Challenges and solution of digitalization in retail sector of India during covid-19

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Abstract

Digitalization has helped in the transformation of several industries in the last 20 years. Merging various computer functionalities, such as internet facilities usage, super-fast processing ability, improved ability to acquire, and utilizing digital form data is a major success factor in this context. In this paper, we would mainly like to focus on the retail sector and how digital platforms transform the logic of retail exchanges and assess the challenges where digitalization can overcome in retail industries. In this day and age of the internet and electronic gadgets, almost everything is going virtual. A large portion of the population is finally transitioning from traditional to modern technology for any transaction type, whether banking, business, selling, and purchasing or any other activity. The digital revolution has significantly altered the efficiency and speed of economic operations, particularly during the recession and after the pandemic, which caused the global economy to slow. As a result of this situation, and to avoid a breakdown shortly, the global economy has been revolutionized by the internet and digital devices.

Introduction

India, the country situated in the southern part of Asia, has a population almost equal to 1.33 billion, which is the second-largest in the world. The area covered is 3,287,263 square kilometres, which happens to be the seventh-largest. Also, the Indian retail market comes under the best five markets in the world because of its economic value with an estimation of US$ 600 billion. However, in December 2019, a virus name corona was detected in china which eventually had spread worldwide within two months. In India, in May 2020, the Confederation of all India Traders (CAIT) said that "due to nationwide lockdown because of coronavirus pandemic, the country has faced a business loss worth Rs. 9 lakhscrore in retail trade." In this country, a major part of the revenue comes from traditional retailing. However, now domestic trade is facing its worst period. These four use cases have been introduced in this paper, which is mainly based on digitalization [1].

Digitalization is a variety of phenomena and processes that use digital technology in a broader range of personal, organizational, and social contexts. It gives an apparent idea of development and a technology-dependent world. In contemporary society, it is a significant transformation currently going, consisting of various everyday life and business elements. In the retail sector, such transformation is necessary, which is affected by this development.

Information technology and changes in customer demands are leverage for all new business models as they can take advantage of these advances, in turn expecting managers to understand and respond to changes in the retail environment at a rapid pace. New business models who have tried to make information technology had to face the consequences in society and organization at a large scale: virtual space infinity, unlimited computing power, and ubiquitous connectivity have allowed greater flexibility, create business effectiveness, and enable entirely new enterprise models which will increasingly use mobile devices to increase the effects of digitalization to connect to the internet, this is changing consumer practices, which include purchasing behavior in traditional store environments [2].

New merchandise for consumers is being launched rapidly, which has mobile Internet access, which also links to other technologies. Due to smartphones and digital devices' variety of features, they have gained an im-

portant position in the retail environment. Smartphones are now not only the alternative for laptops, but they also offer tremendous features like barcode scanning, near field communication, and location-based services. These devices are making Internet services an element in physical product stores that have led to new retail formats [3].

Besides providing information retrieval, brick and motor stores also provide ordering, testing, payments, and various other services. Development of payment applications, price comparison, and access to product information has emerged from these smart devices. Digitalization in the retail sector can help develop new products and services and the small transformation of pre-existing processes, activities, actors, and goods.

Experts worldwide have declared that we are at the dawn of the "digital revolution." Consumer expectations are evolving, and new competition challenges business models in the retail face as it has increasingly moved online. Therefore, digitalization will probably have a good and extensive effect on retailers, consumers, employees, and society. Thus, there is a great necessity for a broad and clear understanding of the phenomenon.

Retailing can be explained as the timely distribution of product sand services required by the purchaser at competitive, reasonable, and budget-friendly prices. Therefore, it is said to link the individual consumer and the manufacturer for purchasing personal commodities, which does not mean a direct link between manufacturers and institutional purchasers, such as wholesale consumers and government [4].

Literature Review

Digitalization for retailers is about rethinking processes and moving beyond incremental changes, creating a connected environment created by technology's practical application. In the same market environment, digitalization can potentially shift the balance between multiple competing firms. Creating a new playing field and changing the pattern in which firms compete in various levels can directly affect known significant business structures. The reason to assess a firm's internal resources and capabilities is served by the current strategic management theories and models. Different combination of tools and systems is used to adopt strategic options further to analyze the current and future market environment.

Different business processes should be standardized to be shared seamlessly and can be understood by everyone. Thus, in digitalization, information tech-

nology plays an integrated role in business innovation and transformation rather than acting as a subordinate support function. For daily work, the Information Technology of the new generation promises significant advantages for manufacturing industries. Unfortunately, these industries are slightly slow in grabbing advantage of the opportunities which the current wave of digitalization is offering [5].

In today's digital world, the growing complexity in the retail sector results in huge data generation. Analysis of the data is important to provide new insights leading to new opportunities for enhanced customer experience. With the help of technologies like IoT, data can be captured and analyzed more efficiently, allowing identifying new business opportunities. Also, AI would be in major demand by the consumers to make interactions as seamless as possible. Moreover, with AI's help, algorithms increase visibility into ROI effects, translating into results such as lower costs and higher sales. Also, transparency is of increasing importance to consumers. Brands make use of provenance, which is a platform that provides transparency by discovering the origins and history of products. The consumer will be able to find the seafood he eats from the boat to the plate. Multiple forces give rise to flourish digital marketing. These forces encourage better information about the commodity, larger variety, and substantial transparency across vendors from the consumer's perspective, and potentially lower prices because of lower fixed-cost operations [6].

By putting extreme pressure on traditional firms and messing up with numerous markets, alteration of customer expectations and behaviors is done because of the digitalization and business model innovation. According to the surviving literature, there are three digital transformation stages: digitization, digitalization, and digital transformation. Today, the shopping pattern of people have also evolved. People prefer things being delivered to them at their homes. They also prefer the waiting at the stores to be less if they happen to be at one of the stores. Also, in the current era, the consumer decision is impacted quite early as soon as the need occurs in the market. People shop as and when the demand occurs and consumes when they buy, which involves instant purchasing, subscription-based purchasing, and automated purchasing [7].

Hanninen studied the retail sector's advancement, which acquired the digitalization and facilitated several platforms to implement their business. It is a theoretical

analysis of various mobile banking platforms to evolve insight into the multi sided retail banking promoted through digitalization. The research inferred that the middlemen between consumer and retailer had been pulled out from the supply chain with digitalization. Now, there is a direct connection between the purchaser and supplier. An immediate transaction has happened between purchaser and suppliers, thus changing retail sector transaction logic in the marketplace.

Organized retail stores occupy only 8% of the Indian retail sector. The unorganized retailers dominate the remaining 92%. Sivathanu interviewed and studied 766 people to analyze how often they used online payment facilities during the time of demonetization in India; he made questionnaires and conducted this study to build a bridge connecting demonetization and the rise in use of online payments [8].

Logistics that are digitally organized and working online have played a positive role in the COVID-19 pandemic. The acceleration of digitalization created due to COVID-19 is seen in all sectors. Also, the COVID-19 pandemic has forced education to adopt digital transformation. However, because of few digital divides, today's children are not equipped for the technology-rich future. We should empower teachers to be digital transformation leaders to help children with their studies and enter a better future. It is high time for the healthcare industry to plan to use digital technology. For example, telemedicine consultation with data in images (X-rays, CT scans, etc.) can be uploaded through sites with remote interpretation. Virtual clinics could be initiated, which will help ensure that every patient is receiving standard clinical service rather than engaging in physical crowding in hospital premises. Also, virtual learning platforms should be explored to avoid physical meetings for other hospital activities like research and education.

Some challenges could be faced during digitalization which can be list [9].
1. The commitment of the management and the employees
2. Need of the efficient change management process
3. Choosing the right technology
4. The complexity of the digital transformation process
5. The complexity of the current retail process
6. Training required for using new digital systems

Digitalization into the business model DNA is another big challenge that is important for a company to succeed and become a critical management issue.

Digital transformation has also brought cross-domain opportunities where one domain complementary to another can work collaboratively to boost each other's business capabilities, potentially a win–win situation for both domains. However, to make this successful, an efficient and well-thought-out change management procedure is required, which is essential since, while digital transformation happens exiting processes need to work smoothly, enabling a gradual transition to digital [10].

Objective
Keeping in view all the facts, the paper focuses on the following objectives:
- Understand the challenges faced by the retail sector due to the lack of digitalization in India.
- Make suggestions that can help overcome the challenges of the organized retail sector.
- Know the scope of digitalization in terms of transactions in the retail sector.
- To present some of the untapped potential areas and use digital transformation cases that can be applied to enhance the customer experience for retail brick and mortar stores.

Methodology
This paper is mostly based on derivative data and information collected from various origins. This document attempts to do a structural analysis of the differences seen in the Indian retail market in terms of size and structure during the "COVID-19" pandemic. This analysis helps to recognize the coming future changes in India's retail market and how digitalization can help achieve them.

The retail industry faces major challenges in today's situation, some of which are listed below:

Physical Interaction
In the current situation, it is highly recommended to avoid going to public places and outside for no reason. Physical interaction plays a major role for retailers to sell their products and services.

Customer's Data Privacy and Sharing Concerns
Protecting data and privacy has become a major challenge for retail companies. More customers, employees, and digital devices go online every day. These data are not only important and critical for the store but also important for the customer. For example,

credit card information, phone numbers, e-mails, and addresses. Protecting loose data is not just to prevent economic losses but to meet stricter new government or industry regulations; it is also about protecting loyalty and customers'trust [11].

Powerlessness to Integrate Users, Devices, and Things

Many retail businesses have developed websites, mobile applications, and physical stores with digital gadgets at check-out standing to capture the most relevant data. Unfortunately,the cost of these gadgets is very high as compared to the retailer's budget. Thus, some initiatives should be integrated and provided as a connected consumer experience to avoid the risk of extra operating cost and disappointment of impatient partners and customers as well.

Impersonal, Dissatisfied Customer Experience

Many retailers do not have personal customer insights or the potential to generate them. Their customer information is quarantined across uneven data islands in their organizations, limited by inheriting infrastructure and temporary IT improvements.

Changing Customer Preferences

Customer satisfaction is the key ingredient for the success of any business. Because of unexpected customer choices and preferences, satisfying them has become a very difficult task. These changes are considerably seen due to high income and sophisticated lifestyle choices. Thus, organized retailers find it difficult to attract customers and retain them.

Infrastructure Challenges

The big challenge faced by Indian retailers today is inefficient infrastructure. This incapability leads to slow down the processing time of the business. Non-efficient disturbance channels are a huge hindrance for retailers. They are difficult to handle and end up with great losses.

Retail frauds

Fraud is a usual challenge faced by everyretailer, supplier fraud, theft, theft and negligence in supervision, and many more. These challenges are quite difficult to solve. These scams still occur regardless of the initiation of surveillance, like CCTV (video surveillance) and POS (point of service) systems [12].

Target the right audience

One of the first and most important things that effective sales can do is identify your target audience in the market; with several internet users reaching their peak and rapidly changing consumer expectations,picking the right audience has become the biggest challenge. Also, the pandemic situation created due to coronavirus has a great impact on every retailer's life. Some of the challenges faced by retailers in this situation are:
- Shortage of supply
- Time constraint to open the shop
- Minimum physical interaction with customers
- Fear in retailers as well as customers to go in a public place.

Results & Discussion:

Use Cases To Address Challenges Faced By The Retailers
E-Cheque

In the pandemic situation created due to covid-19, people are trying to avoid physical or close human interaction as much as possible. In retailing, the retailers need to buy goods in large quantities from other retailers at times. So, the money transactions are done through cash or paper cheque or by depositing money in the bank, each of which requires human interaction in some or another way. Even though applications like Google pay, phone-pay,etc., are available to transfer money online, the limit per transaction is way too less.

The concept of e-cheque has not been introduced in India, as it is highly used in other countries. E-cheque provides fast processing of the transactions, and as it is conducted online, it thus reduces any human interaction. Figure 1 represents E-cheque connecting to the bank [13].

Potential Implementation

Here, the bank has their application, where to activate an e-cheque in our account, a sender and the recipient needs to contact their respective bank, which will verify and provide the customer with login details. After logging in, the customer can add the recipient's necessary details and add the money, which is to be sent. The recipient can directly deposit the amount in his bank account through the application. Figure 2 shows the E-Cheque processing transaction.
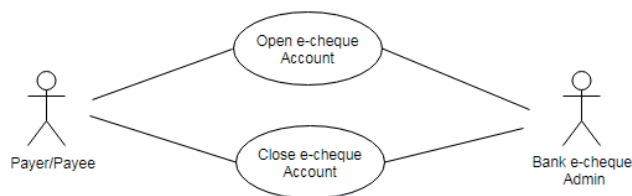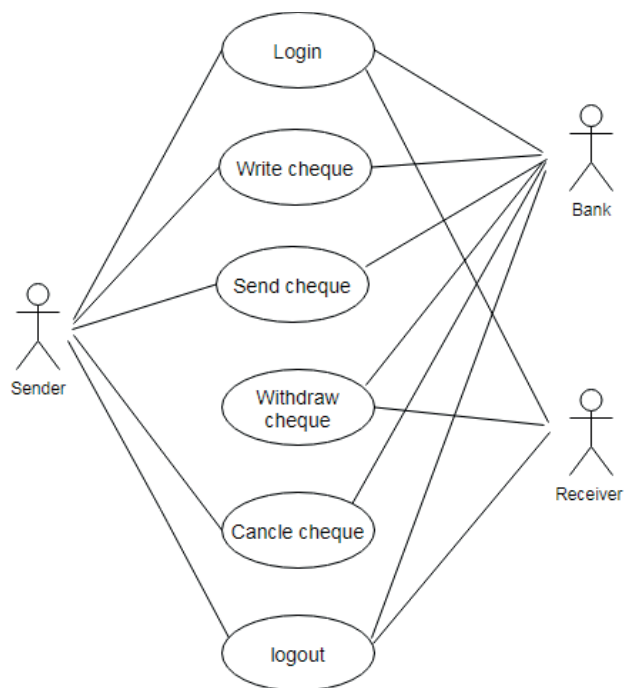
Figure 1: E-Cheque: Connecting To Bank

Figure 2: E-check: processing transaction

Figure 3: Medicine vending machine

Medicine Vending Machine

Many essential things might be needed at any point in time. One of such essentials is medicines. In India, there are negligible medical stores, which are open 24×7. The majority of people who go to medical stores are generally ill or take medicine for the ill ones. Around 70% of the people who are present at medical stores have some infection or virus. There is a high possibility that people around infected ones may contract some disease from them. In this scenario, we need to find a solution where there is minimum physical interaction between people. The service provided is much faster and not time-consuming.

For this, we can introduce a medicine vending machine, which will be located at multiple places in the city just like ATMs and will be connected by a common platform. Figure 3 shows the medicine vending machine [14].

Potential Implementation

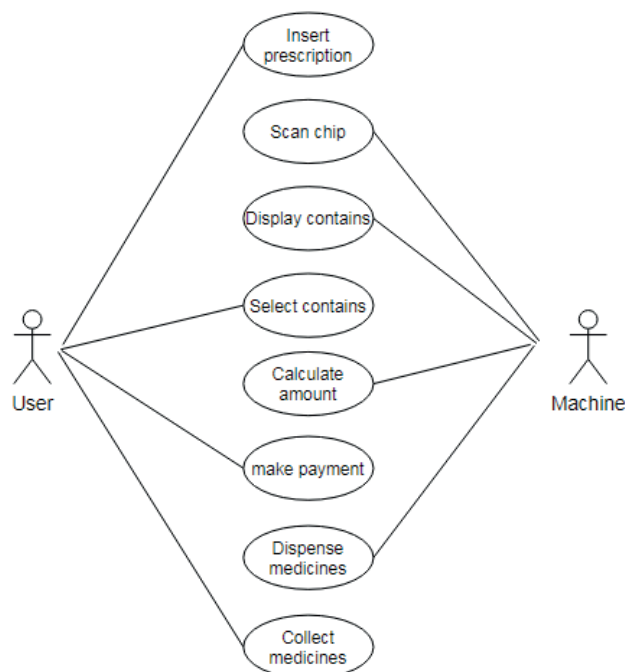Here, an application will be created where all the doctors and services providers of the city will be registered. The doctors can generate prescriptions on this application. The medicine vending machine uses sensor technology that automatically dispenses the medicines based on the doctor's prescription generated through application and the in-hand prescription, which will contain a chip attached to it. The machine will scan the chip inserted into the machine and display the prescription's contents on a screen. The user can select or deselect the prescription contents and make payment according to that. The machine will dispense the desired medicine. Also, suppose the users do not wish to swipe cards there. In that case, he/she can register on the application by adding desired information through which money will be automatically deducted from the account while dispensing the medicines. Through this application, the user will locate which medicine is available in which locality will let their work be done faster with minimum effort [15].

Smart Carts

In India, major populations prefer going physically to the superstores to buy their daily necessities rather than ordering them online. However, yet the concept of the smart cart has not been introduced here. Many use cases have been implemented on the smart cart. One of the best examples is the self-checkout service provided by the smart cart available at Wal-Mart. Unfortunately, there are multiple errors, like scanning the wrong item and willing to replace it. Here, the advanced smart cart will be introduced where a separate chip is attached to each item available in the store [16].

Potential Implementation

An application will be created to connect the smart cart and the users. Just like we book a cab online, users will be able to book their cart by generating a separate id. A particular id will be assigned to each user to access the cart as they reach the superstore.

Once the item is added to the cart, it will automatically scan the value. If the item is removed from the cart, it will delete its value. In the end, the total amount will be calculated and displayed, which will be deducted automatically from the user's account through the id generated. Once the user makes the payment, the information will be stored in the database. The staff there will sanitize the cart, which will reduce unnecessary touching of items and avoid the human error of multiple scanning or wrong scanning. The time consumption will be reduced because there will not be manual scanning required as the cart itself will scan the item as soon as the item enters the cart. Also, the data will be managed appropriately for multiple purposes, for example, marketing, grand offers, etc. Figure 4 shows the smart cart [17].
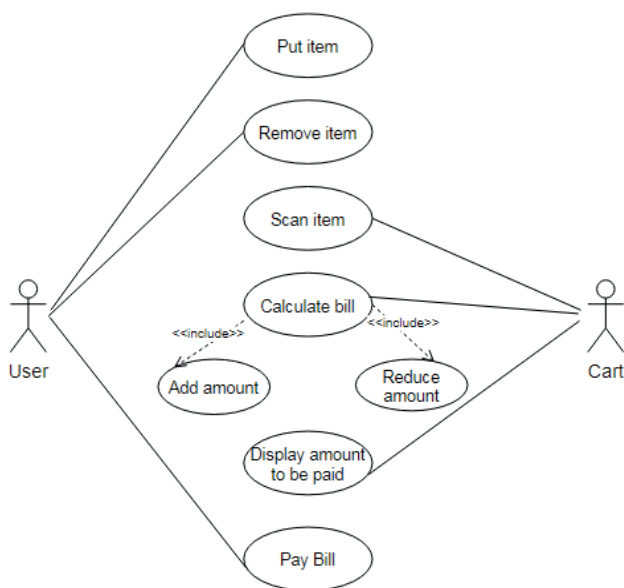

Figure 4: Smart Cart

Digital Marketing

At present, every other retail shop available nearby is not found on the internet; only about 40% of them can be found online. There are times when a person goes to buy something. However, it is not available at that particular time at that particular shop, which wastes the time of the customer and energy, giving a poor impression of that shop. We can take an example of just dial, where as soon as we search in the just dial

app, it will show some of the top 10 results. Those are the ones who had registered with just dial. Multiple shops are not listed on just dial or any other app or sites, where necessary things would be available at a much cheaper price than other shops. Since people are not aware of the shops available nearby, it becomes difficult for the customer and the retailers [18].

Potential Implementation

The idea is to create a website where all small to big retailers will register themselves, and a team of four to five people will be the admin. The team of that city will verify the registration for any fraud by visiting the shop's location.

If the user wishes to access the website, his location information will be taken to give the nearest result. With the help of the search engine provided, users will also search for every item needed. There will be various categories such as general stores, medical shops, garment shops, furniture stores, etc [19]. The owner will be responsible for updating every item with their price on the website. This method will prove effective, as it will reduce the time consumption of a person traveling to a shop where the desired product is not found. It will also help the shops to get the recognition they deserve. This strategy will help all the retailers to satisfy the increasing demands of the customer.

Also, the feedback section will be provided on the website so the users can give their feedback and suggestions to improve the idea's work. In case the price given on the website does not match with the retailer's price at the shop, users have full right to register a complaint against that shop. If multiple complaints come from the same shop, necessary actions will be taken by the admin team. The idea is to do digital marketing of every small to big shop available in the city [20].

Conclusion

This study aims to highlight the challenges faced by retailers and give solutions to eliminate those challenges. At present, considerable growth has been seen in the digital environment. However, numerous untapped opportunities can be identified and worked upon. The customer's journey from traditional shopping behaviour to the current use of the mobile device, internet, and social network makes the traditional online-physical dichotomy obsolete. In this paper, few propositions are introduced which leverage the fact that retiling firms are transforming themselves digitally. However, the older generation may not find it ap-

pealing and easy to use technology. Therefore, the system, application, tool developed for these propositions have to be user-friendly. Otherwise, it will fail to attract the expected customer base. Digitalization has completely transformed India's commerce industries, banking infrastructure, manufacturing, and various sectors. Mobile banking was introduced in the early twenty-first century with limited operations. However, with advancements in information and technology over the years, it is now emerging as a new normal in the banking infrastructure. Mobile banking has successfully met the needs of customers with few drawbacks and in providing customer satisfaction. Factors such as increasing smartphone and internet user penetration, ease of access, convenience, and security in conducting digital transactions are all important considerations that have proven to be the foundation for expanding mobile banking services in India.

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