their failure to accumulate consistent research findings and for their neglect in using or building coherent theoretical frameworks [41].

VI. CONTRIBUTION AND NEW INTUITION

"Given the information technology backlog in many public organizations and the many failed attempts at diffusion, it is of great importance to induce best practices [42]." "The technology influences potentially: (1) scale economies in production and policyholder servicing by decreasing the costs associated with each transaction executed, (2) scope economies in distribution and servicing by facilitating the ability to offer related or complementary products and services, and (3) the extent of product and service differentiation by insurance firms and the industry [43]." "The many aspects of information technology include computers, communications, video conferencing, artificial intelligence, virtual reality, fax, cellular and wireless phones and pagers, and so on [44]." "Information and communication technology has many advantages. For example, it saves time and space, it reaches many more people immediately and directly, it has an enormous memory storage capacity, it can process and reorganize information fast and reliably, etc [45]."

VII. CONCLUSION

The research has shown that Information Technology is now inseparable from business. The role of IT in business is ever increasing. The application of IT creates the positive competitiveness among businesses and provides customer centric solutions. Communication technologies have emerged as a new era. IT application helps its reach to customers. E-commerce is the new dimension of business. It is the direct medium which offers interaction between buyers and sellers. CRM is the tool to generate customer profiles and maintain the record of the same. MIS is solution provider to the management of an organization. MIS has its utmost importance in strategic decision making. To conclude, application of IT is increasing in almost all the sectors of any business and it will continue to do so.

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