

## INFORMATION TECHNOLOGY REVOLUTION INITIATE IMPROVEMENT ON MARKETING MANAGEMENT

Farhang Salehi  
MBA - IT Management  
Faculty of Management  
Multimedia University, 63000 Cyberjaya, Malaysia  
Email: [salehi\\_farhang@yahoo.com](mailto:salehi_farhang@yahoo.com) Tel: +6017-327-3982

Bentolhoda Abdollahbeigi  
Center of Postgraduate Studies  
Limkokwing University of Creative Technology, 63000 Cyberjaya, Malaysia  
Email: [hoda\\_bejgi@yahoo.com](mailto:hoda_bejgi@yahoo.com) Tel: +6017-123-45678

Mina Shahidisadr  
Center of Postgraduate Studies  
Limkokwing University of Creative Technology, 63000 Cyberjaya, Malaysia  
Email: [mina.sh.sadr@gmail.com](mailto:mina.sh.sadr@gmail.com) Tel: +6017-123-45678

Seyed Shahriar Morsali  
Faculty of Management  
Multimedia University, 63000 Cyberjaya, Malaysia  
Email: [Shahryar632010@gmail.com](mailto:Shahryar632010@gmail.com) Tel: +6014-723-0772

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### ABSTRACT

*In the last two decades Information Technology are exploded in our world and affects on our lives. IT develops connection option around the world and brings some new technical options. IT affects on business beside our lives. We want to illustrate how Information Technology initiates development of marketing management as a conceptual paper. We will discuss some part of marketing management that are affected by IT's revolution such as Communication, Organizational Knowledge, Global Marketing, Business Process, and Collaboration.*

**Keywords:** *Information Technology; Revolution; Marketing; Improvement; Global marketing*

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### INTRODUCTION

Marketing management is an important aspect of business. The most companies' challenge nowadays is updating and improvement their structure timely and information technology facilitate improvement and development. According to Mairead (2002), it is important that companies use timely information and technology to stay in the intensive competition world and IT's revolution is an important things that companies must adapted themselves whit it. All aspects of market are affected by Information Technology so if firms want to gain more market place and to remain or maintain in the market place and consumers based on correct management and suitable way to solve it must understand how information technology effect on marketing. Internet as an open information portal gives useful information for everyone, for instance: customers could use it to choose the best product and services; it is useful for managers to understand customer orientation and what they expect from product or service. IT is now a vital resource for competing in the global marketplace. Many reports have been published on the use of information technology (IT) in enhancing a firm's competitiveness. Normally, competitiveness is assumed to apply to the operations of the firm within its national borders. Today, many organizations (e.g. American Express, Dow Chemicals, Federal Express, DEC, GM, Texaco) consider IT an essential component of worldwide corporate strategy. The growth of information technology (IT) has rapidly changed the face of business over the past decade. IT has made possible the sharing of large amounts of information along the employees, including operations, logistics, and strategic planning data. This has enabled real-time collaboration and integration between partners, providing organizations with forward visibility, improving production planning, inventory management, and distribution. Information technology helps firms to save a lot of time because it speeds up business processes. IT, which allows for the transmission and processing of information necessary for synchronous decision making, can be viewed as the backbone of the business structure. For this reason the literature often refers to IT as an essential enabler of marketing activities. Of all the information technologies, the Internet and the Web may have had the most profound impact on business integration and collaboration.

### IMPROVE COMMUNICATION AND PROMOTE THE COMMUNICATION CAPABILITIES OF PEOPLE

Globally, basic skills in using Information Technology have become essential for firms to survive in the intensive competition world. Information Technology fundamentally changes marketing (Mairead Barady, Michael Saren. and Nikolaos T.Zoakas, 2002). Companies are challenged to improve and develop their communication level and their employees' communication skills by using Information and Communication Technology (ICT). It is no longer the case that the software development, technical

support, and scientific industries are sole drivers of need for ICT-skilled employees. Nearly all companies such as industrial, financial, and social support enterprises increasingly require employees to have basic IT skill for a wide range of jobs. (Andrea H.Tapia, 2009). Information Technology (IT) create new ways in marketing to arrange Business and organize companies, IT also affect on communication ways, (ICT) Information and Communication Technology are very large group of electronic systems with high connection capabilities with different role in the company. The first character of ICT is the high connection intensity; in other word these technologies allow sharing information, resource, knowledge, and complementary competencies between actors, independently from the business system. The connection is illustrated rapidly with the distribution of Internet as a standard, universal, and open protocol (Vicari, 2001). Management and employees can use Internet. Intranet, Extranet, Electronic data Interchange (EDI), Email, Video conferencing, Computer devices, Computer links with supplies, Computer links with customers, for communication.(Mairead Brady,2002). Information technology allows firms to share knowledge and information among its employees, so each of them can absorb new and update information and knowledge. The development of technological skill improves the capacity of people to learn how to use technology when they move to the work force. (Mairead Brady, 2002). The Organization for Economic Co-operation and Development (OECD) also emphasize the economic importance and effect of IT in development countries and using Information Technology to develop work force, and increase productivity as well as the need for young people to develop ICT skills in preparation for adult life (OECD, 2004). For every one, basic ICT skills is useful, for employees have become the key to opening the door to employment and advancement, for entrepreneurs it is essential to starting a business and finding skilled employees and for industries IT skills is essential to issues of staffing productivity and participation in wider markets. Information Technology makes communication ways easy, when Information and Communication Technology are used in an organization, employees were encouraged to read. Post, and respond to its contents. Easy-to-use system along with a trusting culture spurred employees to contribute regularly to improve their communication skills (Cherly Nakata, 2006).

### **IMPROVE THE NECESSARY CAPABILITIES TO UPDATE ORGANIZATIONAL KNOWLEDGE**

Web-based technologies are entering into our lives rapidly and affecting our learning habits. Due to the Information Technology's revolution major challenges to firms are viewed as the updating and using of knowledge (Waymond Rodgers, 2007). Nowadays knowledge is developed rapidly around the world and every company that wants to have a good position in the business has to use update knowledge and information. Internet portals allow us to use extension knowledge and transfer knowledge with others. Knowledge transfer can helps firms to collect information from other companies and use this information to improve productivity and knowledge generation. It is an essential source of an organization's sustainable competitive advantage. (Argote, 2002) Search tools allow users to ask random questions and receive automatic responses from knowledge repository and give them a wide range of information that they can choose the best answer and also absorb new information relevant to their problem. Search engines parse individuals' questions, search for potential matches from knowledge repository, and provide potential solutions. (Waymond, 2007) Recent Information Technology advances led to increasingly large amount of data, Documents and other types of knowledge and information. (Xinli, 2009) Information technology and automated forum make it possible for individuals to get their answer of questions and learn about other companies' product and service. Using IT brings together individuals users and the organization to jointly reflect and interpret information. They put together different knowledge structure and each one can use more knowledge, so firms can improve and update its knowledge by using others' information. A company can use Information Technology in its structure for making best market decision. IT allows an organization to build a decision support system in which updated information in pushed to the desk top of all relevant employees. Adoption of publish and subscribe type systems should result to make better decision.

### **ABILITY TO PROMOTE BROADER DEVELOPMENT**

Internet has exploded in our world in recent years and has become an important part of the marketing. IT has an important role in achieving the organization's strategic development goals, the role of Information technology in the firms differs amongst firms. The competitive environment of technology has changed dramatically during the last decades, new markets are emerging, and the role of the technological knowledge and capabilities are becoming increasingly important. (Kirizma, 2008) Development of information technology and distribution of internet around the world make it easy to companies to improve their domain of customers internationalize their organizations, IT remove the destination (place of market), ease the informing timely the customers, wide range of advertising. This improvement in the IT makes new world which shows on virtually all the aspects of a firms' global marketing plan and strategies. Some authors argue that Internet revolutions make it easy to companies to conduct global marketing. (T.C.Melwer, 2003) Consider the organizations that previously have been able to compete on global marketing, now they must use information technologies to survive in competitive environment, by grow in their users based and their ability to be seen by location or time. Internet has a big potential for mass advertising and communication with variable cost for each customer, and it has effect and inform customers online, with fifty-seven percent of online hose holds are using internet for proposes like research products or services. (T.C.Melwer, 2003) These internet impact on the global marketing in not the only its power to create sales enquiries hence drive purchases through usual ways, but also internet suggest firms the opportunity to utilize new ways of reshaping and distribution customer shopping habits. T.C.Melwer, 2003) Bill Gates notes that digital technology enables a company to create of partnership that serves its customers better around the world. The fast adoption of the internet as a business bridge has resulted in more creative solutions of marketing to consumer in computer mediated environment. The internet made easy the power of companies to gain target audience with more efficiency, displacing undifferentiated and mass marketing technique for better customized trainings. Internet is a suitable bridge for companies to gain information and communication with other markets, which has been called "knowledge-creating" role of the internet. IT has a potential for companies' worldwide activities, especially in spreading in the world. (Tho.D 2005-2006) The global nature of

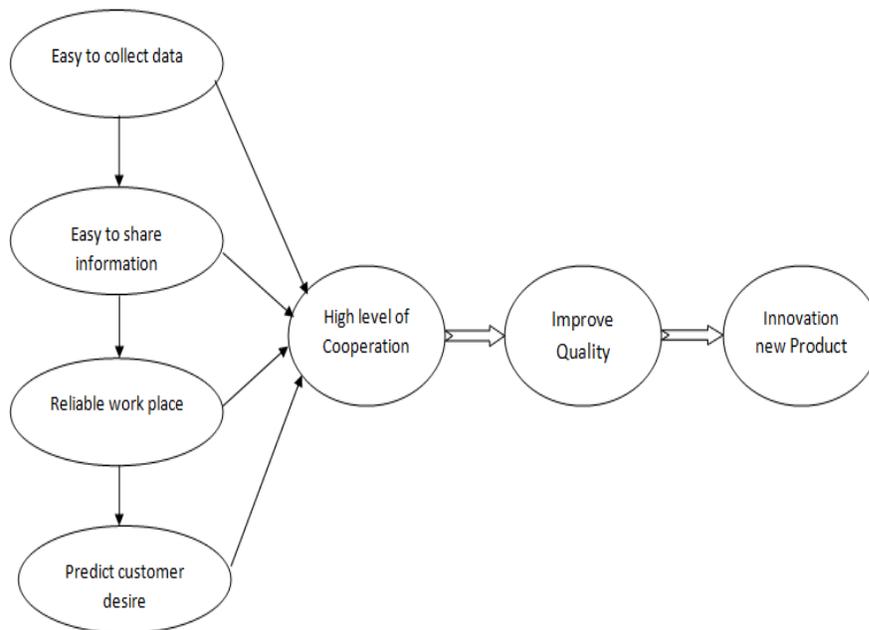
Internet, combined with the nature of the communication makes it a perfect vehicle for the international marketing. (T.C.Melwer, 2003) Internet has huge range information about foreign markets available. Internet operates as a virtual library which is possible to accessed by users from everywhere around the world. In accessing the internet firms may find various types of information to be helpful for international business activities, including information about the environment, market characteristics and marketing mix (Tho.D, 2005-2006)

### **IMPROVE BUSINESS PROCESS**

For the last two decades Information Technology and Information Systems integration and their effects on Business Process Improvement (BPI) have been the subject of considerable interest (Ganesh D.Bhatt, 2000). Information Technology enable us to collect information and process them rapidly than when IT was not been used yet in organization's structure. Using communication networks and inter-connectivity arising have become a major force affecting business in fundamental ways. The use of IS and IT in organization (shared-database, networks) cause to improve business process because it has an enormous importance for eliminate duplicate activity, reduce cycle time in product development, prevent errors, and improve customers' expectation (Ganesh D.Bhatt, 2000). Organization found it necessary to develop more flexible, team based, communication based work capability, and coordinative, so they decide to redesign their core process for this purpose. Firms must make process faster to make productivity higher, efficiency, and make competitiveness better (Mohsen Attaran, 2003). The coordination performed by IS integration enables more views expectations to be shared to be tracked and met; for example, Xerox Company surveys its customers and tracked their satisfaction through Customer Satisfaction Measurement System (CSMS). This is a large and easily accessible shared database that is widely used in the corporation to find the root cause of customers' dissatisfaction (Ganesh D.Bhatt, 2000), they reintroduce the goal of marketing major gain in reducing 'waste' in the organization. IT is defined as capabilities offered to organizations by computers, software applications, and telecommunications to deliver data, information and knowledge to individuals and processes. For a long time industrial engineers have used IT manufacturing as an analytical and modeling tools. Common uses of IT in manufacturing include production scheduling and control, process modeling, materials management information system, and logistics. Information Technology's capabilities involve improving information access and coordination across organization unit. IT is so powerful tool that it can actually create new process design options (Mohsen Attaran, 2003).

### **IMPROVE COOPERATION AND COLLABORATION THAT ULTIMATELY LEADS TO PROMOTION OF INNOVATION**

Collaboration involves flexible relationships between business partners and offer joint work; usually based projects are carried out on the short or medium term. New relationships are created almost ad hoc, and are abandoned as quickly as organizations that are distributed after the purposes and responsibilities involved in business operations have disappeared. The term *e-Collaboration* is necessary to develop a new IT framework for collaborative Web applications that supports this kind of dynamism that address opt-in and opt-out collaboration. This concept occurred in close connection with the use of meaning-based Internet technologies to enable continuous exchange, automated information between suppliers, consumers and intermediaries. Collaboration is a critical phenomenon in organizational life. It is necessary that organization improve their collaboration level. Information Technology's revolution could be use full for firms to develop their organizational structure to gain effective collaboration. Information System (IS) has devoted much effort to understanding how much technologies can improve the productivity of collaborative work (Gert, 2009). In the last two decades, improve collaboration by using IT has emerged as importance element for developing collaboration process. A shared information work place (support interaction among the members of several project teams by sharing the knowledge and information of each member) facilitate access to information content organizational communication and ultimately group collaboration. To guide employees in the sense of more effective collaboration, it is important to know and determine the set of relationships that inside of organization impede or facilitate the creation and transfer of information. To have effective collaboration it is necessary to consider the informal networks. Sharing and transferring knowledge and information by using networks inside of organization, allows the analyst of the system to understand the processes of collaboration, information sharing and information flow inside of the organization (Carla, 2006). Using Information Technology help us to have timely and relevant information to improve level of cooperation inside organization, and leads to identification emerging customer's want, and develop stream of successful new products to meet those wants (Cherly Nakata, 2006). Sharing knowledge and information between employees of a company allows it to have warm and reliable work place; For example, National Semi conductor added its own channel that called National Advisor to the Point cast Network to send company news to its employees (Khalid.M, 2002). Three types of information are shared between employees. First daily order information and traditional sales is pushed to desktops of relevant employees. Second webcasting of customer requests from the company web site for samples, facilitates the management of inventories. Third, email questions fielded on the web are analyzed by product category, and webcasted to individuals affiliated with the product category. Information Technology helps us to collect information easily from competitor companies or other relevant information from Internet, and by sharing this information among employees of the organization new knowledge and useful information can be created, and the company could predict what customer desire in the future and helps firms to innovate new products. We can illustrate the effect of IT in the organization in the following figure:

**Figure 1: effect of IT in the organization**

## CONCLUSION

IT's revolution in the world affect on all aspect of human's life and habits, changes business ways and new market are merging (Kirizma, 2008). IT opens new channels for gaining information by exploding the internet rapidly around the world people have open portals to absorb knowledge and information (Waymond Rodgers, 2007). This capability of information technology helps people to improve their knowledge and use timely information in their work so the companies' knowledge will be affected also. IT brings easy communication ways and companies use it inside firms so the communication inside the organizations will be improved by using information technology (Mairead Brady, 2002). Nowadays many people around the world use internet and it is very important chance for companies to share their product information and services with people around the world and it is not important where the people live. By sharing information and using new media advertising in the internet firms can absorb customer from the global market. IT's revolution helps firms to gain global market (T.C.Melwer, 2003). Intranet and extranet networks make it easy to collect information and process them rapidly, so inside the firms all process will be affected by IT and improve the business process (Ganesh D.Bhatt, 2000). Network and new technologies help employees to work easily with other cooperators and share information whit others, use their cooperators' knowledge to improve themselves. It causes to make a good work climate and trusted place to work. So employees engage themselves to do their best collaboration inside the firms, IT helps to improve collaboration and activate it (Gert, 2009). So it is important to companies to use information technology in order to improve themselves and survive in the intensive competition world.

## FURTHER RESEARCH

As the further research the study on this matter could be handled via adding the examination of the information technology Effect on the performance of marketing in the future. Additionally, the type of IT use is important in its role to the marketing meaning performance. The type of the IT's use is assessed via the different information operational functions and the variety of policies resulting by the availability of IT and organizational construction such as customer services improvement, service delivery and new services development. Furthermore, as a further study the use of IT via Malaysian marketers can be evaluated and also to examine how marketers in Malaysian companies use information technology.

## LIMITATIONS OF THE RESEARCH

This paper was an exploratory research in turn to achieve a general idea of how Information Technology initiates development of marketing management. We would argue that to follow the changes in the information technology capabilities it is necessary to have a longitudinal research of this type, the experience, feelings, , expertise and assurance of marketers and their use of information technology and the marketing changes due to information technology. This paper is a snapshot of single static, so for researchers it's necessary to have a continuous vision of the information technology development in our regularity of marketing. Moreover, this study did not manage for the numerous of factors which could have effect on the use of information technology.

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