

## **HOW MARKETING AND CUSTOMERS WILL BE AFFECTED BY CLOUD COMPUTING?**

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### **—Abstract —**

Market conditions, developments in industry and information technology, customer demands and globalization affect the marketing trends and related environments. Marketing 1.0 just focus on selling the product by using mass communication tools, while marketing 2.0 is based on the purpose of satisfying the customers and creating the brand loyalty with differentiation efforts in the time of high competitive world. Marketing 3.0 is value centric approach that defines the consumers as a human which are mainly affected by emotional and rational needs besides they can easily interact with each other with communication tools such as social media. At the same time, technological developments affect this process with web 1.0, web 2.0 and web 3.0. Evolution of web technologies provide more interactive, customized, collaborative, focused on individuals, advertising oriented and etc. Besides, the communication developments the new concept called cloud computing is trying to achieve the marketing 3.0 efforts. While examining the cloud computing, it is found out that there are lots of advantages of them related to marketing field such as companies can carry out the marketing campaigns in shorter time and lower price, access the customer data more efficiently, data integration and data mining can be more successful and they can access the marketing software more easily. There are lots of definitions and terminologies related to cloud computing and most of them are confusing. Throughout the research, the definition of cloud computing is going to be examined and this research will cover the concepts of cloud computing and usage examples with the effects on marketing trends and Customer Relationship Management (CRM) tools.

**Key Words:** Cloud Computing, SFA, CRM, Social Media, Sales Force.

**JEL Classification:** M15, M31, M37.

## 1. INTRODUCTION

Most of the companies are frequently using information technology tools such as automation software applications with mobile application and web based support for increasing the effectiveness and customer satisfaction for competing with their rivals in these days. Customer relationship management, sales force automation and cloud computing terms are popular in business environment while marketing management concept is evolving. For instance, marketing 1.0 just focus on selling the product by using mass communication tools and marketing 2.0 is based on the purpose of satisfying the customers and creating the brand loyalty with differentiation efforts in the time of high competitive world. Marketing 3.0 is value centric approach that defines the consumers as a human which are mainly affected by emotional and rational needs besides they can easily interact with each other with communication tools such as social media. At the same time, technological developments affect this process with web 1.0, web 2.0 and web 3.0. Evolution of web technologies provide more interactive, customized, collaborative, focused on individuals, advertising oriented and etc.

Companies are trying to maintain all the systems are connected and worked together through web based platforms which covers customer relationship management, sales force automation, supply chain management, production and etc. While integrating all the systems for the aim of working together companies suffer through integration period. Because, there are too many different frameworks and servers which should be work together and there could be integration problems between them.

Cloud computing terminology is rising with many advantages throughout this period. Cloud computing can be answer of integration problems, web based solutions and marketing based facilities while trying to achieve the marketing 3.0 efforts. For instance, companies can carry out the marketing campaigns in shorter time and lower price, access the customer data more efficiently, data integration and data mining can be more successful and they can access the marketing software more easily. There are lots of definitions and terminologies related to cloud computing and most of them are confusing. Throughout the research, the definition of cloud computing is going to be examined and this research will cover the concepts of cloud computing and usage examples with the effects on marketing trends and Customer Relationship Management (CRM) tools.

## 2. SALES FORCE AUTOMATION

Sales force automation systems are mainly used for increasing the efficiency, productivity and providing accurate outcomes throughout the companies' sales force activities by using today's technological tools such as navigation systems, mobile applications, and optimization programs etc. By using Sales Force Automation (SFA), sales staff and marketing managers can maintain contact management, create sales plan, schedule appointments, provide sales presentations, get product information and configure product specifications (Widmier, Jackson, & McCabe, 2002). Whereas, automation budgets can be ranged between \$2.5 to \$6.25 billion dollars for average mid-sized sales forces (Siebel, T. M., & Malone, M. S., 1996) and this amount is an important factor for the companies thinking to automate their related processes.

Planning and communication activities play a crucial role for the marketing managers and sales staff. Communication activities cover both sides such as customer, supply and interior staff for gathering information activities. Providing accurate communication channels by interior and exterior information exchanges, SFA systems will improve its performance (Campell, 1998 and Froom, 2000). In addition, companies can increase the customer oriented response times by implementing SFA systems (Gilbert, 2004), enriched product information, accurate order and accounting data (Honaycutt, Thelen, Thelen, & Hodge, 2005).

Moreover, SFA can produce positive results for the salespeople in competitive environment for instance; they can increase their job security by differentiating themselves and can gather information services through the system (Gilbert, Jennifer, 2004).

Companies can suffer through the SFA and CRM systems implementations. There are many barriers which can affect the adoption success Bush, Moore, and Rocco (2005) successfully summarize the factors with three headlines such as; the degree of requisite process change, salesperson buy-in, and perceptions of technology enablement.

Besides, salespeople are the important factors that affect the SFA success. Salespeople's' intention to use the new system perceived usefulness, attitudes to the new system and the compatibility with the current system (Jones et al, 2002). Technology usages of companies' employees will affect the SFA implementation success and can be exceeded by support such as technical support, training and management support (Buehrer, Senecal, & Pullins, 2005).

At the same time, low perceived value, Lack of support from organization, personnel and demographic factors, lack of rewarded to change will affect the new systems usage ratio through the integration period (Jones et al, 2002; Parthasarathy & Sohi 1997).

While using SFA and CRM systems, salespersons try to use technological environment tools in digital environment for harvesting the benefits of online world. These systems should provide a virtual platform for both companies and customer whom they can interact each other such as customer orientation and sales person can observe customers' responses (Roman S, and Iacobucci D, 2010).

Furthermore, there are new applications such as e-learning such as salesperson can get education from the company while they are out of the office or they can get training about the new automation systems (Davis R and Wong D., 2007).

### **3. CUSTOMER RELATIONSHIP MANAGEMENT**

CRM is gaining importance for the companies as the reason of high competitive business environments which supplies more qualified, customized and low cost produced products. There are two main salvation tools in this competitive and globalized environment. One of them is CRM and the other one is information technology. CRM can be briefly defined as gaining new customer, keeping existing customer, establishing customer loyalty by using relationship management whereas understanding the consumer behaviors (Swift, 2001). But, generally companies perceive CRM as a technology adaptation while they underestimate the theory that they have to act as customer oriented and their aim is to strengthen the relationship between company and customers. In addition, the technological adaption will suffer because of the employees' lack of technological capabilities like the same reason of SFA integration.

Salesperson knowledge and salespersons' effectiveness will be directly affected by proving the market research information and supporting technology tools (Sujan, Sujan, and Bettman, 1988) to reach that information such as automation software programs like CRM or SFA. Besides, targeting is an important stage that sales person can identify and group the customers' interests, ability to buy and their potentials which can be support with usage of these automation systems Moreover, automation tools can improve salespersons' performance, efficiency, sales skills and behaviors (Michael Ahearne a, Hughes, & Schillewaert, 2007).

There is an effective research on business intelligence (BI) which covers data mining and CRM application examples with the results of a company named Fingerhut by Phan, 2010. According to a research; usage of BI and CRM decreases the threats of price by using software and systems such as supply chain management for getting the lowest price from their suppliers and also supports for optimization of the customers' orders according to quantity predictions of these automation systems. Whereas, they prevent form switching cost affects by establishing customer loyalty (Phan & Vogel, 2010).

#### **4. CLOUD COMPUTING**

There are too many different definitions of cloud computing. There is an effective and simple definitions were made by Sultan (2010) about the cloud computing as; "clusters of distributed computers which provide on demand resources and services over a networked medium" and listed the services as;

- Infrastructure as a Service (IaaS); products that includes remote delivery such as virtual computers, servers, storages through the internet. For instance, you can use virtual disk storage space for installing your pictures as a reason of your notebook does not have that disk space.
- Platform as a Service (PaaS); you can reach and control remote local platforms such as operating systems, servers and other services. For instance, you can log-in your windows based computer that is located on your office and write word document with your Ipad from your everywhere.
- Software as a Service (SaaS); Applications are delivered through internet as a service without installing or maintaining. For instance, you can play a game through internet without installing any kind of application to your local computer.

Most of the universities using cloud computing for maintaining their students' email accounts. Yeditepe University is using Google email service with the cloud computing framework in Turkey. Using this method university has delivered the risk of disk storage shortcuts, security attacks, and high maintaining costs.

There are too much researches about the benefits of cloud computing. Research by Marston, 2011 can successfully summarize the benefits of cloud computing;

- Provides optimization of resources with lower cost, especially lowers the entry costs for smaller firms which are seeking for business intelligence.

- Provide immediate access to hardware sources without any upfront capital investments.
- By using online applications, companies can lower the IT barriers because users can use applications without no installation or maintenance.
- Companies can scale their services more powerful. For instance they can increase their capacity with lower costs and energy to maintain.
- Also, cloud computing gives a chance to companies to establish parallel batch processing, mobile interactive applications and business analytics more powerful than ever before (Marsto, Li, Bandyopadhyay, Zhang, & Ghalsasi, 2011).

There is an important distinction in cloud computing as private and public cloud. In public cloud, enterprises use the third party service provider while private cloud covers flexible and service based server allocation which is managed and located within the company. Security and reliability concerns force companies to integrate cloud as a private cloud. Generally, companies prefer to use virtual machines for cloud computing and they are trying to optimize their hardware resources. For instance, by using virtual machines a physical server can act like a multi server computer (numbers can be limited up to that server's capacity) which gives companies to decrease the physical server numbers and maintenance costs.

Companies can get different services from IaaS, PaaS and SaaS or can combine these services as a whole. Salesforce.com Company provides their customers effective solutions while covering cloud computing. When companies decided to buy a new automation system, Provider Company will install the software to the local servers of the buyer company. But, when the companies select Salesforce.com solution there is no need to install any kind of software to your companies' computer. You have to decide which services and application to use and then you will start to use them through their web based portals with cloud based server while paying an annual price for them.

Salesforce.com products are SFA and CRM based solutions with Service Cloud, Marketing cloud, Salesfroce.com products are SFA and CRM based solutions with Sales Cloud, Service Cloud, Marketing Cloud, Sales Platform, Salesforce Chatter and Salesforce Work.com. Sales Cloud covers account, contact, task, appointment, campaign and deal management packages while supporting communications between customers and company employees by chat and video conferences. Furthermore, company could use BI tools and evaluate social media

channels with the solution. Service Cloud; runs customer service, support, and help desk solution. For instance, customers can connect with the technical person by video conference for solving their problems. Marketing Cloud covers marketing activities and covers social media extensions of the company. By using Salesforce Platform, enterprises can use 135 different servers and applications or they can develop their own applications which are maintained, updated and backup by the Salesforce.com with cloud architecture. At the same time, employees can use different operating systems and related application with the help of this platform. For instance, sales representatives can visualize the 3d model of the product with their mobile devices without any software installation or high CPU power installed computer. Sales Force.com is expressive example of using cloud computing for marketing activities.

Other advantages of using cloud based automation systems are the social media based marketing efforts. For instance, an airplane company gave customized presents to their customers by using data which are gathering from their customers' social media accounts which motivates their customers or companies can arrange short period campaigns for their customers.

While adapting cloud computing, companies can struggle in period of choosing services, applications or third part companies they have to work with. There are not too many numbers of companies who provides all the services, platforms and applications as a one package. Companies have to pick up different services from different vendors and combine them with their customized needs while overcoming the technological change barriers.

Successful integration of cloud computing will affect the companies with decrease in their cost, and also supports marketing managers can produce and serve more customized to their customers by using effective information based networks with shortened response times even as using interactive web tools and social media channels. Moreover, customer can take better support and information about related product or service through their mobile devices from everywhere and every time.

## **5. CONCLUSION**

Today's competitive environments or the globalization affects leads companies to find new ways to produce more customized products and services while satisfying their customers with shortened response times and decreased prices by using

automation systems such as customer relationship management, sales force automation, supply chain management, production control and etc.

Cloud computing seems to be a solution for these concerns by optimizing resources and strengthen the communications between customers and employees of the selected enterprises while using social media channels. Also, the marketing capabilities are developing by using cloud based BI tools and data collection channels and measurement facilities.

Most of the companies are transforming their applications, services, servers to cloud computing. But, the transformation process covers the important selection phase that which services or applications should be maintained by which vendor to that company? At the same time companies have to choose between private or public cloud computing.

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