

Evolving Retail Experience While Supporting Indian Economy

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Abstract

This project aims to help the retailers of our country and prevent them from going bankrupt. A platform has been developed that digitalizes retail markets of all sizes. Many factors were kept in mind while building the platform, such as the basic needs of the retailers and the buyers; sufficient information is taken from both sides to distinguish between a fraudulent user and a genuine one, but not in excess which might look like an invasion of privacy to the user; a user-friendly interface which is self-explanatory even to a person with minimal technical experience. The use of Django as a backend framework, HTML, CSS, and JS for the frontend framework, and SQLITE3 for the database has been used to set up this platform.

Keywords: Online shopping, covid-19, website, retail market, kirana stores

Introduction

Covid-19 brought challenges and hardships for most sectors and businesses, especially local shop owners and vendors. The major reason behind this is the complete lockdown across the country which forced shops to remain closed for months. Though some relaxations were offered later, in the meantime, these businesses suffered huge losses. Another important factor was a huge shift to online shopping. E-commerce facilitated customers with much-preferred doorstep delivery in comparison to going out and buying. Such platforms are focused on buying everything on a contract basis and not from retail stores. Today, giant franchises like D-Mart, Jio-Mart, and the rest survive because of their advertisement, online representation, etc.

This project aims to create an online presence for these local shops and would also better

equip these businesses to continue if another unwanted circumstance like covid-19 needed to be faced in the future.

Research Methods

The study's goal is to examine COVID-19's influence on the Indian economy by examining its influence on growth, manufacturing, trade, and the micro, small, and medium enterprises (MSME) sector, as well as to highlight essential policy actions to mitigate the economy's potential consequences. In all scenarios of the total, the impact of the pandemic on the Indian economy is enormous across industries. According to the report, India's economy could barely manage a positive growth rate of 0.5% in the best-case scenario, but it also faces the risk of a negative growth rate of 3–7% in the worst-case scenario. The economy is on the verge of entering a downturn, necessitating methodical, well-targeted, and robust fiscal-monetary stimulus measures. The authors also offered their own evaluation of the impact of the pandemic related lockdown and restrictive regulatory measures on India's gross value added (GVA), manufacturing, trade, and micro, small, and medium businesses (MSME) sectors. (Sahoo and Ashwani,2020)

Robinhood user activity suggests that investor in retail sectors are actively engaged in both momentum trading (buying stocks having good performance and selling non performing stocks)and contrarian trading (maintaining the stocks believing that prices will reverse). But due to increased volatility and uncertainty in financial markets because of the COVID-19 pandemic, it is found that in the beginning of crisis retail investors reduce momentum trading and believes that prices will reverse once the pandemic is over. It is also found that the impact of investors on several measures of market quality varied depending on market conditions,

corresponding to better market quality during less stressful periods and worse market quality in the beginning of the COVID pandemic. (Pagano et al.,2021)

In structural change of consumption of market items, COVID-19 pandemic is surely an accelerator and the digital transformation in the world. Two most dominant motivations for shopping in physical stores instead of shopping online are immediate possessions and social interactions, but shopping online seems to be substantially more convenient and economical. Greater flexibility in terms of time, location and product variety also provided by online shopping. Learning cost might be the one potential barrier that makes many consumers hesitant to adopt online shopping. Not only due to the desire for immediate possessions, consumers might have preferred to shop in stores nearby but also because they have been against investing time into learning how they can shop online from online registered stores. In aspects of time and location, online shopping provides great convenience compared to nearby physical stores. Still there are some reasons why some consumers still prefer to shop in nearby stores. Consumers face a problem in online shop from any virtual store that product information is often limited to images and product description provided by the virtual stores. Virtual stores might want to utilize some recent technologies to help consumers make decisions more easily while they shop online. (Kim and R.Y.,2020)

Digitalization implies an on-going change fundamental for the retail region. The inspiration driving this paper is to look at the wonder of the digitalization of retailing by developing an applied framework that can be used to extra layout current changes of the retailer-consumer interface. This paper has outlined the more exhaustive changes of digitalization of retailing by looking at how it affects four segments of the retailer-

consumer interface. Based on the past writing, it has separated first, how trades are changed through changes in correspondence, transactions and distribution; second, how actors are changed through the intermixing of people and digital technologies, the extended obscuring of limits, and new actors, jobs and connections; third, how settings are changed to consolidate ordinary and new settings similarly as their intermixing; and fourth, how contributions are changed through changes of items and administrations, augmentations of contributions and new sorts of pricing. As shown over, the difference in retailing as a result of digitalization is wide along the retailer-consumer interface and is likely going to have basic ramifications for investigation and practice. Consequently, the framework adds to moving the retailing past conversations of digitalization as web-based business and examinations of explicit, tight pieces of digitalization. Drawing on this examination, it is possible to inspect the hypothetical and reasonable ramifications.

This paper has illustrated an overall framework for understanding how digitalization affects the retailer-consumer interface. Unavoidably, this craving limits the opportunity of giving an inside and out examination of all of the four segments and the sub-characterizations of each part. Space limitations have furthermore obliged them to block a part of the viable models that may have clarified certain disputes. Regardless of the way that there is a remarkable necessity for research on explicit, concrete and continuous common sense models, there is furthermore a danger in being excessively based on contemporary practices that are promptly superseded. This difficulty has driven them to underline the reasonable conflicts rather than give different functional portrayals. At last, their goal has not been to give a total survey of the current writing yet rather to give a as a rule reasonable framework subject to huge investigation.

There is, thusly, a future prerequisite for more traditional assessments with respect to the digitalization of retailing similarly as accurate preliminary of the cases set out in this paper. (Hagberg et al.,2016)

Methodology Adopted

Research Analysis

This module describes the method that has been adopted to do research for the project. To understand what needs to build and what are features to be added many interviews will be conducted with people whom the product evolves. Google Forms were used to generate the public's opinion and how likely they are to use the product. Our idea will be posted on social media platforms mainly LinkedIn to get expert views from the people in the industry.

Database Design

The module describes the database structure and design of the work. The entire database has been divided into three parts mainly. The User table containing the encrypted user credentials using (PBKDF2). The Retailer table consists of all the details concerning the retailer and its products and orders. The Customer table consists of all the details concerning them including their past and current orders with a wish list and cart details. Both the Retailer table and Customer table are further divided into smaller tables for easy handling of data while reducing redundancy and maintaining consistency.

Registration and Login Page

The module describes the authentication and authorization side of the application. Any user can register themselves depending upon the role (retailer/customer) by choosing the appropriate role and filling in the necessary details. The registration involves two-factor authorization and asks for the PAN number

and Aadhar number from the retailer and customer respectively.

Retailer Profile Page

This module describes the step immediately after a retailer creates an account. They will have to enter the general details regarding their shop. These details include the open timings for orders, the variety of products they are going to sell, and the minimum order for which they'll deliver.

Retailer Dashboard

This module describes the product each retailer is willing to sell and at what price and all their past and current orders. For every product listed, its name, company, (one or more) photos with price and quantity available have to be mentioned by the retailer

Customer Dashboard

After logging in, the customer can view and search for all products they intend to buy. While viewing the products they can add them to their cart or their wish list and select the number of products they want to buy. A user can also view the situation of their current orders and view their past orders.

Result and Discussion

A survey was conducted through Google form and responses were analysed in which 63% of the respondents were male and the rest were female. The survey reached a variety of people from various states. As it is observed in **Fig 1**, that 70% of the users live in the COVID-19 affected areas. The people living in those areas are more cautious and would think twice before stepping out of their house, and would appreciate products being delivered at their doorsteps as early as possible. The product mentioned in this paper

is exactly what the need of the hour for such families is.

Are you living in a Covid19/Corona affected area?

100 responses

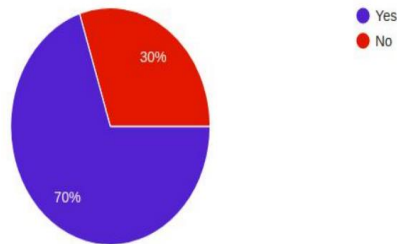


Fig 1

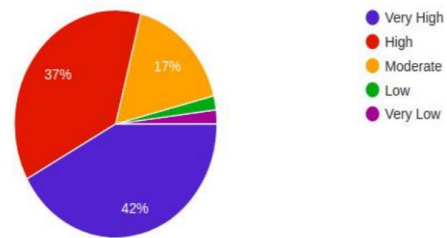


Fig 2

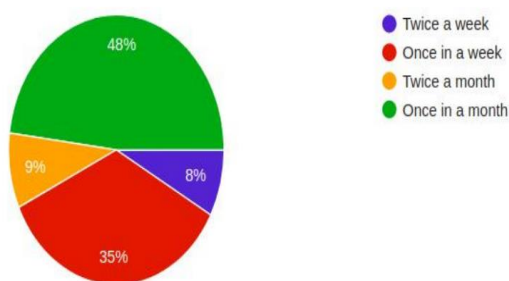
The effect of COVID-19 can be observed in various sectors like agriculture, IT, mass labor etc. Amongst these sectors the Indian Retail sector witnessed devastating effects. According to **Fig 2**, 42% of people believe that the impact of pandemic on retail markets is very high whereas 37% said it's high. These are the people who live in areas affected by COVID or are aware of the impact on others. The majority of the people understand the severity of the situation and would also be aware of the measures, which

are to be taken by them in order to be safe and would prefer to buy products online rather than going physically to the shops.

The last part of the survey was about the concerns of people and the safety measures they take. The results as shown in **Fig 3** show that people are trying to avoid the crowd during the pandemic time. Further analysis showed that nearly 57% of people step out of their house only once or twice a week and that too for essential products.

Whats the frequency of your visit?

100 responses



Conclusion

This project aims to help the retailers of our country maintain a digital presence, stay in the competition and prevent them from going towards bankruptcy during this pandemic. During our discussions of the various research papers, it was analysed how deadly Covid-19 can be to the economy and can affect retailers all across the globe and how the Indian retail market is shrinking because it is unable to compete with the foreign MNCs that are now trying to dominate the Indian economy. Various Social media platforms like LinkedIn were used in order to gain some input from people who have experience in the field and so far, the responses and the helpful suggestions have aided significantly in the research. After many discussions and extensive analysis, it was decided that the tools and frameworks Django, HTML, CSS, and JavaScript will be used as the primary tools for the project. The goal to build a platform that will aid retailers, it was decided to include a separate interface for Buyers and Sellers, providing functions like searching for a product, online transactions and request for order and delivery, etc. Numerous meetings and discussions were conducted with our local retailer to get to know what they are facing and to understand their requirements better, the reason for this was because the product will be used by the retailers and hence it is best to understand the requirements of the target audience better to make a better product. During the discussions, a week-by-week project plan was drawn to aid the development of the project and to make it systematic. This also helped in figuring out the Work Breakdown Structure (WBS) for the project. The team discussions have proven to be a crucial part of this project as it has helped the team better understand the problem, divide work to come up with a solution, and communicate better.

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