

# Technological Factors to Improve Performance of Marketing Strategy

Sultan Alghamdi

Department of Technology Management  
University of Bridgeport  
[salghamdi@my.bridgeport.edu](mailto:salghamdi@my.bridgeport.edu)

Christian Bach

Department of Technology Management  
University of Bridgeport  
[cbach@my.bridgeport.edu](mailto:cbach@my.bridgeport.edu)

**Abstract**—The purpose of the study is to offer a review of literature on how information and communications technology is developing and improving marketing practices and strategies. Technology has changed so much about the way people all over the world deal with each other – be it in business, politics, education, or in socialization. Internet has been the source of information. The internet has allowed wide and extensive collaboration. It also promotes innovation. As the internet progresses, the prices are also decreasing and it becomes greatly friendly to the users. It has changed the way businesses operate nowadays. The increasing rate of competition in the marketplace has changed the company orientations. The paper uses a theoretical modeling on past and current sources on the implementation of information and communication technology in marketing practice. It focuses on modeling the factors identifies in the marketing communication framework model, by looking at communication factors and variables affected by the use of technology. The model demonstrates that technology has a positive impact on marketing strategy where it is integrated with marketing elements of positioning, selection of target segments, segmenting the market, understanding consumer behavior, managing sales, managing marketing campaigns, and understanding the market.

**Keywords**—*component; Marketing Strategy; Technology Impact on Market strategy; Significant change; Internet marketing*

## I. INTRODUCTION

The efficient and successful business is operating in an environment characterized by information, dynamism, and globalization, driving it to be flexible and react quickly to changes in the market. Business's reaction is the result of continuous, accurate, and rapid flow of information possible through information systems and information technology[1]. The continuous development of communication and information technologies has had a profound implication on businesses and business functions like sales and marketing, procurement, finance and accounting, research and development. Different scholars analyze the different ways technology is applicable to marketing practices. For this research, it is the different factors of marketing practices that technology directly influences that is the focus.

According to Brady [2], technology has encouraged the development of relationship marketing, which improves the relationship between the consumer and company compared to the traditional transactional marketing mix entailing the 4P's. Effective marketing strategies are today centered on relationship marketing to retain and attract consumers by meeting consumer satisfaction, by overcoming problems to consumer satisfaction as seen in the diagram below. Numerous authors, [3-6] identify that technology has an impact on the main activity of marketing strategies, which is the securing and retaining of profitable relationships with consumers. These studies find that technology affects the way companies communicate with consumers and how they carry out their promotional activities. They also identify that technology; especially interactive technology like the internet enables consumers to interact directly with the company. Technology in marketing as also eased mass marketing through e-marketing revolution that offers customized and personalized marketing services. However, this study will prove there are different factors or ways technology impacts marketing strategy. These include consumers, managing sales, managing marketing campaigns, and understanding the market [1, 2, 7].

## II. RESEARCH METHODOLOGY

Theoretical modeling begins with a need to understand a marketing phenomenon, for example, to try and understand why stores have sales. The researcher then constructs an environment, which is the model on which actions are to be explained or take place. A model is a series of assumptions, which may be purely mathematical and aim at making the research assumptions tractable or they may be substantive to verify empirical content [8]. These assumptions can describe thing like actor involved, what they care for, and the exogenous conditions they make decision in. in marketing, the actors of any marketing model are consumers, channel intermediaries, and manufacturing firms. The theoretical framework or model is derived from relating the conceptual or concepts of existing theories [8]. For this research, the research method begins by identifying the theories of marketing strategy affected by technology, and then it tries to find a connection between the theories to create the model. In this case, the

model used is a schematic diagram with boxes and arrows showing the constructs and propositions, and the arrows represent the relationships between them. The goal of using this model is to create concepts in a logical and sequential design to represent the formal structure and existing theory of applying technology in marketing practice.

The theoretical model uses theory, which offers a foundation for the researches meaning. The theory is a set of interrelated definitions, constructs, and propositions offering a rational view of the phenomenon by explaining or predicting relationships between the research elements. The role of theory in this research is to offer a rational explanation of the interrelationships between propositions, definitions, and constructs of the impact of technology on marketing strategy, and explains existing conditions or predictions of future outcomes of natural phenomenon [8]. This research employs a theoretical framework where abstracts and constructs are defined and the relationship between them identified. Abstracts describe and name a phenomenon providing a separate meaning and identity. In this research, an abstract is the marketing phenomenon in which different variables, constructs, and factors of marketing occur. The constructs are very high levels of abstraction with a general meaning. They offer a concrete level and have narrow definitions, for example, the construct of consumer communication relations in the marketing framework.

### III. THE GOAL OF MARKETING TECHNOLOGY

It is important to understand the concept of marketing strategy to comprehend the impact of technology on strategy. This is necessary since there is a lack of clarity in literature as some scholars identifies targeting, segmentation, positioning, and differentiation as marketing strategies. In the same breadth, other scholars identify marketing mix elements or the 4-Ps mix including product, pricing, promotion, and place as marketing strategies [9]. These accounts of marketing strategy fail to differentiate between marketing strategy and marketing management. Marketing strategies are segmentation, differentiation, targeting, and positioning. According to [9], marketing strategy is the taxonomy of marketing strategy formulation and implementation processes. It is defined as the "integration of segmentation, targeting, differentiation, and positioning strategies designed to create, communicate, and deliver an offer to a target market [9] p.268." The involvement of technology in marketing strategy leads to improved communication, better product content, and connection in a market between consumers, company, and competitors. Technology like the internet builds brands with better content that connect with consumers and give a company competitive advantage over competitors. Brands that can connect with the market communicate better in context, and connects by increasing followers, connections and likes in the market.

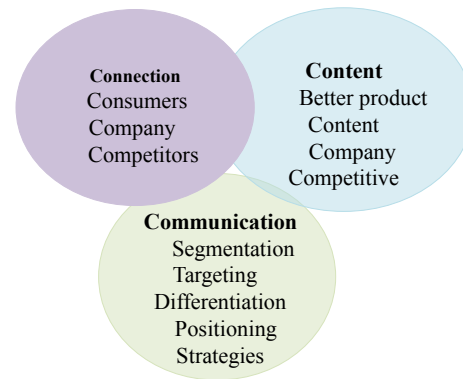


Fig 1: *The involvement of technology in marketing strategy*

Therefore, marketing strategy formulation is an iterative and interactive process that performs the sequence involving understanding customer behavior, segment the market, select target segments, design the offer to fit the target market needs, position it in the customers minds, and differentiate the offer [9]. Marketing strategy also involves the processes of creating value (price/product), communicating the value (promotion), and delivery of the value (channels) [9]. Other scholars identify that marketing strategy are approaches involved or associated with competition and market share. Marketing strategy involves the identification of the optimal market share, maintain, and reduce the market share, and the creation of competitive marketing strategies. Marketing strategies are implemented and formulated directly to the activities of competitors. Marketing strategy processes are designed to offer positive customer experience, offer customer value, satisfaction to achieve royalty through effective marketing communication and delivery processes. Marketing strategy strive to achieve maximum positive outcomes from this positive customer experience entailing higher financial outcomes. Therefore, given this broad definition of marketing strategy, this research identifies the key factors in strategy technology impacts.

### IV. TECHNOLOGIES TO IMPROVE MARKETING STRATEGY

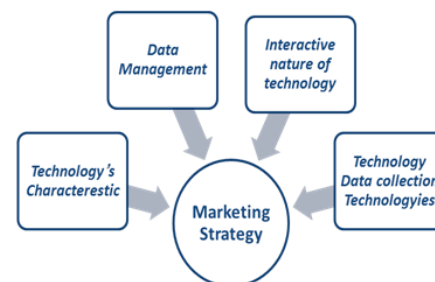


Fig 2: *The impact of technology on marketing strategy*

### *A. F1: Technology Date and collection techniques*

“The use of the internet as a medium, and the World Wide Web as an evolving technology has made it less costly and allowed marketers to get information- both of low quality and high quality- more quickly and easily than ever before [10] p.85.” Marketers have traditionally used survey, observation, and experimental research, but with the advent of technology like mail, personal and telephone interviews, and electronic networks have increased their marketing research capabilities. The convergence of media and Transmission Control Protocol/Internet Protocol technology, and including cell-phones, television, and touch-screen responses assist marketers to collect data from the market and from their stores. The technologies collect data on visitors to the company’s websites, purchases, inquiries, and competitors. The technologies synchronize data from various sources to determine the changes in market and consumer demands from inquiries, comments on blogs, and online comments on social media sites.

According to [11], traditional marketing research on competitors, brands, and consumers was suffering from falling participation rates, respondent fears concerning misuse of private information, rising costs, and managerial issues. Data collection techniques using technologies like mobile and internet based technology have the advantage of lower costs, high response levels, faster turnarounds, broader stimuli potential from inclusion of color, lower respondent error, flexibility from adaptive questioning, sounds and graphics, and greater enjoyment to the consumer or respondent [10].

According to [12] an important data collection technology is the open source intelligence, which is an information processing discipline. This process scans, finds, gathers, exploits, validates, analyzes, and shares intelligence seeking clients from publicly available digital and print data from unclassified, grey literature, and non-secret sources. The approach is very popular with businesses since it is easy, inexpensive, and produces plenty of raw materials for processing. The growth of digital media and sources like the World Wide Web and public communication airwaves enlarges the open source activity, offering large source of data for marketers to plan and forecast their markets. This is because the data collection technologies like the open source, data mining, and data warehouse technologies assist marketers to gather, analyze, collect, and store huge amounts of data on their markets in terms of consumer experiences, competitors’ experiences, and brand experiences.

### *B. F2: Interactive nature of technology*

Technology, especially the mobile and internet technologies have increased interaction. This element of technology is an important factor for the study since interactive technologies are a major influence on today’s consumers. According to [13], “marketing and advertising is evolving with the dissemination of the internet as a tool for commerce and technology p.437.”

There is empirical evidence that the motivation and outcomes of interactive technology is directly associated to the consumer.

Having carried out an empirical study of millennial consumers, [13] finds that these consumers use interactive and integrated technologies like their mobile and internet devices to connect to brands and retailers. This finding implies that technology is directly connected to marketing strategy since it leads strategies to focus on consume experience. The study also finds that interactive technology is used by these consumers to interact with traders on their websites and through social media platforms. They also make use of these technologies to make online purchases, as they allow them to access catalogue of products and services and coupons.

The studies identify that marketing strategies must consider interactive technologies since majority of consumers, especially the young generation turn to online marketing and advertisements for information on products and services, to make purchases, and compare brands. They also use interactive technologies like the mobiles and internet to interact with other consumers, retailers, and bloggers as they make decisions on brands. According to [14], they turn to online shopping channels since they are socialized to use these interactive technologies. The rapid changes in technology have driven the population to make wide use of their mobile devices with internet connection for communication and literacy reasons. More and more people are on interactive technology each day drawing businesses to restructure their business functions to match the shifts in society.

An area that is highly affected by the existence of interactive technology is marketing as it is the key to communication between the brand, company, and consumer. With more consumers on interactive technology, companies are using mobile and internet technology to market and communicate with consumers. Studies identify that this is allowing companies to improve their marketing strategies, gain a competitive advantage, and gather data on consumer and market trends, and competitors easily. This is because interactive technology allows for a two-way communication channel between the consumer and marketer or company.

### *C. F3: Data Management*

“The successful implementation of relationship marketing demands the integration of timely and accurate market, consumer, and product information [15] p.64.” Organizations are expending great efforts in using the latest information technology to maintain and build information systems. The effective use of such systems needs a high degree of data quality fit for the use by data consumers [16]. Data management is necessary since poor data quality causes immediate economic harm since it leads to the creation of bad business and marketing strategies.

Data management technology develops, executes, and manages practices and programs that control, deliver, protect, and enhance valuable information and data assets. Data management involves the equipment and skills used to secure,

store, organize, and retrieve information [16]. For marketers, this information is on product and service, brand, market size, competitors, their strategies, brands, market forecasts, market trends, and sales history.

Achieving consumer satisfaction requires a company to mandate quality production policies as well as production systems. These in turn necessitate quality data systems and policies. The successful implementation of relationship marketing strategies requires the development of data quality policy, identification of critical data quality requirements, and set up data production systems. A marketer seeking to improve their marketing strategy must focus on the key factor of marketing, which is the establishment of a relationship with consumers. This relationship is maintained and established where the company is able to identify and offer consumers their preferences and tastes. This is only possible if the marketer is aware of these preferences and tastes as found in the marketing information or consumer data.

The studies find that the possession of this information is not enough to warrant the success of a marketing strategy. [15] identifies that effective data management systems must be in place to develop, organize, analyze, process, present, interpret, and store the marketing information into useful marketing and sales plans.

#### D. F4: Technology's Characteristic

Technology offers a diverse ways of dealing with core business competences and functions. This is because the characteristics and nature of technology allows it to perform these functions, and are finding wide applications in marketing. For example, [17] identifies that "search engines are important ways to get people to your (Web) site initially once they want to ensure they return. An excellent way to do this is via a newsletter [17]." Technology like the web-based search engines and the internet allow companies to discover new potential clients. They allow existing consumers to include the URL of the company or its advertisement site to their list of favorites allowing them to easily return to the sites and check out new products, announcements, and services. However, according to [18], this does not ensure that first time consumers will return to the company's site or will regularly check for new products and services. Studies show that information and communication technology like the e-mail accentuate the advantages of the internet and web technologies. This is because e-mail becomes a push and pull tool that offers consumers a platform with free useful information in the form of e-bulletins and e-newsletters [17]. These are added to web-based technologies to add to the pull strategy of the websites.

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The Websites first attract new and existing consumers by having a high search engine score increases the probability of it appearing on the first page of the search engine. This is achieved using the right combination of search terms associated with the company, its brands, its advertisements, sales promotions, and offers [19]. The e-newsletters and e-bulletins add to the pull strategy of technology for they offer the consumer useful information as well as promotional materials. A consumer convinced of the information, then contacts the company through their e-mail list, makes a purchase online, and requests for delivery online. These web-based tools are the main technologies that improve the pull strategy of marketing.

#### V. IMPORTANT OF TECHNOLOGY MARKETING

The model is important for it show the different key pillars or segments of marketing strategy, and how technology impacts these segments. The model show that technology has a major impact on marketing strategy since marketing strategy is not a standalone endeavor. Marketing strategy is a functional area of a firm involving different elements that are integrated to create a competitive marketing strategy [20].

The model has led to the realization that technology leads to consumer satisfaction as it has a positive effect on consumer experience. This is because the model identifies that each element of marketing strategy leads to the creation of a positive relationship between the consumer and the brand and company. Therefore, in the model, all the elements are connected, and technology mediates these elements to improve the performance of marketing strategy.

#### VI. CONCLUSIONS

In this paper, an integrated framework of marketing strategy formulation and implementation factors is presented along with the impact of technology on each. The paper advances propositions that differentiate and integrate marketing strategy processes and recast them into a model to demonstrate how technology affects each process. The model demonstrates that technology has a positive impact on marketing strategy where it is integrated with marketing elements of positioning, selection of target segments, segmenting the market, understanding consumer behavior, managing sales, managing marketing campaigns, and understanding the market.

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