Are Indian Kirana Stores Ready for the Digital Transformation?

Irfat Ahmad¹ & Dr. Shailja Dixit²

Amity Business School, Amity University, Lucknow

- 1. Research Scholar (Part-Time), Amity Business School, Amity University, Lucknow, India. <u>irfat76@outlook.com</u>
 - 2. Associate Professor, Amity Business School, Amity University, Lucknow, India.

sdixit1@amity.edu

Abstract

This study is part of a research project to understand and gain insight on role of digital technology in operation of unorganized retail sector in India. Kirana stores are an integral part of Indian retail with almost 90% contribution for FMCG and grocery sales but with increased penetration of technology, modern retail, changing demographics of consumers and growing preference for online retail, struggling to maintain their share of business now. To overcome these challenges these stores have shown initial adoption for digital technology to improve operational efficiency but for complete transformation of stores, need more robust understanding and support on what technology can offer them.

The purpose of this paper is to identify the key challenges before these stores and analyse the drivers for digital transformation of kirana stores. The paper also attempts to evaluate the role of digital technology in transforming the operating processes of stores and enhancing customer experience at stores.

The methodology adopted in this study is Interpretivism approach of research. All the interpretations are drawn with the content analysis of recorded, semi structured interviews and Industry reports.

The outcomes from the study suggest that favourable demographics of the customers, increased penetration of Internet and smart phones and current preparedness of stores and suppliers are the key drivers for digital transformation of kirana stores while inventory, space and cash management ,fear of losing business to organized and online retail ,lack of knowledge about benefits of technology, fear of disruption and skills gaps are the key challenges before these stores Another outcome of the study is to highlight the role of affordable tools like Digital displays, POS billing and mobile based communications in digital transformation of kirana stores.

The limitation for this study is the non-availability of primary data and direct interaction with the people involved in the process.

This study provides a novel understanding of the changing dynamics in the Indian retail sector which can be of great help for industry professional and business managers to develop a new outlook for kirana stores in India.

Key words: Kirana stores, digital business transformation, customer experience, operating processes, technological solutions, consumer's demographics, challenges and drivers

1. Introduction

Indian retail is one of the most vibrant and fast growing sector which is experiencing exponential growth and now has been termed as fifth largest preferred retail destination globally (IBEF, 2019). As per detailed report by IBEF (2019) retail segment in India accounts for over 10 per cent of the country's Gross Domestic Product (GDP) and around 8 per cent of the employment. It is expected to touch USD 1.2 trillion by 2021 form US\$ 795 billion in 2017 on the back of factors like rising incomes and lifestyle changes by middle class and increased digital connectivity (IBEF, 2019).

Indian retail has its presence across different channels from mom and pop stores to giant supermarkets to online grocery stores. It comprises both organized and unorganized formats but so far have been dominated by the unorganized retail sector only. Most of India's grocery and FMCG business happen through the unorganized and traditional sector, which mainly comprises of small grocery stores, also known as kirana. While organized retail includes gourmet stores, department stores, discount stores, supermarkets and hypermarkets, e-tailers and cash-and-carry formats and is characterized by high investment requirements, large premises, trained staff where retailers are licensed and are registered to pay taxes to the government..

There are over 15 million grocery stores (IBEF, 2017), popularly called as kirana stores in common parlance (IBEF, 2017) which can be defined as a small neighbourhood family owned retail and grocery store, often situated near residential areas. It is generally characterized by low rentals, low tax pay-outs with a majority of it being owner managed and employing personal capital. These stores generally serve immediate neighbourhood and operate with limited capital and space. Kirana stores stock a range of products – grain, cereals, packaged foods, beverages, non-food items (cosmetics-soap, shampoo, detergent), fruits and vegetables and dairy items.

These kirana stores score very high on parameters of customer acquaintance, connection, and their brand preference and usage pattern. Emotional attachment with the customers is the strongest point lies in the favour of kirana stores which is a competitive advantage over the organized retail. Customers prefer these stores because of proximity to their homes, convenient timings, close acquaintance with owner and availability of credit also. The profiling of customers varies from higher Income group to daily wage earners also because of factors of convenience and credit facilities. The entry barriers in this business are very low and thus lot of competition is there for these stores to maintain their customer base and expand that beyond operating localities to ensure regular income and return on invested capital.

In recent years with the advent of technology and increased penetration of Internet, smart phones and younger customers in market, kirana stores like other unorganized sector players are facing challenges from organized as well as online retail segment. Currently Indian market is skewed towards more young consumers with average age of 27.6 years (Indian Retailer, Feb 2018) which has impacted the overall purchase behaviour of consumers and buying channels. This changed demographics and buying behaviours are expected to challenge monopolistic position of years for kirana stores as they are more inclined towards technology, social media and online shopping because of their life style and time constraints.

It is already projected that by 2020 the share of unorganized retail will go down to 75% from 90% with 18% share going to organized retail and 7% of online retail (IBEF, 2019). Under these circumstances it has become imperative for kirana stores to transform their business operation and customer management processes. This whole exercise of transformation cannot be completed without active

involvement and usage of technology and technological solutions. There are stores who have already taken lead by using technology based solutions to improve their inventory and space management besides building communication with customers using mobile based solutions and social media platforms.

While talking about digital transformation of kirana stores, it is important to understand what is digital and why it is required for these stores. Digital can be defined as a technology enabled combination of resources (can include instruments, devices, bots, tools, teams, protocols, processes, networks, methodologies) which enables the availability of content (can be data, information, expert/social reviews, reports, analysis, games) for the user (employee or customer) to make more productive (can impact cost, time or service level) decisions and satisfying choices (Deloitte, 2017). Internet enabled mobile, mobile apps, Cloud Connected POS billing machines, LED monitors for Product display, Handheld scanner, Tablets and Printer for Billing, Swipe machines, mobile wallets are few of the elementary digital tools which can be used by stores to bring operational efficiencies and managing the expectation of the customers.

These technologies provide retailers opportunities to reduce cost of operation, acquire new customers and negotiate a better business terms with its suppliers with various other benefits which have a direct impact on his revenue and profitability. Mobile applications with ability to scan and issue bills can be termed as an important tool to bring digital transformation for Indian store to meet expectation of customers as it is becoming an important tool for Indians to access e-commerce. This research paper will deal in detail about various technologies and its application for core operation of kirana stores.

2. Objectives of the Study

The specific objectives of the study are as follows

- i. To identify the key challenges before kirana stores
- ii. To analyse the drivers for digital revolution
- iii. To evaluate the role of digital technologies in store operation and customer management

3. Research Methodology

Research methodology is a way of systematically solving the research problem and deals with the research design and methods used to present the study. This study is based on secondary data and majorly focusing on various issues and strategies involved in unorganized retail. Secondary data has been collected from various national & international journals, magazines, newspapers, articles, books internet and other documented material. The study is based on descriptive research design.

4. Literature Review

In this section, a review of the relevant literature in the current area of research is presented. A taxonomical view of the literature review conducted for this study is given in figure below:

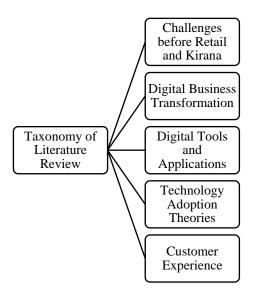


Figure 1: Taxonomy of Literature Review

Challenges before Retail and Kirana: This category discusses about the research pertaining to challenges and inhibitors for kirana stores .Ahmad (2012) attempted to identify the key challenges faced by Retail Industry in his research paper "Retail Industry Adopting Change The challenges mentioned by him are customer experience management, multi-channel-ing, marketing intelligence, seamless and short supply chain, inventory optimization, assortment management, collaborative information sharing and finally a complete busi-ness intelligence system. He emphatically concluded that these challenges are much more beyond cost reductions and increasing efficiencies. Choudhury (2017) discussed about the changing dynamics of the Grocery Business in India. It talked about the changing lifestyle and increasing urbanization and its impact on shopping behaviour of consumers across all section of society. He further adds that young aspirational Indian will always strive to look for better convenient options when it comes to product choices or the shopping channel choice. While discussing about the future trends this article foresees that Value delivery in every Interaction with customer will be the key for future, no matter where it occurs.

Digital Business Transformation: This category covers research which talks about digital business transformation, the methodology and implementation scenarios. **Uhl & Gollenia (2014)** have provided an integrative business transformation management methodology with an emphasis on the balance between the rational aspects of transformation and organization level readiness for transformation. **McAdam (1996)** has proposed an applied business process improvement methodology which will enable existing business improvement related initiatives to be integrated and refocused on business/ customer needs. **Westerman, et al, (2014)** talks about conceptual framework for digital business transformation covering what to transform, why to transform and how to transform and analytical frameworks to evaluate business models and strategies.

Digital Tools and Applications: This category study the research on digital tools and its potential impact on kirana stores. **Kristiansen** (2014) in his research on Digital Retail cited mobile apps as a logical extension of store to build communication with customers. He further states personalization in terms of digital maps and digital signage's to promote brand specific advertisement are the factors which can help consumers making informed choices. **Shukla & Sharma** (2018) used TAM in study

on use mobile technology in kirana shopping states that in tier II city consumers prefer more to shop using mobile app in comparison to tier I consumers. This result is in with agreement to AC Nielsen report (July, 2015) that time spent by users in non-metros (116 min/ month) was found higher than in metros (109 min/month). **Agrawal (2018)** suggest to provide Technology and logistics supports to Kirana stores to help them have a level playing field. He further highlights the need of digitization of these kirana stores in creating back end integration with whole sale suppliers for better Inventory Management.

Technology Adoption Theories: This part of literature review deep dives in to technology adoption models and motivators for adopting the technology. Carr (1999) defined Technology adoption as 'stage of selecting a technology for use by an individual or an organization. Roger (1960) states that there are four elements that influence the spread of a new idea which are innovation, communication channels, time and social system. In case of Indian kirana store owners, time and social system are critical seeing their social, cultural and behavioural background. Davis (1989) in his Technology Adoption Model cited "perceived usefulness" and "perceived ease of use" as two constructs for predicting extent of adoption of new technologies at individual level. Communication on perceived usefulness can be critical for store owners in India. Sharma & Mishra (2014) stated that that technology adoption is not related to the aspect of technology alone but has evolved as much more complex processes involving dimension of user attitude and personality and numerous facilitating conditions

Customer Experience: This category covers available literature on creating and managing customer experience .Berman (2011) suggests that engaging with customers at every point where value is created is the suggested digital business model that differentiates a customer centred business from one that simply targets customers well. Customer interaction in these areas often leads to open collaboration that accelerates innovation. Zomerdijk & Voss (2010) stats that a purposeful focus on elevating the customer experience is an internal driver that prompts retailers to select innovative techniques to strike the best balance between their back-office activities ,physical and digital environments. Prepletaný (2013) stated that a wise application of modern technology inside retail stores can lead to enhanced customer convenience, service, and time savings that time-sensitive customers are likely to appreciate and welcome.

5. Key Challenges before Kirana Stores

Kirana stores have worked and survived on strength of comfort, trust, personalization and convenience created and developed for their customers since long but now there is fear that with technology probably that personalized touch with customers would get diluted and they will become more robotics in their dealing with customers to whom they have been serving since many years. In absence of knowledge about the benefits technology can offer, there has been a belief that these technologies will not add values in their business (KPMG & Google, 2017). This belief is also driven by the perception of these stores that their own customers will probably not ready for a purchase experience which is driven through technology and uniqueness of kirana stores is to remain traditional with more human related interface rather technological interface. This perception is driven by lack of guidance on the inherent abilities of technologies and how these can be integrated and institutionalized in their businesses and lack of understanding of business benefits technology can deliver across end-to-end value chains (Raghvendra, 2012). Here education part needs to be built around to clear their doubts and making them understand the true benefits of technology and how by using it then

can build even more personalized contacts with their customers than before. So, the challenge is not only adoption, usage and leverage the technology but on education also on how to use the technology. A strong value proposition and its communication in simple language will be the key to help the stores driving the change and meeting this critical challenge of leveraging the technology for business operation. Google and BCG in their joint report "Digital Payments -2020" (BCG-Google, 2016) have mentioned that the lack of compelling value proposition as one of the key barriers for digitization after the habit of using the cash and complexity of using the technology.

Another critical challenge is to provide in-store experience to customers with changing lifestyle and increasing urbanization and its impact on shopping behaviour of consumers across all section of society. Nielsen (April 2015) highlighted the need of personalized attention even with advancement of technology as a key driver to run business in future. The report says "While the majority will continue to shop for the bulk of them grocery purchases in store, retailers need to ensure the experience is pleasant, efficient and relevant to keep shoppers coming back. Young consumers look for better convenient options when it comes to product choices or the shopping channel choice. Thus the bigger challenge for kirana stores are to provide value delivery in every interaction with customer no matter where it occurs. In order to meet and overcome this challenge these stores need to establish credibility and exceed expectations for its customers and supplier both. The key challenges faced by kirana stores have been given summarized below.

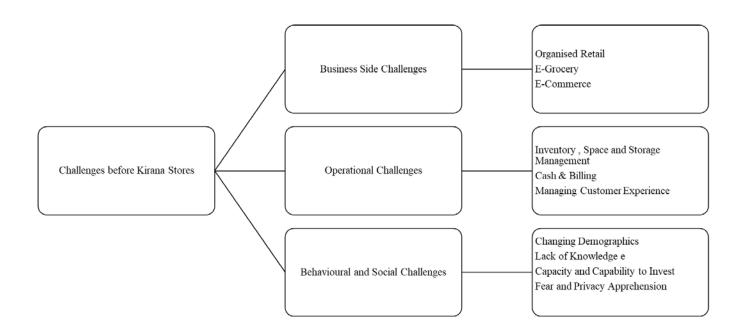


Figure 2: Challenges before Kirana Stores *Source*: Author

5.1 Business Side Challenges

Organized Retail: Share of organized retail is increasing at the cost of kirana stores as most of the customers in main towns prefer to buy under one roof where they can have everything from electronic items to readymade garments to grocery and other household items.

E-grocery: Another area which is impacting the kirana stores where more number of customers are buying the necessary grocery is through online. This saves their time and with more numbers of the players in e-grocery and many more attractive offer supported with free home delivery, this channel is impacting traditional retail in big way.

E-commerce: Overall e-commerce business in India is on rise and government also promoting a digital culture. Regular festival sales with heavy discount and cash back for digital transaction are the attraction for growth in e-commerce business.

5.2 Operational Challenges

Inventory, space and storage Management: One of the key challenges face by these stores are of inventory and pace management. Kirana store right now don't have any mechanism to place right order quantity and most of the time get swayed by discount and dumping by suppliers of slow moving brands. Limited space not only restrict the proper and safe storage of stock but create challenges for display and merchandise also.

Cash and Billing: Mostly these kirana stores either don't use bills or provide a hand written bill while dealing in cash making checkouts quite inconvenient for new age consumers. They spend lots of time in counting cash and then depositing in bank. In case of single owner store, cash management eats good amount of productive time on a non-value added activity. In absence of proper record of returns and revenues, banks also avoid giving these stores loans in case they need it for business expansion.

Customer Experience: Managing customer experience in today's market scenario is a big challenge for these stores. Despite of having a huge set of verbal data about purchase patterns and personal like and dislikes of customers, stores are unable to use it for segmentation and creating a personal shopping experience. Customers are also having complain about how to browse and feel the product at store due to limited space and poor visibility of products which these store owners need to address to not only manage but enhance the experience of customers at stores.

5.3 Behavioural and Social Challenges

Changing Demographics: There are now more young and tech savvy consumers are around to shop and meeting their expectation and preference is a big challenge for kirana stores as most of these consumers are tech savvy and like to use technology during their shopping. Increased penetration of internet and affordability for smart phone have led to more aware and evolved consumers who are more informed about product benefits and their choices and always demand the most recent item launched by companies from the stores.

Lack of Knowledge: Most of store owners are not clear about the inherent abilities of technologies and how these can be integrated and institutionalized in their businesses and what all benefits technology can offer to them.

Capacity and Capability to Invest: Since most of kirana stores operate on low capital model, there is enough resistance to incur upfront investment in technology and technology based solution to improve operational efficiencies .Another challenge is skill gap to operate the technology as even operating POS machine is a challenge for most of the store owners.

Fear and Privacy Apprehension: Most of these stores operate on cash and always afraid of using any other means to collect payments e.g. digital payments due to apprehension about the visibility of collection, revenue and taxation.

Most of these challenges can be overcome by giving education and training to these store owners while on operational front, technology can be a great saviour to not only save the cost and time but to increase the profitability also. In subsequent section, it would be discussed that how technology can be used to overcome the operational challenges and managing customer experience for these kirana stores.

6. Drivers of Digital Transformations for Kirana Stores

Kirana Stores have two options to respond to digital revolution – while a vast majority see it as an enabler to improve its efficiency using the technology while a large set of store owners find it a challenge and try to avoid the adoption and usage of technology but sooner or later they will realize the importance of moving with times and taking required corrections in their operations. Integral to this approach is the ecosystem in which traditional retail operates – suppliers and customers. Most of the suppliers have moved on handheld devices track and monitor real time sales and are in process of integrating this data with their central data base for further collaborative filtering and communication. These companies have moved one step ahead to use chat bot and Audio Video tools to train their sales force on new product's benefits or change in promotional campaign. In turn sales people use these application to train kirana store owner which again work as catalyst for store to get understanding of technology to pick the key facts faster. Companies are using video technology also to identify the gaps in planogram compliance at the store and thus making more informed choices depending upon the space and store layouts.

The retailor who opt for technology tried to develop a collaborative approach with ecosystem to improve customer life time value as customers are also looking to optimize his time, efforts and experience of buying from these stores while suppliers were already in frame of using technological solutions to optimize cost and increase efficiencies to deliver the best value to its customers. Focus is on customers, customized solutions and personalized communication to customers. Kirana stores with set of information they have can create higher degree of personalization in services than any organized retail and for that they would be in need of technology. Bhatnagar (2017) defines digital business transformation as profound and accelerating transformation for business operation and activities to fully leverage the opportunities of technology and its current and future impacts on business in strategic manner. The key enablers for digital revolution for retail and especially for kirana stores can thus be discuss under different buckets as given below

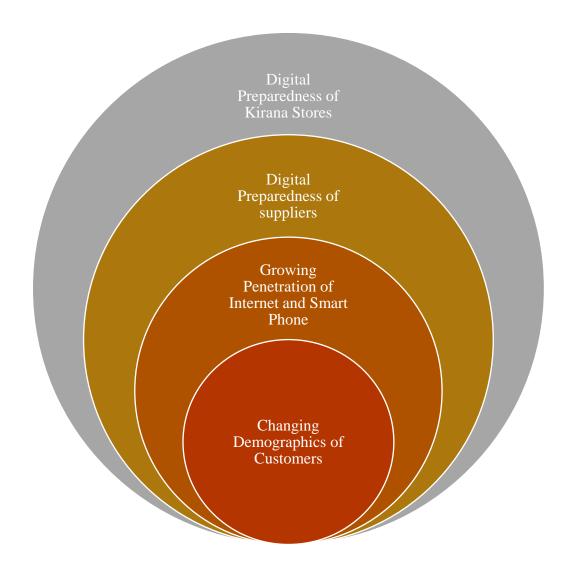


Figure 3: Drivers for Digital transformation of Kirana Stores *Source:* Author

6.1 Changing Demographics of Consumers

- i. India is getting more younger with 400 million of population in age group of 18-35 years which almost 30% of total population of India (Morgan Stanley, 2017)
- ii. 84% of them already reliant on mobile broadband, spending an average of 17 hours a week online5. (Morgan Stanley, 2017)
- iii. 150 million customers are digitally influenced in Retail (Digital influence factor is the % of instore retail sales influenced by shopper's use of any digital device (laptops, desktops, smartphones, tablets, wearable's) and in-store devices (i.e. Kiosk, mobile payment device (BCG-Google, 2017)
- iv. 69 million online consumers, in 2016, 83% of the smartphone users in India made purchases through their mobiles (BCG-Google, 2016)

6.2 Growing Penetration of Internet and Smart Phones in India

i. 1200 million mobile phone users and 520 million smart phone users by 2020(BCG-Google, 2016)

- ii. 650 M internet users by 2020, Mobile is the friendliest device for internet access for 77% of internet users (BCG-Google, 2017)
- iii. National Optical Fibre Network, an Initiative for Digital India is set to provide broadband connectivity to 2.5 lacs Gram Panchayat. At present 70% rural India access internet through mobile handset but this initiative is expected to increase the adoption of data enabled services in these areas (BCG-Google,2016)
- iv. Rural Internet users will contribute to more than 50% in upcoming growth during next 3-4 years (BCG-Google, 2017)
- v. Share of female internet users to grow to 40% by 2020 from 31% in 2016(BCG-Google, 2017)
- vi. 241 million Facebook and 200 million whatsapp active monthly users (Deloitte ,2017)
- vii. Non cash methods contribution is expected to touch 40% of consumer payment segment by 2020
- viii. Person to merchant transaction in cashless mode will be highest in unorganized retail at 34%, by 2020 (BCG-Google, 2016)
- ix. Offline points of sale will contribute to 60% of digital payments eventually
- x. 81% of existing digital payment users preferred it to other non-cash payment

6.3 Digital Preparedness of suppliers

- i. Front line sales force use Cloud connected Handheld devices for order and billing
- ii. Artificial Intelligence and Machine Learning is being used to improve productivity
 - a. Integration of Internal data with Big Data from market, retailer and location
 - b. Collaborative Filtering
 - c. Personalization Communication
 - d. Isolate and identify granular trends from sales and return
 - e. To highlight the Channel -Portfolio gap
- iii. Training to Sales Force using Chat bot and Audio and Video tools to download information about products and promotions
- iv. Video technology to check planogram compliance
 - a. Smart Store technology to assess Trial -Purchase Intent of customers
 - b. Heat Maps to view most visited or sought after place inside the store for visibility creation using smart store technology

6.4 Digital Preparedness of Kirana Stores

As per a study "Going Cashless" which was conducted to assess the impact of digital transaction pre and post demonetization in India (CDFI &IIM B, 2017), initial acceptance of mobile technology and POS machines have increased manifold in recent years. With the cost going down the affordability of both internet data and POS machines is expected to touch new heights. This report throw very interesting facts about the preparedness of kirana stores for digital technology.

- i. 94% of Kirana retailers have a mobile phone of which 41% have Smartphones.
- ii. Around 80% of Smartphone users use Internet. This presents huge opportunity to move these retailers to mobile payments
- iii. Post Demonetization 63% retailers intend to use cash less system of transaction and 50% intend to buy a POS machine

- iv. 45% retailers intend to deploy a POS machine. Current penetration (about 5% Kirana retailers having a POS device) and at least 35% of consumers having access to Cards present a huge opportunity
- v. 63% of retailers in rural areas plan to use a cashless system. High penetration of bank accounts and mobile phones amongst both consumers (80% and 84% respectively) and retailers (97% and 94% respectively) and an inclination amongst consumers to use cashless modes should be tapped.

7. How Digital can Transform Kirana Stores Operations

While there is enough possibilities and potential which technology can offer to kirana stores in their core areas of operation, the focus areas will always be the operating processes and customer experiences because these two are the most critical challenges to not only improve the delivery process but also to manage the customers expectation to expand the business.

7.1 Role of Digital Technologies in Transformation of Operating Process of Kirana StoresDigital technologies can transform existing operating processes in areas of store operation, finances, space and inventory Management and thus help kirana stores to overcome the operational challenges they are facing.

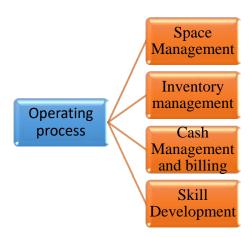


Figure 4: Role of Digital in Operating Process of Kirana Stores *Source:* Author

Space management is one of the key challenges of stores which impact merchandising and customer movement in stores. Digital displays and censor based POS billing are the two key solutions which can transform the inside operation of store while reducing time on billing as well as showing merchandise to customers. These digital displays can help these stores merchandise the goods through digital medium and order the goods on demand reducing the chances of investment getting block in items which doesn't sell much form their shops. It will help kirana stores in both inventory and space management

These stores operate with space of 200-500 sq fts and always complain about space as in absence of proper planning the available space even falls short of placing goods in order and sequence leading to a situation where some of the items get lost in haphazard storing and finally lead to damaged or out of date which again causes loss to owners as most of the suppliers don't replenish damaged stock

after certain timelines.. Digital technologies deals with macro and micro space analysis can help stores in layout and store planning as well as optimization of shelf space to assure the most optimal utilization of space and arrangement of goods.

Digital mode of transaction can reduce the productive time being spent on non-value added activities of collecting and accounting cash and would make the financial dealing more transparent and convenient for stores. A proper accounted monthly performance would help them to secure short term loans also from banks and financial institutions which currently is not available in most the cases.

People would be the key for digital transformation for kirana stores and people here includes not only kirana store owner but his family member and staff if he can afford. The inertia for change, adopt, use and leverage technology can be handled by providing them reasons and benefits technology can offer to them. With affordable internet data and availability of content in vernacular languages, store owners can use application like YouTube etc. to learn online about the skills required to operate the digital displays, POS terminals or inventory tools. As per 2020, BCG-Google (2016) internet penetration in Indian language is expected to touch 75% by 2020. Store owners can take help from initiatives taken by Government of India like Digital India and Skill India program to attain the necessary training by trained professionals .

7.2 Role of Digital Technologies in Enhancing Customer Experience at Kirana Stores

According to a report by Deloitte (2017), 71% of Indian shoppers use digital before their purchase journey8 nearly 70% of Indian shoppers prefer digital devices (own or kiosk) rather than sales associates for in-store activities such as comparison of product pricing, obtaining product information, checking product availability etc. It is imperative for retailers to complement traditional methods with new-age digital technologies to provide a seamless shopping experience. Kirana stores can help create this kind of experience for customers using technology in following areas.

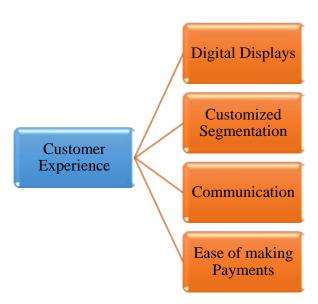


Figure 5: Role of Digital in Enhancing Customer Experience *Source:* Author

Digital Displays helps customer in browsing for different brands and making informed choices without any physical movement. It also suggest the availability of product at store so if predefined product is not available, one make decide about a substitute before placing the orders.

A major benefit of POS billing is that it keeps details of purchase made by customers and with help of a compatible tools one can retrieve the data customer wise and product, SKUs they bought in past for attributing their needs and preference. This customized segmentation not only help store owners suggesting customers about their shopping preferences but also help in designing loyalty and subscription programs to increase order size and bill value basis available data of preferences and usage.

One of the most important ways of improving customer engagement within stores is to focus on merchandizing. Quite often in this new digital world, merchandizing and promotion strategies go hand in hand. A robust communications using social media and flash sms can be used by kirana stores to promote not only stores but products as well. Social media integration is becoming integral for a retailer as customers use it to obtain validation from personal network, gain awareness, research products and get feedback from friends/family.

Payments and checkout is a significant pain point for customers in retail stores as they encounter long queues severely impacting shopper experience. Recent development in technology for financial transaction has increasingly fuelled the use of electronic-based payment instruments globally. Retailers can utilize self-checkout options like Digital/mobile wallet, credit and debit cards and UPI based payment options.

8. Conclusion

There is one fact about Indian retail which no one can dispute is about the high growth potential of the sector and role of kirana stores to support and drive this growth. It can be said with great amount of belief and conviction that kirana stores in India are aware of their internal and external challenges and ready to overcome these challenges. They have shown initial acceptance towards technology and now in process of using technology to improve their operational efficiencies and managing customer preferences and expectations. Initial readiness of these stores for digital transformation can be witnesses with extent of penetration for smart phones, internet and mobile based solution in these stores. The operating ecosystem of customers and suppliers have also worked as enabler for these stores to speed up the adoption and usage of technology to meet the challenges posed by industry and customers to them. It can be easily concluded that kirana stores in India are ready for a digital transformation and are working hard towards to remain relevant and to capitalize the opportunities provided by growing retail sector. Findings of this study would help FMCG companies and players in grocery business to frame strategies to cooperate and collaborate with kirana stores to have a shared growth story for future.

References

- 1. AC Nielsen. (2015). the future of grocery E commerce, digital technology and changing shopping preferences around the world.
 - https://www.nielsen.com/content/dam/nielsenglobal/vn/docs/Reports/2015/Nielsen% 20 Global% 20 E-Com-
 - merce% 20and% 20The% 20New% 20Retail% 20Report% 20APRIL% 202015% 20(Digital).pdf
- 2. Agarwal, S. (2018, July 23). Kirana stores need an equal playing field.

- https://www.financialexpress.com/opinion/kirana-stores-need-an-equal-playing-field/1254291
- 3. Ahmad, N. (2012). Retail Industry Adopting Changes –Adoption, Automation, Benefits. https://www.theseus.fi/bitstream/handle/10024/53336/Nabeel_Ahmed.pdf?sequence=2.
- 4. BCG & Google (2016). Digital Payments 2020-The making of \$500 Billion Ecosystem in India. http://image-src.bcg.com/BCG_COM/BCG-Google%20Digital%20Payments%202020-July%202016 tcm21-39245.pdf
- 5. BCG-GOOGLE (2017) .Decoding Digital Impact in FMCG. https://media-publications.bcg.com/BCG-Google-Digital-impact-in-FMCG-Sep2017.pdf
- 6. Berman, J.S (2012). Digital transformation: opportunities to create new business models. Strategy & Leadership Vol. 40 Issue: 2, pp.16-24.
- 7. Bhatnagar, A. V. P. (2017). Enablers and Inhibitors of Leveraging Analytics for Digital Business Transformation
 .https://shodhgangotri.inflibnet.ac.in/bitstream/123456789/4574/1/synopsis.pdf
- 8. Carr Jr, V. H. (1999). Technology adoption and diffusion. The Learning Centre for Interactive Technology. http://www.au.af.mil/au/awc/awcgate/innovation/adoptiondiffusion.htm
- 9. Choudhury, R., R. (2017). Challenges and Future of kirana Business in India A brief study of the Indian online and offline kirana Market. Advance Research Journal of Multi-Disciplinary Discoveries, Vol. 14.0 Issue I, 2017
- 10. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340.
- 11. Deloitte (2017). Disruption in Retail through Digital Transformation. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/in/Documents/CIP/in-cip-disruptions-in-retail-noexp.pdf
- 12. IBEF (2017). Retail Industry in India. https://www.ibef.org/industry/retail-india.aspx
- 13. IBEF (Jan, 2019). Indian Retail Industry Analysis Retrieved 10 September 2019 ,from https://www.ibef.org/industry/indian-retail-industry-analysis-presentation
- 14. KPMG & Google (2017). Impact of digitization and internet on SMBs in India. https://assets.kpmg.com/content/dam/kpmg/in/pdf/2017/01/Impact-of-internet-and-digitisation.pdf
- 15. Kristiansen, L. (2014). Improving Customer –Retailer Relationship through Digital Retail (Master's Thesis). Reykjavik University
- 16. McAdam, D., McCarthy J, D., & Zald.M. (1996). Introduction: Opportunities, Mobilizing Structures, and Framing Toward a Synthetic Comparative Perspective on Social Movements. Cambridge University Press.
- 17. Prepletaný, D. (2013) The Impact of Digital Technologies on Innovations in Retail Business Models (Master Thesis) Aalborg University
- 18. Raghvendra, R.H(2012). An overview of Unorganized Retail Sector in dia. https://pdfs.semanticscholar.org/8a02/64646157b85b948715e6a5c4bc828ff0eacb.pdf
- 19. Rogers, E. M. (2003) Diffusion of Innovations, Free Press, New York, And Fifth Edition 2003.
- 20. Sharma, R.& Mishra, R.(2014). A Review of Evolution of Theories and Models of Technolo-

- gy Adoption.
- https://www.researchgate.net/publication/295461133_A_Review_of_Evolution_of_Theories_and_Models_of_technology_Adoption.

- 21. Uhl, A. & Gollenia, L.A. (2014). Digital Enterprise Transformation: How to Take Full Advantage of Digital Technologies. Gower.
- 22. Westerman, G., Didier B., & Andrew M. (2014). Leading Digital: Turning Technology into Business Transformation. Harvard Business Review Press
- 23. Zomerdijk, L.G. & Voss, C.A. (2010). Service Design for Experience-Centric Services. Journal of Service Research: JSR, vol. 13, no. 1, pp. 67.