Middle-East Journal of Scientific Research 12 (5): 738-743, 2012

ISSN 1990-9233

© IDOSI Publications, 2012

DOI: 10.5829/idosi.mejsr.2012.12.5.111212

## Maximizing the Effectiveness of Communications and Information Technology in the Field of Business and Marketing

Leena A. Bin Shalhoub and Mohammed Hassan Shalhoub

King Abdulaziz University, Jeddah, Saudi Arabia

**Abstract:** Information and Communication Technology (ICT) enable companies to achieve competitive advantages among others where information technology represents a resource of connecting the marketing orientation. The major objective of this article is to explore the impact of information technology as well as communication on marketing function, highlighting the distribution and marketing techniques. After we surveyed a lot of works covering this subject, we conclude that through using the most recent approaches of ICT, companies currently re-engineering their way in which they conduct business and markets products and services.

**Key words:** IT · ICT · B2B · DM · CDW · MKIS · SEM · E-commerce and GPS

## INTRODUCTION

Over the past decade till current time information technology associated with communication technology as well as the revolution and particularly the combination of database systems, computer analyses have turned the marketing function of art and the level ofthe previous largest development reserved industries and richer. The information technology and more specifically the computer systems play an important role in the following three axioms:

- The ability to register: companies can now store millions of customers records, with many properties for all-not just the names and addresses, but age, sex, marital status and family composition, Buying habits and history.
- Can chose individuals from one database or: the ability to find Select multiple properties.
- Comparability: with one set of information on customers.

The properties can be compared to customer information using various set of properties.

Combining the above three authorities with speed, affordability and the interaction of Internet communications lay the foundation for the marketing revolution. It leaves mix a few, if any, aspects of marketing

untouched, too the idea of technical and product pricing, promotion and distribution strategies. For companies that bring the promise of more efficient and customers the promise of better service. Recently in the current time mobile communications, digital television, electronic financial services, Internet and quickly became a part of the everyday life of citizens [3-4]. Continuous development of information and communication technology assist in increasing the number of electronic services and other applications. Information and communication technology (ICT) enables automatic processing of information, however, was a very powerful tool that can be used for other purposes than originally intended. ICT and e-commerce are the main engine of the development of value chain: procurement, manufacturing, marketing, sales and distribution. Specific goals and e-commerce applications, however, vary greatly depending on the business model and its size in the market in which they operate. It is clear that marketing has changed over the years. At the forefront is a shift from traditional methods of marketing more interactive and non-traditional marketing methods. In general, this is at the forefront of the Internet, blogs, social networks, marketing and bands targeted public relations. It is confirmed that as a new product enters the market, marketing department becomes active and tries to persuade buying it, which in turn leads to increased sales volume [1].

Corresponding Author: Leena A. Bin Shalhoub, King Abdulaziz University, Jeddah, Saudi Arabia.

At present time, we have enough information, but the problem arises to find those that are important for us and is usually overwhelmed with large amounts Information that is useless to us. Therefore, knowledge discovery (data mining) is an increasing role and more. Database marketing (DM) which is normal in response to the development of electronic commerce and the growth of a large amount Information [2]. Also, the data warehouse is an essential basis for many possible solutions to enhance the competitiveness and profitability of enterprises. Based on the above facts, the companies need to consider investment will contribute effectively in their business results/benefits and determine whether they should spend money on these results. Finally, we summarize the following benefits categories as a result of using the most recent approaches of ICT: financial variables, efficiency; quality variables, relationship development; competitiveness and customer satisfaction.

Literature Review: With spread of ICT and its entering to various work environment, the world is witness to close relationship between employment of ICT and performance improvement and also better and faster achievement to organizational goals [2]. The deep theoretical literature review clarifies the impact of information and communication technology on customer satisfaction through the change process, there is no consensual agreement of how to use information technology in the process of change affecting customer satisfaction business (B2B) markets. For example, industrialization of new technologies, such as GPS has not been explored extensively [4]. Raised little has written about this important issue and research question: How can the use of information technology through the change process affect clients satisfaction? As a form of advanced new technology information GPS at hand of how adoption affects customer satisfaction in the entire transport process changes. It is known well in the past and current time that E-marketing is direct marketing Internet application. Redirect marketing, which consist of direct connections with their targets accurately individual consumers to obtain an immediate response and cultivate the lasting customer relationships, However, it was by its youth marketing. Internet makes it possible to weave a dense, customized the relationship with each client, in order to better meet the needs of consumers [5].

Traditionally, in the direct marketing campaign, an organization that sends specific, time limited, usually promotional offer directly to individual customers by telephone and mail or email instead of through the media

like billboards and radio and press TV. This generates direct and quick response in the form of an order, renew our subscription, request more information, or visit the retail a port or a website. The media are effective to promote the fast-moving consumer goods but have proven less efficient for cultural products. In the field of culture and objectives are usually very small and very complex products and limited budgets for organizations to take full advantage of the mass communication techniques. Furthermore, the effect of the declaration is undeniable but difficult to specifically Measure.

A lot Companies are introducing design solutions for customer relationship management. Customer the data warehouse (CDW) for modern business essential of information infrastructure. Without that it's impossible to succeed in key areas such as customer relationship management, marketing automation and campaign management. The core is the central customer databasecollected all the relevant information about customers. customer support data warehouse operational processes (such as target marketing and fraud detection or change Client address), as well as strategic (such as consumer value is selected, it Solvency and credit risk and retirement to compete if possible reaction).

Accordance to [6] and success depends on the ability of the finance, marketing and operations finance and accounting and other functions will not really matter if there is a demand for the company's products and services. Furthermore, high competition day by day in the rapidly growing global marketing and marketing is affected by internal and external environment [7] commented. Due to these changes, the marketing department is defined as the art and science of choosing target market and win customer loyalty and attract new customers by creating and delivering and communicating superior customer value. Marketing managers know what to sell, when to sell and how to sell goods and services and in order to do this, managers for certain information to be able to decide the correct marketing. It increases the value of the information to become one of the most valuable assets. This means that companies need systematic planning information systems and development and marketing (MkIS) that can collect effectively, processing and dissemination of the necessary information available both on the internal and external levels [8]. MkIS were seen as a support system for marketing management in companies with its decision-making process, as well as the perspective of management and marketing information system can be an essential tool to regulate the whole market. Due to [8],

information systems, marketing and structure the interaction of people and equipment and procedures for the collection, analysis and evaluation of screening and distribution of accurate and timely information for use by decision makers of their marketing to improve marketing planning, implementation and control. and of the MkIS efficiency reflects the situation and relevant changes in the market simultaneously while ridding the environment reporting information redundant.

MkIS help in the analysis of the features of the product with the customer data and assessment of options pricing and channel and create and test promotional plans and get instant feedback on concepts and plans and quickly jump to the marketing plans of production [9]. [10] form of marketing information system has four parts, which are the internal records, marketing intelligence, marketing research and marketing decision support system (MDSS). Internal records are the most frequently used information on companies worldwide such as reports of orders, sales, prices, costs and inventory levels and receivables and Payables and so on. When analyzing this data managers can opportunities and threats facing your company [9]. Intelligence is the market system a set of procedures and sources used by managers to obtain everyday information about developments in the environment. The findings of the previous studies show that, the organizations around the world are depending more on new technology in processing their operations. MkIS is used widely in all kinds of businesses and has a great effect on decision making. The studies also show that MkIS popularity is increasing and the information gathered by the firms is stored in the database, where it can be easily reached when making decisions. The previous studies concentrates on MkIS in general or at one component of the MkIS only; moreover, studies about the MkIS use in the Palestinian banking sector has not been done, where this study concentrates on the use of each component of the MkIS in the banks and it shows the level of importance to each component with regard to the MkIS. In addition, the study reveals the use of the MkIS in the banks and clarifies the sources of information that the banks rely on.

## **Privileges of Marketing with ICT Approaches:** Companies are attempting to find ways to improve their flexibility andresponsiveness and in turn competitiveness by changing their operations strategy, methods and technologiesthat include the implementation of Supply Chain Management (SCM) paradigm. Hence, Information

Technology(IT) can enhance the agility of SCM [18]. Turning, second, to the concept of "information technology", now seen as a business tool, with the ability to offer competitive advantages properly if harness. However, the strategic use of information technology is the only one of the three ways in which the dissemination of information technology and business arms. It can also be used in information technology (1) routine data processing and (2) internal operational efficiency [11]. Combining the two concepts-customer service and information technology, one finds that the adoption process is not specifically anywhere in literature. However, it is clear from the documentary material that there is two ways to study the development of the use of information technology in customer service. First, there is the acceptable information technology development path. This usually is defined as follows:

- The sheets/routine activities;
- · Middle management/internal processes and
- The objectives of the strategy.

From this perspective, most companies use information technology in Customer service to deal with routine activities, for example accurate invoices. This usage than either efficiency activities and/or reduce costs. Information technology is also being used in internal management Operations, for example increasing products, which leads back to internal efficiency And/or reduce costs. Finally, with regard to the phase III information The development of technology and many companies are aware of the benefits of the strategy Information technology customer service, but have difficulty in fact, identifying and managing applications like [11]. Other approaches to discuss phases information technology development. Media traditionally used for direct marketing (email and phone) largely in use, but some restrictions:

- The mail. Mail offers many formulas for direct contact:
- Letters, postcards,
- Booklets, catalogues, samples and tapes or CDs.

In many countries mail offers discounted rates for bulk mailing. It is, however, relatively expensive and slow means of communication. The phone telemarketing (i.e. using the phone for direct marketing Purposes) is faster and more interactive than email, but also more expensive. Call a long time and considerable effort. telemarketing is regulated in some countries: individuals can have Phone number "off" to avoid receiving marketing and sales calls. E-marketing is way more attractive and cost-effective access to customers. Internet access is growing rapidly. In fact, the vast majority consumers already are linked. Send an e-mail message costs a fraction of the price of a phone call or buy stamps. E-marketing is interactive like telemarketing but is much less intrusive and client not to reply to the e-mail message immediately. Lead the time required for a very short campaign: it only takes a few hours to craft the message, extract the list of e-mail addresses and send an email against two to three weeks to draft, format, print and speed up message. It also answers e-mail easier and faster to respond to the message (or not seal Deployment) and response rate tends to be higher than nine.

[12] is based on "intelligent marketing information system (IMkIS) that has the ability to address some pressing concerns facing marketers today, can help in the analysis of the features of the product with the customer data and evaluate options pricing, channel and create and test plans promotions, instant feedback to acquire concepts and plans and move quickly in the marketing plans of production". There are three roles for the marketing information system according to [13-17], which are data collection, analysis and dissemination. The MkIS must be able to collect relevant data from different sources such as customers, competition and government. At the mean time, the MkIS must be able to analyze the data and disseminate the data to the management and the departments in the firm.

What is electronic direct marketing (EDM)? EDM, also known as email marketing, a channel of direct marketing which uses electronic mail or electronic mail as a means of communication to the target audience. EDM can be used to promote products or services and dissemination of information or for other purposes. Priority online marketing is to serve as an effective marketing solution with clearly-defined objectives to earn new customers via the Internet, thereby increasing profits. Designed email marketing service to promote your company and its products and services. The objective is to inform and motivate customers to buy through search commercial email. There is no doubt that e-marketing contributed positively in the life of modern societies and particularly consumer communities. Allowed buying materials cheaply without any limit and without any restrictions. It also gave opportunity to make a free choice and comparison between prices in electronic department stores around the Internet. E-mail may direct one online marketing communications tool that specifies the highest among marketers. Compared with the direct marketing, direct marketing online offers customization, personalization, specialized target more flexible, easier, faster and cheaper.

As seen of the benefits and importance of MkIS, there are some reasons why MkIS is widely spread and used by the organizations. According to [12], there are five factors helped in the spread of MkIS:

- Restrictions on the time allocated for the manager to make decisions and the speed needed to make many decisions
- The diversity and complexity of marketing activities and it's increase in depth.
- Information revolution and stunning development in information technology and computers.
- The growing discontent of consumers due to the lack of adequate knowledge of management of their expectations, needs and desires.
- Deficit in energy and other raw material resources necessary for the industry.

Marketing Using New Approaches of ICT: In this section we try to cover the most recent approaches and techniques of ICT that assist in raising the value of marketing and business and on the same time cope with the customer needs and meet them. Based on [19], we see that the following approaches represent the most latest IT technologies adopted for electronic marketing more efficiently.

Search Engine Marketing: Marketing based on the search engines(Search Engine Marketing - SEM) is the most effective method. Up to 87% of internet usersvisit web-pages via a search engine. Search is improving and becoming multimedia. Your search results you will receive in the form of text, image, audio or video. Therefore it ispossible to use several methods of advertising, e.g. text ads, image ads, video advertising, gadget (interactive) advertising. Instead of just displaying text or images like Google Ad Words, there's much more. These new Gadget Ads can incorporate real-time data into thead so that the content becomes more relevant to users and websites. Instead of simply clickingthrough an ad to a website, with gadget ads the consumer can click a certain area. learn moreabout the advertiser's right there and decide to continue. This results in highly targetedadvertising and marketing efforts where the users are fully aware of the site's content beforegoing to the advertiser website. Consumers link placement in search engines with successof the company. SEM is the essence of the location of the advertised web link in a prominentposition (first page) search results relevant phrases. On the first page of result links clickaround 90% of users. Up to 71% of users expect on top positions of search results the bestknownbrands and 36% of users associated placement in the results with significance andbrand positioning. What benefits will bring internet-based search engine marketing? The mainadvantage is precise, direct targeting. Visitors who get through online marketing in searchengines, looking for what you offer. Therefore, it is likely that those visitors order your goodsor services and become your customers is significantly greater than those visitors who getthere through the classical banner advertising.

Database Marketing: Problems such as lack of information receded into the background. With the amount of information that the Internet offers grows the length of time needed for their selection. We are overwhelmed by large amounts of information that is useless for us and than is problem to find those that are important to us. Therefore, knowledge discovery (data-mining) is playing an increasingly greater and greater role. Database Marketing (DM) arises as a natural response to the development of electronic commerce and the growth of a large amount of information. Electronic commerce is a new economy, which places high demands for its effective use. The necessity of effective information handling solves database marketing. Its purpose is to gather data about customers, carefully save these data intodatabases, retrieve data from the relevant information and then use this information forimproved decisionmaking processes. In the DM we are working with information in order tomore effectively reach customers. For the existence of a customer database is essentialdevelopment of information technology. The whole process of handling the information falls within the field of information systems and information technology, known as the IS / IT(Information Technology /Information Communications). Data warehouses represent thedevelopment trends in business and technology. For enterprise data warehousing is the mostused relational database management systems, they allow to store large amounts of data. In the relational database model data are stored in tables and columns. As part of this databasemay be some data from internal company information system. Filled with sufficient andappropriate database structure can also be used for

other purposes, such as market research, testing new products, measuring the effectiveness of the media, monitoring trends etc.

**Electronic Direct Marketing:** What is Electronic Direct Marketing (EDM)? EDM, also known as Email Marketing, is a direct marketing channel which uses electronic mail or email as a means to communicate to a target audience. EDM can be used to promote products or services, disseminate information or other purposes. Online marketing priority is to serve as an effective marketingsolution with clearly defined goals - to gain new customers via the Internet and thus increaseprofits. Email marketing service is aimed at promoting the company, its products and services. The aim is to regularly inform and motivate customers to buy - through solicitedcommercial e-mail. There is no doubt that electronic marketing has contributed positivelyin the life of modern societies, mainly the consuming societies. It allowed purchasing of materials cheaply without any limit and without any restrictions. It also gave the chanceto make a free selection and comparison between the prices of goods at the electronicdepartment stores throughout the Internet (1). Direct e-mail might be the one online marketing communications tool that has had the highest penetration among marketers. Compared withoffline direct marketing, online direct marketing allows customization, personalization, and niche targeting in a much more flexible, easier, quicker and cheaper way (2). Every emailsuccessfully sent is an opportunity to generate brand awareness, sales leads or any of youroutlined objectives. However, successfully sending a message is only part of the successjourney in any EDM campaign. Convincing recipients to open their mail, read the messageand act on it requires specific focus.

Concluded Remarks: In terms of development trends in the area of marketing communications cannot assure that We are witnessing a revolution in the area of marketing communications, it is clear that there is The permanent and continuous development. Customers consider quality and speed, Reliability, flexibility and cost-efficiency to be the main criterion for choosing products And services or develop customer loyalty. The article indicates that managers rely on marketing information systems (MkIS) decisions and trust these decisions, because banks have reliable technology and marketing decision support system (MDSS) which governs information collected from all sources and analyze data to assist managers in marketing decisions. Furthermore, MkIS components

(i.e. internal records and intelligence, marketing, marketing research, marketing, decision support system and new technology) have implications for the decision-making process. In addition, the study found statistically significant relationship between the MkIS and all components on the other side of the decision-making process. Also the article illustrates the use of tools MkIS collect information by banks, so widely used marketing research in the process of gathering information and is useful in the decision-making process.

## REFERENCES

- Ali Akbar Balaghar, M. Majidazar and M. Niromand, 2012. "Evaluation of Effectiveness of Sales Promotional Tools on Sales Volume (Case Study: Iran Tractor Manufacturing Complex (ITMC))", Middle-East Journal of Scientific Research, 11(4): 470-480.
- Kamal Ghalandari and Saeed Delmaghani, 2012. "Study of the Relationship of Information and Communication Technology (ICT) for Searching Information, Sales Activities and Communicational development with Performance in International Markets and New Market Knowledge in Iranian Firms", Middle-East Journal of Scientific Research, 12(2): 249-254.
- 3. Brien, R. and J. Stafford, 1998. "Marketing information systems: a new dimension for marketing research?, Journal of Marketing, 32(3): 19-23.
- 4. Buttery, Alan and Tamaschke Rick, 1995. "Marketing decision support systems in a small trading nations: an Australian case study", Marketing Intelligence and Planning, 13: 14-29.
- 5. Cassie, C., 1997. "Marketing decision support systems, Industrial Management and Data Systems, 97: 293-297.
- 6. Caudron, S., 1994. I spy, you spy?, Industry Week, 243(4): 35-40.
- 7. Colgate, M., 1998. Creating sustainable competitive advantage through marketing information system technology: a triangulation methodology within the banking industry?, International Journal of Bank Marketing, 16(2): 80-89.
- 8. Fatayerji, C.N., 2004. Electronic Marketing: Advantages and Disadvantages, Saint Regis University Wilmington, USA.
- 9. Jensen, B.M., 2008. Online marketing communication potential, European Journal of Marketing, 42(3/4): 502-525.

- Burke, R.R., 2002. Technology and the Customer Interface: What Consumers Want in the Physical and Virtual Store. Journal of the Academy of Marketing Science, 30: 411-432.
- Deery, S., R. Iverson and J. Walsh, 2002. Work Relationships in Telephone Call Centres: Understanding Emotional Exhaustion and Employee Withdrawal. Journal of Management Studies, 39: 471-496.
- Devaraj, S. and Kohli, 2000. Information technology payoff in the health-care industry: a longitudinal study. Journal of Management Information Systems, 16: 41-67.
- Ellinger, A., D. Lynch, J. Andzulis and R. Smith, 2003.
  B-To-B E-Commerce: A Content Analytical Assessment of Motor Carrier Websites. Journal of Business Logistics, 24: 199-220.
- 14. Forgionne, G.A. and R. Kohli, 1996. HMSS: a management support system for concurrent hospital decision making. Decision Support Systems, 16: 209-229.
- Glazer, R., 1991. Marketing in an Information-Intensive Environment: Strategic Implications of Knowledge as an Asset. Journal of Marketing, 55: 1-19.
- Amaravadi, C., S. Samaddar and S. Dutta, 1995.
  Intelligent marketing information systems: computerized intelligence for marketing decision making?, Marketing Intelligence and Planning, 13(2): 4-13.
- 17. Brady, M., M. Saren and N. Tzokas, 2002. Integrating information technology into marketing practice the IT reality of contemporary marketing practice?, Journal of Marketing Management, 18(5/6): 555-577.
- 18. Mehdi Fasanghari, Farzad Habibipour Roudsari and S. Kamal Chaharsooghi, 2008. "Assessing the Impact of Information Technology on Supply Chain Management', World Applied Sciences Journal, 4(1): 87-93.
- Ladislav Izakoviè, 2012. 'Application of new information and communication technologies in marketing", Department of Applied Informatics, Faculty of Natural Sciences, University of SS. Cyril and Methodius, J. Herdu 2, Trnava, SK-917 01, Slovak Republic.