PERAKENDE TEKNOLOJİSİ: ALIŞVERİŞÇİ ODAKLI ALGILAMADA BİR DÜRTÜ

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Abstract
In terms of globalization, it is obvious to reveal that retail industry is being reshaped in the context of technological advances. In this globe, consumer preferences are also changing and companies are spending the most effort in meeting the needs of the consumers while reducing the cost of operation on the company side. In the concept of sustainable competitive advantage in retail industry, it is advised that new technologies should be revealed and used. In this sense, the consumers should be motivated as a means to use the newest and most advanced technologies. Retailers, by using and implementing the newest technologies not only increase the number of consumers but also they succeed in keeping loyal consumers by meeting the needs of the consumers. This strategy ends up in reduced cost of operations while increasing efficiency on the consumer side. In this study, managerial implications are being discussed towards consumers that face new technologies. If companies may adopt efficient retail technologies, they not only increase their sales through extended technologies, but also they become shopper centric thereby they might possibly offer a value to the consumer in order to compete well. With the support of omni channels, retailers may well engage in integrated marketing communications. Especially, new technologies well contributes to this process.

Keywords: Retail technology, mobile shopping adoption, omni channel retail

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1. Introduction
In today's retail industry, new concepts and competition tools have been introduced as an attempt to establish efficient business practices. In this sense, as a result of substantial increase in buying power, companies initiated to offer variety of products and services. On the other side, it is obvious to analyze that as the world moves towards the era of consumption, companies nowadays are forced to provide a greater amount of information in order to position themselves appropriately in local and global markets. In this perspective, literature in this field proposes that two way communication should be utilized in between consumers and the companies. However, in this notion, customized offerings and services are given priority in launching business practices as a means to differentiate the offerings. Finally, in the context of global competition and local incentives, it is mandatory for companies to improve logistics and operations efficiency for cost savings.

On the other side, there are two factors that enhance the change in shopping behavior. These are listed as internet retailing and smart phones as indicated in the related literature. In this way, consumers have the convenience of purchasing anything online and having the opportunity to be delivered to their desired location. Surely, there have been several indicators for e-commerce. Among these have definitely been the value and convenience that is being transferred to the consumer. In addition, increasing access to the web, pace in downloading process, advanced shipping and cargo process, online transfer of fees and payment, a huge popularity to smart phone technology and tablets have all caused a sudden and dramatic emergence into internet-shopping in the mid-to late 1990’s. According to Digital Innovator Report of Euromonitor; based on this competition and innovation on the e-commerce companies like Amazon and Alibaba, store-based retailers have been forced to launch unique and value oriented alternative solutions.

Recent literature review in this concept states that the process that starts from the vendor and ends in the delivery to the consumer focuses on three main issues. Firstly, it is stated that integrated logistics management approach should be implemented. Secondly, just in time distribution should be considered. Third, quick response technology should be prospered. Overall, these three business strategies aim to increase efficiency while reducing the cost of operation which in return might possibly offer competitive advantages in successfully managing the retail enterprises.

As depicted here, a new managerial thought in regards to managing the retail industry has to be revealed in four main grounds. Firstly, the use of market research should be situated as a strategy to meet the needs of the potential consumers along with overseeing the potential risks and benefits that arise in the markets. Secondly, companies that are competing in retail industry should restructure themselves in the light of hiring passionate, enthusiastic employees as the main focus and responsibility in services industry is being undertaken by employees who reveal the company message and mission effectively to the consumers. Thirdly, retailers nowadays aim to create a community of consumers by generating various marketing strategies, thereby increasing the level of consumption on the consumer side. Fourth, retailers along with these advances in the retail market are spending the most effort in rethinking the marketing mix based upon the changes and challenges that occur in the retail industry.

2. Literature Review
Recent literature review reveals that two concepts have highly emerged in the retail industry. The first is definitely the introduction of mobile technologies to the retail indus-
try which has transformed the industry to a rapidly changing competitive atmosphere. Second, in this globe, emergence of digital platforms have been given an important concern as a strategy to take role in the competitive retail markets. While, shopper experience and consumer satisfaction played a critical role in decision making process. Here, the overall strategy has been focused on enabling consumers to use the technology extensively. This is why traditional retail instruments have shifted to technology mediated mobile services (Hung et al, 2012:30). According the the related literature, “Theory of Reasoned Action- TRA Model”, (Fischbein and Ajzen, 1975) is the first theory that has been introduced to the literature in terms of preexisting attitudes which are explained as positive and negative feelings about a particular behavior and behavioral intentions which are explained as impacts of age, gender, prior experience, and ability etc. Afterwards, TAM Model- Technology Acceptance Model has been addressed. This model aims to improve the prior TRA Model in the specification of consumers’s approval level ( in the context of accept and use of a technology) to technology. Within this model, perceived usefulness and perceived ease of use are important factors to explain behavior (Davis, 1989). Following this model, Extended Technology Acceptance Model has focused on intention to adopt mobile shopping (Venkatesh et al, 2012). Intention to adopt mobile shopping states that the effects of trust and perceived risk on the system use plays an important role in mobile shopping attitude (Agrebi and Jallais, 2015). In these models that are being specified here, the major concern of interest is based upon perceived enjoyment, perceived usefulness and convenient Access.

Technology Adaptation Intentions are being discussed in terms of “reasons for” and “reasons against” (Gupta and Arora, 2017: 2) Under “reasons for”, the research shows that price savings, choice variety, and convenience are the most dominant factors. Under “reasons against”, self efficacy, consumer anxiety, relative advantage are the most dominant factors. As technology changes quickly, retailers have to be proactive as an attempt to meet the competition. In literature, this is called “smart retail”. Smart retailers in this sense should have different motivations in order to cope in this industry. Companies should be able to analyze the feedback effectively that comes from the point of sales which in return might possibly help them to contribute well to earning new customers while keeping the current customers on hand. In order to effectively conceptualize this fact, consumer’s needs and behaviours should be detected and researched deeply as a way to raise the number of loyal customers through increasing the share of heart and the share of wallet. There are a number of technologies that have been generated to meet this specific goals. Automatic visual data analysis, in this sense, is one of the most famous analysis techniques that aim to create a distinct advantage on the company side. This data analysis focuses on following an individual’s overall movement in a retail store. So, an analysis can be retrieved and recorded on behalf of the customer’s shopping experience. This shows that new sensors ( like iBeacons or Radio Frequency Identification- RFID’s) have been introduced as this approach used to be realized through standard cameras in the past. In this video analysis, consumer’s region of interest is attempted to be found. (Quintana et al, 2016: 3-4). There is a solid reasoning behind why retailers should use these recent technologies in their management strategies. Motivating new consumers, increasing sales from current shoppers, inceasing surplus on consumer or decreasing cost through reducing labor to shoppers are the primary reasons that have been pointed out in the related literature (Inman and Nikolova, 2017:7-8). In the 20th century century, retail technology has started with barcode technology in 1974. Retailers in those times have made use of barcoding for shelf space allocation and strategic decision making. Later on, video cards have been brought into the market. This
instrument has been driven from location based marketing. In the case that the display receives a certain signal, it automatically displays advertisement in regards to respective location (Malec and Mozer, 1994: patent received). In-store coupon dispensers also help frequent shopper program as a means to understand which product categories are being sold based on the consumer’s previous purchase history. On the other hand, a kiosk consists of a touch screen that can deliver information or promote the sales of products and services. Kiosks are the initiators of innovative self service technologies. As the lifestyle of consumers have changed in the retail industry, kiosk offer benefits in airports, hotels, banks, grocery stores, and shopping malls. On the other side, video monitors are the other tools in retail technology that have been used in the past. This technology is initially used by Wal-Mart as an aim to increase sales (Inman and Nikolova, 2017: 10).

On the other side, in the millenium age, several retail technologies have been introduced. The new generation is called the Screen- Age which is described as a generation that is addicted to new Technologies with their hand and soul. Multi screens and socia media dependence are the major indicators of this generation. There is well beyond engagement which also includes hashtags which in return offer word of mouth in the context of viral marketing. Companies which plan to succeed in this competitive environment should make use of screen in order to reach their customers such as TV, laptops, smart telephones, tablets, smart interactive dispensers, and smart ledbox). This is called “omni channel retailing”. The retailer should compete in terms of physical, online, and mobile platforms. This is why integrated marketing approach should well be adapted to the overall strategy(Pantano and Viassone, 2015:106).

Such actions have ended in online shopping capabilities, the the growth of mobile shopping aps and a move to omnicgannel retailing, in this way consumers have the advantage of easily reaching a retail brand at the same time through the engagement of different ways. In this sense, nowadays the use and implementation of 4G plays a huge role in offering efficiency in faster mobile broadband Access facility while driving a success in data usage. In the context that the number of Wi-Fi spots have been restructured in the sense that people can log on to their devices without having the necessity to count on mobile networks which offers an innovative approach on the company side.

With the aid of this, consumers are able to receive a better level of service through advanced Technologies. In this sense, screen age generation seeks customized experience. Apple’s IBeacon technology offers customized services to consumer. For example, if a consumer is willing to buy a diaper, in that location, a message is being sent to the consumer’s smart phone about a promotion about diaper rash cream or baby shampoo. Besides, loyalty programs are also changing in the new age retail industry. For example, fast and instant applications are in use. A consumer is likely to receive a free product in the case that he/she hashtags or he/she engages in social media messaging. Mobile wallet is going to be more popular in the coming years not to replace credit card usage. In this globe, emerging and value oriented paymet methods have been prospered. Among these, pay pal is one of the major payment method that dominates the market in this related field. However, digital wallets, such as Google's Instant Buy and Visa’s V.me has the advantage of preserving payment data and info in the storage base in order to diminish the steps to purchase, thereby creating an ease of operations on the online process. On one side, the growing popularity of what is called “showrooming” has taken the attention of online consumers recently. Showrooming is a concept where consumers go to the store to observe the products traditionally, then they are given the opportunity to order these products in the context of online buying. This process ends up in traditional retailers bringing an opportunity to consumers in terms of inviting them to their online outlets and providing incentives to purchase products online that consumers have seen and tested tradition-
ally. The search for value has really been offered to the consumers in this sense, as the consumers have the opportunity to compare the whole process, such as price comparison web sites etc. On the other side, several precautions have been taken to the process of showrooming since now consumers have the privilege to see and observe the products in retail stores and then find the most decent prices for such products online. This scenario have enforced the retailers to be active both in physical and digital world. The term “phygital” arises from this notion.

In the trends that have been explained above, new retail technologies have emerged. Firstly, mobile ads make use of utilizing smart phones to shop in an anytime anywhere thereby offering an extensive level of convenience in shopping. Second, self scanning is another technology to improve retail efficiency by offering ease of sales without waiting in line. Customers scan their purchases themselves and make payment (Demoulin and Djeelassi, 2016: 541). There should be clear instructions and video demonstrations near the check outs if the consumers are accepting to use this service. In this way, self-efficacy can be increased. In this technology, consumer’s actual payment habits should be researched whether the consumer is willing to pay cash or with credit card. Need for interaction and enjoyment lacks in this process. That’s why a promotion strategy should be established to attract this form of technology. For example, hedonic benefits may be offered. Also, situational factors like time pressure, small baskets, and line increase the usage of self scanning (Demoulin and Djeelassi, 2016: 554). Self scanning also includes “scan and go” approach. This is a strategy of sales by the use of smart phones to scan items on the shelves so that there is no need to scan the items further on the check out line. This strategy saves time on the consumer side thereby offering a great level of value (Inman and Nikolova, 2017: 12). Third instrument is called the Q Vision. In this instrument, there exists infrared sensors that count shoppers which reduce the waiting time in the check-out counter. So, based on the number of consumers waiting in line and their buying behavior, new check out counters are being opened and the same system is being applied to parking lot based on predicting how much time is being spent during the retail store. Fourth is the application of smart shelves. In this instrument, there exists weight sensors in the shelves so that retailers get rid of out of stock. This organizes the flow of information in best efficient way possible by implementing relationship marketing. This instrument is also one of the best ways in establishing effective supply chain management strategies in retail industry. For example, there is an extra net system between Migros and Procter&Gamble that states that as pampers reduce in quantity in the shelves, there is a flow of information that’s being sent to the producer and supplier throughout the supply chain system so that pampers are being sent to Migros promptly. Through smart shelves, a good level of communication may also be utilized by push messages and digital price tags (Grewal et al, 2011: 46). Digital price tags enable retailers to constantly monitor and change prices with the aid of technology when needed. This instrument saves employee’s time in terms of labor savings by providing digitalization of services. So, pricing based on time may be structured to optimize price and maximize revenues. For example, if a consumer is in a hurry during dinner time, the prices may be charged higher. Another instrument is gravity feed shelving system. This instrument is based on front item being removed as gravity pushes the next item to the shelf. The major advantage of this system is that it requires less attention from store employees and it provides a good appearance of the shelf and lowers labor costs (Karolefski, 2008).

The great success of mobile phones and and the increased demand on Pokemon Go and Snapchat have caused an augmented reality in the context of boost in demand and popularity. Along these, interactive behaviours, and usage trends have shifted. Nowadays, there is a trend toward more realistic mass appeal in a much shorter time zone beyond gaming
cohort. Therefore, in home and mobile usage can best be fit to this overall process.

It is obvious that AR and VR ideally serve the same purpose and in this sense the use case must offer guidelines in using the services in terms of businesses and consumers. However, there is a necessity that there should exist advanced technology so that the whole process may well be managed. In this globe, through the aid of augmented and virtual realities, there exists an ease in shopping behavior. In this manner, augmented reality strategies such as mapping bodies and faces for more accurate sizing could be supplemented with virtual reality stores which could end up creating total unique personal digital stores that offer more value to consumers. With the aid of innovation and competition, new emerging trends will have to be restructured. Surely, retailers will be enforced to cope with these changes as an attempt to adapt their overall marketing strategies to these newly introduced technological advances in the local and global markets. So, a good amount of effort should be spent on understanding and evaluating the user behavior as a tool to compete well.

Personalized promotions and pricing are another important way of retail technology. It combines loyalty card data and smart phone technology to reach shoppers offering customization. Shopper’s movement, dwell time, and location is being retrieved so that customized products and services may be offered (Inman and Nikolova, 2017: 12). In-store CRM is another way of dealing with retail technology which includes personalized content. This is an emerging methodology where facial recognition software that identifies shoppers is being introduced. In this sense, emotions through the face is being analyzed on the consumer side so that shopping path and dwell time may be optimized. In fashion retailing, body scanner is an emerging technological

In the light of all these advanced technologies that have been discussed in this paper, retailers are bringing new strategic marketing plans in order to compete well in local and global markets. In managerial aspects and social aspects, technology is extensively used and implemented. In terms of managerial aspects which include planning, organizing, implementing, control and feedback, technology is being used in each stage which brings consumer focus and efficiency. In addition, in terms of social aspects, there is a greater tendency to understand the consumer behavior. As a result they re-consider the marketing mix. In this technology based service, retailers redefine their target market and their marketing mix. Through the integrated logistics and relationship marketing, they make their operating systems better. So they organize their flow of material and flow of information better throughout the supply chain.

**Concluding Remarks**

Based on the literature review that has been extensively revealed in this paper, it is important to note that retail industry is changing dramatically. In this sense, a major determinant of change is technology that is highly correlated and associated with the emergence of new trends and applications in the context of innovation, Research and Development approach. In this paper, new technologies in regards to retail industry has been explained as an attempt to lead retailers in the online industry to understand and apply such strategies into their business practices. However, on the other side, it is critical to presume that technology has to well be discussed in the context of human behavior. So, in this sense, shopper oriented perception has to be extensively researched and concluded. In this perspective, the authors believe that retail technology strategies, as depicted in this paper, has to be originating from the consumer behavior which is also called the shopper oriented perception.

Along with all these advances, accurate information that is being delivered to the consumer side is a major determinant of the overall success of this process. This paper discusses
that buying power of consumers are relatively increasing and this is why with the aid of accurate information, there should be plenty of effort in providing customized offerings in terms of products and services. Absolutely, the best way of doing so can be adaptation to retail Technologies in this perspective. But, it should deeply be noted as well that in the concept of cost savings, retail companies should also pay attention to implementing and adapting logistics operations efficiency. Through the spread of smart phones, it is seen that internet retailing has restructured their point of focus. In this notion, many emerging managerial applications have taken place in business platforms. Main point of interest is surely on the specification of market research as it displays the most crucial attempt in strategy generation. In this issue, digital platforms have highly transformed themselves into a unique challenge whereby shopper experience and perception played a major role in terms of strategy generation and formulation. In this strategy generation and formulation, trust and perceived risk, perceived usefullness, perceived ease of use of technology etc are important to be debated and adapted to overall business practices. Finally, in the screening process of the overall internet retailing and retail technology, a major point of research and interest should be paid up an technology adaptation intentions which are also discussed in this paper.

Information buying power customized offerings logistics operations efficiency cost savings internet retailing smart phones managerial thought- market research digital platforms shopper experience trust and perceived risk perceived usefullness perceived ease of use technology adaptation intentions

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