Technology adoption in the sphere of Retail Communication- A critical evaluation study

Akshay Jain [1*]

[1] Symbiosis Centre for Management and Human Resource Development, SCMHRD, SIU, Symbiosis International (Deemed University), SIU, Hinjawadi, Pune, Maharashtra, India

[1] jain_akshay@scmhrd.edu

ABSTRACT

Purpose: To study the limitations in the existing retail communication across the channels, and evaluate new technology platforms that are emerging in the sphere of retail communication.

Methodology: This is an exploratory study which is conducted involving sample respondents from the population of retail industry.

Findings: Organisations across industries are leveraging different platforms for building effective and uniform mode of communication across the retail channels.

Practical Implications: – The results of the study imply that the retail industry in spite of various limitation, because of the emerging competition from the e-commerce they are forced to adapt to digital innovations.

Originality/Value: The study identifies that conventional retail organisations are tying up e-commerce widely as they help in quickly adapting to technological innovation and communication to reach the end mile consumer with ease and convenience.

Article Classification: Research Paper

Keywords

Retail marketing, Retail communication, Mobile Applications, E-Commerce.

Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020

Introduction

The retail environment is undergoing a rapid and innovative change in response to the covid-19 pandemic that has hit the nail right into the loopholes of retail communication. The Indian retail industry comprises of a wide number of channels including modern trade, wholesale trade, retail trade comprising of general stores, kirana stores, medical stores, with the brick and mortar stores continuing to contribute 95% of the retail revenue with over 1.2 million kirana stores across the country. However, the retail industry has been facing stiff competition from the e-commerce segment which is growing at a rate of 51%, comprising of 5% of the retail revenue. The coming of e-commerce brought with itself a modern era of retail trade with new technologies that brought convenience to the customers and hence attracted customers and posed still competition for the traditional offline retail trade. While e-commerce earlier seemed to be competing with the brick and mortal set up, but with changing times, it has started to from strategic alliance with the retail stores to cater to last mile consumer demands. Several e-commerce giants have designed different framework to cater to the growing demand, like Google Local, Amazon – I have space program, Flipkart – Touch and Feel, Myntra – Myntra extended network of store activation (MENSA) and Jiomart being one of the major players with a target of reaching 5 million retailers by 2023. E-commerce giants have started onboarding retailers on the newly devised structure since the traditional retail outlets have several benefits which resolves issues of logistics and meeting customer demand. Retailers face several obstacles like lack of technology adoption, lack of infrastructure logistics and lack of skilled workforce, however with changing consumer preferences and technological drivers from the e commerce segment, we are to see a revolution in the field of retail communication.

Retail industry is considered to be an important pillar of the Indian economy and is growing at a rapid rate accounting for almost 10% of the GDP. Retail industry is witnessing a change from brick and mortar stores to modern trade and stiff competition from online retail. Although brick and mortar stores are located at the proximity of the consumers, but there is a shift towards modern trade and online retail due to convenience and availability of goods under one roof. India is

considered to be the 5th largest retail space in the globe and is a home to 8% of employment in the country. Comprising of various channel partners and forms of retailing, brick and mortar comprises the maximum part by volume and sales. However, the presence of modern trade chain is on a rise in urban, metropolitan and tier 1 and 2 cities. Due to heavy investment and rise of innovative technology in the retail industry, India is considered to be the fastest growing retail market across the globe. Increasing purchasing power of the upper middle-class population in tier 1 and 2 cities has increased consumption expenditure and hence the revenue generated from the retail industry. There are high expectations from the e-commerce markets, which is witnessing a high growth rate. The rising incomes of the population has increased the need for consumer goods, electronic goods, etc and hence generated the need for investments in the retail industry, which also resulted in Walmart entering into the Indian retail industry. Apart from different driving factors, initiatives taken by the government like allowing FDI in online retail has also resulted into push for the retail space. Consumers essentially look for good quality products at lower rates and thus e-commerce is driving the revolution. A large part of the Indian retail industry is still unorganized and hence needs to be reframed and revolutionized.

The Covid–19 pandemic has surfaced business opportunities for enterprises providing software solutions. After interacting with several such businesses, we found that among different modes of communication, a personalized mobile application, a progressive web application or a WhatsApp chatbot are the three most prominent and widely used platforms in the retail industry. Doing a critical study about retail communication in the FMCG industry, we have undertaken this research to identify the available modes of communication and their scalability and ease of use from the perspective of retailers. Organizations tend to build a uniform channel of communication to ensure effective sharing of information to the retailers. Previously transfer of information was dependent on salesman, the key connects between the business and the retailers. However, this framework resulted in loss of information which affected the business for the organization. High attrition rate and absent salesman resulted into loss of sales for the industry. Hence the need to equip the retailers with a technology that could give them access to all the relevant information just on a click, surfaced in the industry.

Literature Review

A number of studies have been conducted about the adoption of technology in various aspects of retail industry including mobile technology, point of sale merchandise, digital payment transactions, enabling the retailers to conduct their business operations with efficiency and ease of use, to help them reduce their operating costs. It has a number of benefits over the traditional retail channels mainly related to shopping convenience and time savings, as well as 24-hour accessibility to a wide variety of products and virtual stores (De Kervenoael et al., 2014; Durand and Gonzalez-Feliu, 2012). However, technology adoption comes with some driving factors and barriers as well. Technology use research often focuses on the antecedents associated with intention To use a specific technology, or the actual use of such technology. Theories developed to Explain this phenomenon include the technology acceptance model (Davis, 1989), The theory of reasoned of action (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975), The theory of planned behaviour (Ajzen, 1991). More recent efforts reflect an attempt to Apply these theories in an m-commerce setting. For example, Rao and Troshani (2007) Develop a model of adoption intentions based on perceived usefulness and perceived Ease of use, along with user predisposition and social influence. Maity (2010) extracts TAM-related factors, i.e. Perceived usefulness and ease of use, as well as subjective Norms, behavioural controls, self-efficacy and the role of alternate channels, from Qualitative data on m-commerce usage. Khalifa and Shen (2008) apply the theory Of planned behaviour – an extension of the theory of reasoned action – to develop An m-commerce framework, with adoption as the behavioural outcome predicted by Perceived consequences of adoption, attitude and subjective norms. These studies, Though, examine the antecedents of technology use without considering how respondents Expect the technology to perform specifically. Among the factors having a significant positive influence on mobile application adoption, the most recurrent ones are usefulness, ease of use, compatibility,

convenience, social influence, and personal propensity towards the adoption of new information technology (IT) solutions (Alalwan et al., 2016; Lee and Han, 2015; Lee et al., 2015).
Rather than treating adoption as the behavioural outcome, the present study examines the consumer's interest in the mobile app as an attitudinal predictor of two behavioural outcomes (i.e. the use of the app for shopping and/or information sharing). That is, the model tested in this paper considers the relationship between intention to download a retailer's mobile app and the outcomes associated with using a retailer's mobile app. Applying this framework to the present research questions, a discussion of the rationale for each hypothesized relationship follows.

Research Methodology

This is an exploratory study which is conducted involving sample respondents from the population of retail industry.

The objective of this study is to study the limitations in the existing retail communication across the channels, and evaluate new technology platforms that are emerging in the sphere of retail communication

Defining the questionnaire

Retailers based out of Indian states like Rajasthan, Uttar Pradesh, Gujarat and Maharashtra that centers around disconnected retail including a blend of internet business and customary trade, were picked to be a piece of the review. The study was created to measure enthusiasm for and employments of conceivable application for use on an individual advanced right hand (for example cell phone, cell phone). The overview was led over telephonic and individual meeting going on for around 30 mins. The study was led for three days.More than 100 retailers agreed to be a part of the survey and gave their responses to the survey. The research involved convenient sampling. Respondents didn't get any type of pay for finishing the overview. Respondents were screened for responsibility for cell phone. Those respondents who needed such a gadget were not appeared as a piece of the overview.We are utilizing blend of primary and secondary information so as to gather the information, test the speculations and reach the determinations. Information gathered will be both subjective and quantitative. We are attempting to utilize the different proportions of focal propensity which incorporates mean, mode, middle, standard deviation, charts and diagrams. Data examination will be finished with the assistance of reaction from the survey.

Defining the factors

1. Improved market reach – brands have vast distribution network in the industry. With increasing competition in all product categories, it becomes difficult to sustain the market share. Hence, it becomes evident for brands to keep increasing the market reach in order to achieve sales and revenue targets. By leveraging digital technologies, brands have been able to increase their market reach with a greater number of retailers under their umbrella. They have been able to reach to small and far off located retailers with the help of digital platforms. Thereby they are able to tap in the potential market and increase their revenue and sales.
2. Cutting down costs – brands bear huge costs in sharing information to their stakeholders which is often not uniform. Adoption of digital platforms has helped brands to cut down such costs by decreasing their dependency on salesmen. This digital platform eliminates the intervention by humans and hence helps to lower down costs. Low costs thus improve margins and gives brands a competitive advantage to spend more on incentives and loyalty programs.
3. Zero stock outs – retail industry, warehouse, distributors normally carry an inventory that lasts for 15 days. With the ongoing pandemic, manufacturing plants being shut and disruption in the supply chain led to lack of availability of goods with the retailers. Companies follow a specific sales route with each retailer being served on a specific date. With such digital innovation in hand, retailers have the benefit of keeping track of inventory and avoid stock outs. Stock outs are also a problem for brands as it leads to loss of potential sales.
4. Reduced complaints in store – with so much of competition in the industry it

becomes important for the brands to make their customers feel connected and associated with the brand. This is usually done with quick redressal system. Retailers have a lot of complaints related to damaged goods, goods not delivered on time, goods not delivered as per order, etc. Use of such digital platforms ensure timely redressal of such complaints and thereby reducing the complaints in store.

Results and Analysis

Channels of communication –

Owing to the disruption caused by the pandemic, it has been evident for the market to upgrade itself with technological solutions to combat the loopholes identified. A lot number of solutions providing agencies have been active in developing such solutions which are capable enough to resolve the issue of communication between the stakeholders of the organizations. These agencies provide different IT solutions and integrate it with the existing infrastructure of the organizations. After interacting with several such digital solutions providing third party agencies, the channels of communications identified are as follows –

1. Mobile application – Mobile application is one of the most traditional methods used by different organisations to connect with their stakeholders. Mobile applications offer a personalised platform which is considered to be secured. Users feel more convenient by using a mobile application since it is secured and reliable. A large number of organisations across the globe have launched their personalised mobile application platform to make their stakeholders have easy access to all relevant information just at a click. Mobile applications have a lot of personalised features which offers its users a good user experience. However, there are certain pros and cons to every development and so there are certain advantages and limitations when it comes to mobile application as a medium of communication. Mobile applications are developed with different versions supporting android and IOS. Interface of the application plays an important role in ensuring better experience to the user. Hence, developers prefer to keep the interface simple and easy to use and not make it complex. Mobile applications are downloaded from different sources and require internet connection. However, they require low internet bandwidth and can even operate on 2G/3G network and hence are preferred. Mobile applications offer a personalised platform and hence helps to improve visibility, brand recall and brand recognitions. Mobile applications require good smartphones and usually do not work on feature phones. However, there is an increasing trend of smartphone penetration which is supported by affordable smartphones and declining data costs. The adaptability of such mobile technology also depends on the internet penetration which is further increasing due to low data costs and a report by BCG states that by 2020 half of the internet users will be rural India and hence it will not be limited to metro and urban areas. Keeping the users engage is very much essential for any service provider and hence all service providers use data analytics to analyse customer journey and behaviour and devise strategies to retain and engage them on the platform. In case of mobile applications, it is comparatively easier for organisations to keep their stakeholders engage. Retailers are a different kind of mostly uneducated and lower middle-class income group and hence it becomes more important for companies to resolve their pain points and keep them engaged. Mobile applications also have a high churn out ratio. According to a survey, mobile users spend 77% time on top 3 applications and the best online activity is messaging. Users spend maximum time social media platforms, video streaming and messaging. Hence, WhatsApp, Facebook and YouTube are the three most downloaded applications. Thereby it becomes important for the application developers to keep the users engaged and drive them to the platform frequently.

However, on the flip side of various advantages that a personalised mobile application has, there are several limitations to its adoptability and

usage. Owing to high churn out ratio of such applications, organizations have to develop loyalty programs to keep the retailers engaged, which itself is a difficult task. Organisations need to evaluate their ease of use, scalability, feasibility and adoptability of such platform. Along with that, developing a personalised mobile application is the most expensive mode of communication and involves huge cost in developing the platform. Moreover, such digital platforms require timely upgradation and involves complex maintenance to ensure smooth customer experience.

2. WhatsApp –

WhatsApp is a widely used messaging platform which is owned by Facebook. WhatsApp is one of the most downloaded application over the years and is widely accepted due to its easy user experience. It offers wide features to his users like sending and receiving messages, documents, media files, etc. its familiarity has increased over the years. It is available on mobile and desktop view and hence is widely used. It is just not limited to smartphones but is also available on featured phones. WhatsApp works on very low internet connection and hence is highly penetrated even in rural areas. WhatsApp is used by people from all age categories and has millions of users across globe. WhatsApp has over 400 million users across the country and is witnessing a rapid growth. Primary factors driving its growth are declining internet costs and high smartphone penetration at affordable costs. A recent study conducted in the pandemic showed that there has been a 43% increase in the time people spent on WhatsApp. In rural areas, users spend almost 2-3 hours daily on WhatsApp. It is hence considered to be the easiest channel of communication where information can be shared in different formats. Users can also check delivery and read of messages on WhatsApp. Owing to the benefits that WhatsApp offers with its wide popularity and ease of use, WhatsApp offers business accounts where organization can develop chatbots and operate business over the platform.

Accordingly, several digital solution providing agencies have developed WhatsApp chatbot as one stop solution that offers a variety of options to the retailers from placing an order to getting informed about schemes and promotions. It can be developed at low costs and is easy to adopt for the retailers. Retailers are given a drop-down menu to choose from different options. Such mode of communication offers two-way communication and hence helps to keep the users engaged. Although, there are certain policies of WhatsApp business platform. Operators can use it as an advertising channel and push promotional content without the consent of WhatsApp. Also, it is the user who has to initiate the conversation and the business in return gets a 24-hour window to revert to the query of the user. Although WhatsApp claims end to end encryption of messages and secured communication, but there have been security concerns in the past and hence users feel less secured using this platform for business purpose. Data privacy is hence considered to be a limitation for using WhatsApp as a channel of communication.

3. Progressive Web Application –

Web application is a traditional method of communication adopted by organisations across the globe. Every business, no matter big or small by size, has their own personalised website which is available for the users over the web. Websites offer a wide range of features and is developed in the most lucrative manner to ensure customer engagement and easy navigation. Access to web applications require internet connection and comparatively good internet connection. A large amount of data is derived from the web portals to read different insights and understand customer behaviour. Web application can be accessed through a link which is sent to the users. Users have to register themselves on the portals and their authentication is done at the backend to make sure that it is a valid user. A progressive web application is a modern approach and innovative web portals which are similar to mobile applications. Progressive web portals can be accessed through mobile and desktop and hence can be widely accepted. The link to access this web application can be sent via different mediums, SMS, WhatsApp or E-mail. Organisations are using WhatsApp as a medium to connect with the retailers and send them the link on WhatsApp, due to its large user base and better visibility as compared to traditional SMS. Retailers either get a customer ID or they can login via mobile number after entering the OTP. There are several benefits of adopting this channel of communication. A progressive mobile application works similar to the traditional mobile

application. The interface of a PWA works is similar to that of a mobile application and hence is convenient to adopt and use. A PWA requires no installation, it can be accessed anytime, anywhere, as per the convenience of the retailer. Moreover, there is an added option of adding the icon of the PWA to the home screen of the mobile and the user can thereby access it by just clicking on the logo. User engagement is very much essential on any platform and hence organisations use loyalty programs with rewards in return to engage the retailers.

On the flip side of several benefits, there are certain limitations to PWA. PWA requires good internet connection as it is accessed over the web. It also requires good smartphone as featured phones cannot support such features. Good internet connectivity can be a limitation in various parts of the country. Navigation can turn out to be a hindrance due to poor internet connection and hence be annoying for the users.

Discussions

Problems faced by retailers –

1. Retailers mostly belong to the lower middle-class category of income and have limited source of income. The size of the shop they operate in is usually very small and work with 1-2 workers. The shop is mostly on rent since the retailers do not have adequate financial resources for expansion. Although, they are agencies in the market who provide financial loans to the retailers but the reach has been very limited till date. These retailers largely operate on cash basis and also provide credit to some regular and trustworthy customers. Their expenses include rent, salaries, electricity and communication, etc. Retailers largely demand credit period from the distributors or wholesalers, ranging between 7-15 days depending upon company to company. Thus, due to limited financial resources, they have limited space and keep only hot selling products and not variety of products.
2. Retailers often employ cheap labour to keep their costs minimum and such cheap labour are usually unskilled and untrained and do not possess necessary marketing or selling skills. They usually belong to the rural parts and hence are not equipped with technology use and hence follow traditional methods of selling. They find difficult to influence a customer to buy any particular product. Organisations now a days are investing a lot in training these labours to enable them to sell their product over competitors and in return incentivise the labourers with monetary benefits.
3. Retailers fall short in the race with modern trade when it comes to product assortment and display. Retailers have limited shelf space and keep only limited products for display, whereas, modern trade adopt innovative methods of product assortment which persuades a customer to buy a particular product even though it might not be on his wish list at the first instance. Retailers get a margin from the organisations usually ranging between 2-3%, for providing a particular window display. However, retailers complain about these margins being low. Retailers thus face working capital issues and often have to borrow money.
4. Retailers also face difficulty in understanding the complex structure of the economy and are unable to reap the monetary benefits that are available to them. Lack pf education and awareness along with lack of technology makes it hard for them to comply to the norms of the tax structure.
5. Retailers do not have enough technology due to lack of logistics, lack of infrastructure and skilled workforce and hence are not digitalised. They do not have digital modes of payment and are hence dealing in cash which often leads to liquidity crunch in certain scenarios like a pandemic or GST or demonetisation. Availability of digital mode to transfer payments would make their operations easier and they would not have to carry cash.
6. In the retail industry it is essential to map customer demands and understand their buying behaviour to map their purchase journey. Mapping their customer journey helps in successful selling. Big organisations use data management to derive customer demands and project future growth. They project consumer

needs and hence make necessary changes to meet them. However due to lack of technology with the retailers make them unequipped to tack the customer buying journey and project their demands so that they can meet them effectively and efficiently. This is from where arises the problem of lack of inventory tracking. Retailers do not keep a track of the inventory they have and hence often face stock out issues during phases of high consumer demands. This leads to loss of sales due to loss of potential customers.

Despite the many benefits supporting the use of mobile applications, some issues might represent barriers to their diffusion. On the one hand, both initial and operating costs, such as costs for establishing mobile services and fees for messaging and internet surfing as well as online transactions, play a significant role in diffusion (Lee and Han, 2015; Thi et al.,2016).

Sharing of information is essential to ensure effective and efficient output which would then result into growth in revenue. With innovative technologies coming up in different sectors of the economy, it becomes evident for the retail industry to adopt to the revolution in technology as well. However, the Indian retail industry is still operating with the traditional framework when it comes to sharing of right information at the right place to the right people sand in right time. The industry works with a specific distribution model which is more or less same for different.

The goods are transited from company warehouse to the distributor via carry and forwarding agent. Distributor further have their own employees and company appointed salesman who are at the pay roll of the distributor. These sales man have their sales beat where they physically visit the outlet of the retailers and take order from them. The goods are then delivered to the retailers in 24-48 hours. Distributors, retailers usually keep an inventory that can last up to 15 days. The sales structure differs from company to company. Generally, there is a territory sales officer who has the responsibility to supervise all the salesman in his region. There are specific targets that are given to the territory sales officer, salesman, distributor, retailers, who are then incentivized for the completion of their targets. There are various schemes, promotions, offers, that are given to the retailers. In the existing framework, the sharing of this information is in the hands of the salesman. Salesman is the key aspect that bridges the gap between the organization and the retailers. While the salesmen are on their beat, apart from taking order from the retailers, it is also their responsibility to share relevant information with the retailers pertaining to various schemes and offers that are available to the retailers so that they can reap the monetary benefit from them. Salesman are also responsible for making the retailers aware about new product launches, schemes and offers available to them. Retailers are thus connected to the organizations via these salesmen. Hence the salesmen are also responsible for making the retailers feel connected with the organizations and thus fostering healthy relations. However, there are many loopholes with this framework of sharing information. This structure of sharing information is not effective and efficient and hence results into loss of growth of revenue. Salesmen are usually better connected with the big retailers because they bring in maximum revenue for the organization. However, when it comes to small retailers there is a break in connection. Salesmen are more focussed towards the big retailers. Moreover, the retailers do not give enough time to the salesmen for them to share the information in its best form. Salesmen are not able to convey all the monetary benefits available to the retailers nor can they ensure optimum product awareness during new product launches. Salesmen are not efficiently skilled for effective communication. The pandemic has identified this loophole since the salesmen could not physically visit the retail outlets and hence there was no contact between the organization and the retailers. This led to the need for a technological change in ensuring uniform communication to the retailers without high dependency on salesmen. Among several other problems, attrition is another hurdle when it comes to salesmen. Average salary for a salesman working in the retail industry rangers between 10000-12000 Rs excluding incentives. On the other side rising e-commerce segment and start-ups offer an average salary of 15000-20000 Rs to their salesmen. Thus, it becomes a lucrative segment for the salesmen to have a shift. This hurts the business of the retail industry since it is difficult to train the new salesman and it increases costs of operation. Organization have started

investing in making the salesmen trained and equipped with technology to keep them engaged. Loyalty programs are adopted to make the salesmen feel competitive and earn monetary benefits by achieving targets. Apart from high rate of attrition there is also a problem of absenteeism amongst the salesmen. This leads to loss of sales for the organization when the salesmen are not able to visit the retail outlets physically. The rate of absenteeism in the retail industry is approximately 10%. Hence organizations are looking for new modes of communication to equip retailers with remote ordering platforms. Organizations thus have to adopt to channels of smart selling to retailers. This would reduce the dependency on salesmen and ensure uniform flow of communication to all levels of the pyramid. These new modes of technologically updated platforms will be an alternative medium to communicate with the retailers and not compete with the existing framework of salesmen.

LIMITATIONS

First of all, all the data collected was mostly from the Tier 1 cities of the country, which were Delhi, Mumbai, Chennai, Kolkata, Hyderabad, Pune, etc. Other Tier 2 & Tier 3 cities were not taken into account. Many states were completely unaware of the research being conducted i.e. there were no respondents from these states. Rural and semi-rural areas of the country were not taken into account. A large section of the population was not taken into consideration, rural population accounts for almost 61% of our entire population. This sector was completely ignored while undergoing the research and analysis. The product which was selected was a fast-moving consumer good, hence its demand was always higher than other products during the time of crisis and also before and after the crisis. Other products and services should also be taken into account. These products can vary from high research-intensive products known as the durables or intermediate products can also be used such as clothing. Demand for each of these products will vary accordingly depending upon the nature of the crisis. For example, during the current outbreak, the demand for these intermediate goods and the durables have reduced significantly owing to the higher cost under which they are sold. On the other hand, IT services have received a tremendous response from various organizations as they tend to operate under the umbrella of various other organizations. Under this research, as the major cities targeted were Tier-1 cities, the education level of these cities were particularly higher than the cities which were not included in the research. This turned out to be one of the key limitations of the project as a major population of the country have lower levels of education, yet they are aware of the various technological trends happening in the country. The responses which were collected, were mostly from the age group of 21-35 years. The data was mostly taken from the student community and the office driven crowd. This is a limited source of data as there are various other age sectors which are to be targeted.

References

[1] 1 Andriulo, S., Elia, V., & Gnoni, M. G. (2015). Mobile self-checkout systems in the FMCG retail sector: A comparison analysis. IJ RF Technol.: Res. and Appl., 6(4), 207-224.\

[2] 2 Arrigo, E. (2018). The flagship stores as sustainability communication channels for luxury fashion retailers. Journal of Retailing and Consumer Services, 44, 170-177.

[3] 3 Baen, J. (2000). The effects of technology on retail sales, commercial property values and percentage rents. Journal of Real Estate Portfolio Management, 6(2), 185-201.

[4] 4 Eger, L., & Mičík, M. (2017). Customer-oriented communication in retail and Net Promoter Score. Journal of Retailing and Consumer Services, 35, 142-149.

[5] 5 Escobar-Rodríguez, T., & Bonsón-Fernández, R. (2017). Facebook practices for business communication among fashion retailers. Journal of Fashion Marketing and Management: An International Journal.

[6] 6 Fernie, J., Fiorito, S. S., Gable, M., & Conseur, A. (2010). Technology: advancing retail buyer performance in the twenty-first century. International Journal of Retail & Distribution Management.

[7] Hopping, D. (2000). Technology in retail. Technology in Society, 22(1), 63-74.

[8] McLean, G., Osei-Frimpong, K., Al-Nabhani, K., & Marriott, H. (2020). Examining consumer attitudes towards retailers'm-commerce mobile applications–An initial adoption vs. continuous use perspective. Journal of Business Research, 106, 139-157.

[9] Mols, N. P. (2001). Organizing for the effective introduction of new distribution channels in retail banking. European Journal of Marketing.

[10] Perkowski, T. (2002). U.S. Patent Application No. 10/059,078.

[11] Perkowski, T. (2002). U.S. Patent Application No. 10/059,076.

[12] Piotrowicz, W., & Cuthbertson, R. (2014). Introduction to the special issue information technology in retail: Toward omnichannel retailing. International Journal of Electronic Commerce, 18(4), 5-16.

[13] Rese, A., Ganster, L., & Baier, D. (2020). Chatbots in retailers' customer communication: How to measure their acceptance?. Journal of Retailing and Consumer Services, 56, 102176.

[14] Upadhyaya, M. (2019). THE POSITIVE & NEGATIVE IMPACT OF TECHNOLOGY IN RETAIL POINT OF CONTACT. Journal of Critical Reviews, 7(4), 2020.