# BARRIERS TO ONLINE GROCERY SHOPPING: A STUDY OF SOUTH ASIAN ECONOMY

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**ABSTRACT**

*Purpose: The e-commerce sector of Pakistan is growing at an exponential rate and is expected to cross $100bn. However, the online grocery shopping sector has not shown significant progress, although there has been a heavy investment and an influx of start-ups in this sector. The aim of this study is to explore barriers to buying groceries online despite the busy schedules of people, heavy traffic on the roads, and long queues in shopping malls.*

*Method: This qualitative study used the thematic analysis method to analyze the responses of 16 participants collected through semi-structured interviews.*

*Results: People usually buy their groceries monthly and weekly from different types of stores and neighborhood shops. The main barriers were the negative influence of the immediate family members, lack of hedonic motivation, lack of experience in online shopping, disrupted power and internet connections, unable to see the complete range of products on the shopping website, and not receiving products within a few hours. People were deprived of exploring the products or finding out about new products when they buy online.*

*Conclusion: Businesses involved in online grocery shopping can increase their number of customers by fulfilling customer needs of hedonic pleasure in a trustable manner. The government can also support this sector by providing adequate improvement in internet connectivity and power supply.*

*Keywords: e-commerce, e-grocery shopping. online grocery shopping, online shopping*

## INTRODUCTION

"The Internet is becoming the town square for the global village of tomorrow." _ Bill Gates

'The tomorrow' has come. The Internet has not just brought the global village together but also brought several amenities just a click away (Saoula et al., 2023). For more than a decade and a half, the Internet was used more extensively and intensively all around the world (Iglesias-Pradas et al, 2013). Besides its multiple uses, the Internet has been an avenue of commerce across borders and within boundaries (Shroff et al., 2024).

The world's first internet service, Advanced Research Projects Agency Network (ARPAnet), was launched in 1969 to be exclusively used by educational institutions and public research agencies in the United States of America (Cockburn and Wilson, 1996). Gradually, the Internet extended to Britain, Europe, Africa, and then Asia. During the 1980s, businesses started using the Internet for emails and other data transfers (Hardy, 2014). Later on, in 1994, Pizza Hut recorded the world's first online sales by selling pepperoni and mushroom pizza over the Internet (Zakon 2014). In 1995, Amazon and eBay were launched as the world's first online retail stores or marketplace websites (Kotha & Basu, 2011). Slowly and gradually, there has been a

growth in the list of products that have been sold online. The expansion of e-commerce was faster than the expansion of the Internet; in some regions, the Internet and e-commerce entered simultaneously (Miva, 2019).

Many individuals consider grocery shopping a necessary evil due to the fast-paced urban life. However, the e-grocery market share is quite smaller than its expected size (Loong et al., 2018). Although e-grocery shopping accounts for only 10% of online shopping globally, it is proliferating in the USA (Magana, 2019). Globally, the volume of online grocery shopping increased by 15% between 2016 and 2018. This industry still has untapped potential that can be translated into revenue for online vendors and logistics firms. In addition to this, consumers can also benefit from the growth in this sector. Online grocery purchases can help consumers save on growing fuel expenses globally (Stevens, 2019).

In general, people living in the urban region are more likely to make online grocery purchases as compared to suburban and rural areas (Nelson, 2024). This is because of the higher level of education, higher incomes, busier lifestyles, and more developed infrastructures in the urban areas (Martins et al., 2017). Packed Fast Moving Consumer Goods (FMCG) products were bought by almost 3 in 10 internet users, while fresh grocery purchases were made by almost a quarter of the internet users (Deepak, 2018). Online Grocery Shopping reached $663bn in 2023 worldwide (Statista,2024).

Online grocery stores are operating with a variety of business models. For example, "Brick and Click" model has an online store along with a brick and mortar store (Shroff et al., 2024), online-only stores with their own delivery services (Ponte & Sergi, 2024), online stores which collect grocery from other retailers and deliver it to the customers directly or indirectly (Ahmad, 2019), and Store-pick where customers place an order through an app or website and pick it from the store (Davies et al., 2019).

## Pakistan Context and Online shopping
Pakistan's first online shopping store started up in 2001 (Dawood, 2019). Since then, there has been tremendous growth in the e-commerce sector of Pakistan. E-commerce progress was made possible because of increased internet connectivity. Almost 25% of the population is internet subscribers

(Munawar et al., 2022). This proportion is forecasted to increase in the future. The e-commerce sector volume is expected to reach US$5,035.00m by the end of 2024. This trend is expected to continue. There are currently 87.4 million Internet users in Pakistan, and that number is expected to grow a lot over the next five years (International Trade Administration, 2024).

Youth in Pakistan are more likely to make online purchases (Saleem, 2018; Ladhari et al., 2019), comprising 64% of Pakistan's population under the age of 29 years (State Bank of Pakistan, 2024). This tech-savvy youth remains a dominant proportion of the Pakistani population for more than three coming decades (Pakistan Bureau of Statistics, 2018).

## Online Grocery Shopping in Pakistan
There is a vast untapped potential for online grocery in Pakistan. Several factors in Pakistan's environment are supportive of this phenomenon. A substantial number of households commute by motorbikes or public transport, which is why online shopping is helpful for such families carrying heaps of shopping bags filled with monthly supplies (Usmani, 2019). Moreover, young, tech-savvy generation of Pakistan makes up almost a third of the population. This segment is expected to dominate the population for the next three to four decades (State Bank of Pakistan, 2024).

Most of the regions around the world have gone through three phases. In phase 1, the people shop for fashion, travel, and books over the Internet. Phase 2 leads to e-commerce related to baby products, personal care and beauty products. In phase 3, people start purchasing food and groceries online (Deepak, 2018). At the moment, Pakistan seems to be moving from phase 2 to phase 3. People purchase cosmetics and personal care products online, but they are still adopting the idea of e-grocery.

There has been heavy investment in online grocery retail in Pakistan. Eight percent of GDP and 47.7% of household budget on average is spent on grocery shopping. The e-Grocery sector only makes up 6% of the e-commerce sector (State Bank of Pakistan, 2018). Almost two-fifths of Pakistanis have experienced online grocery shopping (Usmani, 2019).

More than 30 ventures have emerged in this sector, for example (Hanif, 2016) Some of the online

grocery stores had to partially roll back their programs which include Grocia.pk, Khaopiyo.pk, Rashanmart.pk, Pakistangroceryservice.com, www.giftstopakistan.com, Rashanwala.pk, www.rfeen.com, www.consumernewspk, Meridukan.pk, thecsspoint.com (Ali et al.,2017). More than 20 e-grocery stores operational in Pakistan: Esajee's, Tazamart, Daraz, Yayvo Grocers, CartPK , 24/Seven, Hummart, GrocerApp, SubziPhal, MandiExpress (TechVise, 2019) WooCommerce, MyCart, QnE, GoMart, FreshDaily, OpenCart, Grocia (Qureshi, 2016), and savers.pk, well,pk.

Online shopping satisfies such families as well who would be unable to carry heaps of shoppers on their motor bikes. Many people claim to think twice buying products online which they would grab instantly standing in a supermarket aisle. You don't have to pull out your cars, thus saving gas and petrol bills too. shopping online doesn't have time restrictions. You can easily place an order in the middle of the night. In many desi households, the women are in charge of the groceries but now many of them are career-orientated and simply shop online from their offices (Usmani, 2019). This study aims to explore the barriers perceived by customers who are reluctant to or are not convinced to shop grocery online. `

Online grocery shopping can possibly bring more expansion in e-commerce of Pakistan. At the moment, for majority of households, e-grocery stores are not a replacement of brick and mortar stores. These online vendors will have to adjust their offerings to match customers' needs to be a viable grocery shopping alternative (Hanif, 2016). In order to be profitable, online grocery sellers will have to address consumer barriers to online grocery shopping (Magana, 2019)

## Methods

### Design

A qualitative case study research method was adopted. People with different educational, ethnic, gender and income groups involved in grocery shopping for households were selected within Karachi for interviews.

**Table 1 Characteristics of participants**

| Interviewees | Gender | Socio-Income Group | Profession | Age group | Marital Status |
|---|---|---|---|---|---|
| F01 | Female | Middle Class | Not on job | 36 – 40 years | Married |
| F02 | Female | Middle Class | Not on job | 31 – 35 years | Married |
| F03 | Female | Upper Class | Not on job | 25 – 30 years | Single |
| F04 | Female | Upper Class | Working | 31 – 35 years | Single |
| F05 | Female | Middle Class | Working | 31 – 35 years | Single |
| F06 | Female | Middle Class | Not on job | 61 – 65 years | Married |
| F07 | Female | Middle class | Working | 41 – 45 years | Married |
| F08 | Female | Upper Class | Working | 36 – 40 years | Married |
| M01 | Male | Middle Class | Working | 36 – 40 years | Married |
| M02 | Male | Upper Class | Working | 41 – 45 years | Married |
| M03 | Male | Middle Class | Working | 31 – 35 years | Married |
| M04 | Male | Upper Class | Working | 41 – 45 years | Married |

| M05 | Male | Middle Class | Working | 71 – 75 years | Married |
| M06 | Male | Middle Class | Working | 46 – 50 years | Married |

## Sampling and Recruitment

Purposive sampling was done in such a way that divergent perspectives from people with maximum variation would be included in the sample, for example, people of different gender, income groups educational levels and lifestyles were included in the sample. Attitude towards Digital Technology was all friend criteria to bring about the variations in people's responses.

People participated in the research on a voluntary basis. They were provided the topic guide and the consent form before the interview started some of the participants signed the voluntary form while others provided verbal consent to participate in the research study on the audiotapes.

The fixed sample size was not decided at the beginning of the study; interviews were conducted until the data saturation was achieved.

## Data generation

Before each interview, written or verbal consent was obtained from the respondents. The topic guide was used and reviewed for each interview. Only one interview was conducted in English, while all others were conducted in Urdu. Interviews were translated and transcribed, keeping in view the literal meanings of words. The majority of the interviews lasted between 10 to 20 minutes. All the interviews were scheduled between October and November 2019.

## Data handling and analysis

Respondents' views were recorded on a voice recorder, and field notes were maintained during the interviews. In order to have an iterative approach, analysis of the transcription began right after the first five interviews. This allowed for adaptation in the topic guide and adjustments in the recruitment plan. Some of the themes were adapted from a previous research paper on online grocery shopping, and some new themes emerged from the data analysis, hence using deductive and inductive approach Reflexivity was maintained throughout the research process data was collected and analyzed with complete awareness of the researchers' background

## Results

Thirty people were approached for this study. Out of these, sixteen agreed to participate. Individual interviews were conducted with these respondents in private settings or offices. The key characteristics of the participants are shown in Table 1 **Characteristics of participants**Themes evolved using Thematic Analysis (Braun et al., 2019).

## Grocery Shopping Habits
### Frequency of shopping

Almost all the participants reported purchasing a substantial portion of their groceries once or twice a month.

"We try to make purchases in such a way that we whatever we buy should last for the whole month" M03

"...we prefer buying things every 15 days." F04

Only one participant reported purchasing the supplies on need basis. He only had a motorbike as a mode of transportation which poses a restriction on bulk purchases.

"… it's not in bulk. We go to the shop near my home where I buy on weekly basis or daily basis. I buy few things on each trip whatever is needed at home… it really depends on the need and the budget" M01

### Channel preference

All participants reported omnichannel approach for grocery shopping. For example, they purchased majority of their groceries (mainly comprising FMCGs) from supermarkets whereas they purchased perishable items such as poultry, meat, bakery products, eggs, and fresh produce from the neighbourhood shops.

"We normally buy groceries from the Imtiaz superstore… we but fruits, vegetable, poultry, meat, milk and other dairy products from the shops in the neighbourhood." F05

## Barriers for online grocery shopping
### Attitude towards online shopping

It was found that people in general are not accustomed of online shopping. People in general were aware of the online shopping. However, despite having likely circumstances for online shopping, some of the respondents had never tried online shopping.

"I have never tried online shopping and I have seen reviews of the other people" M04

"I never even open any website for online grocery shopping and never tried any other online shopping." M03

Even for people who make online purchases on regular basis, volume of online purchases is quite small. Some of the respondents reported that they only buy speciality products or the ones that are not available otherwise.

"I buy clothes and some innovative products usually the things that are not available in the general market" M05

"I like online shopping and I have ordered a lot many things almost every week I buy something online, but these are the things that are not related to grocery" M05

"I do buy many other things online, but I don't want to buy the grocery online." F02

### Social Factors
### Influence of the family members

Participants were of the view that their decision to not purchase online grocery were influenced by their parents or spouse.

"…since I have shifted to Karachi and I started living with my mother, we have never done online grocery shopping because she is of an idea that all of these groceries should be purchased from the shops…" F04

"My husband doesn't like online shopping" F06

"My mother always enjoys going out for groceries and hand picking the stuff so we might not opt for online grocery shopping in near future" M02

### Lack of hedonic motivation

Some of the respondents who are not on job reported that going to superstores for groceries provides an opportunity for quality family time.

Even one working mother, who occasionally make online purchases, preferred going for grocery with her children as it provides a learning opportunity for children.

"I have two little boys who love running around… It is a very good medium for me to tech them the names of the vegetable and many other things." F08

### Not habitual of online purchases

A great majority of the respondents, who occasionally make online grocery purchases, claimed that they are not habitual of online purchases. So, whenever the need arises for a supply, online purchase doesn't come to mind as an option.

"… we are used to of the offline shopping since our childhood, so it's not that easy to shift towards online shopping for grocery that fast" F03

### Financial Factors

A great majority of respondents from the middle class were apprehensive about the price of the grocery item. Their current choice of grocery shopping channel is primarily based on low prices. One of the members even reported buying from two different superstores to avail of the lower prices offered by these stores of different product categories. The majority of the participants perceived that online shopping would be costly.

### Higher prices

Middle-income earners who had not tried online shopping were afraid that the product prices might be higher on the websites than the superstores or the convenience stores. Even the group who had tried online grocery shopping reported that monthly supplies cost higher in the virtual stores.

"…The online sellers might charge high price." F01

"…I compare the prices of daraz.pk they were slightly higher as compared to what we get from Imtiaz superstore…" F07

"I think these products should be expensive this is my perception and that's why I never even open any website for online grocery shopping and never tried it." M03

### Delivery charges

Some people expressed their dismay about the delivery charges. Although the fuel cost saved on the trip to the supermarket compensated for the delivery charges, the fee paid for delivery is considered an additional charge by many people.

"They even charge for delivery." M03

## Perceived risk

Online shoppers find it generally risky to buy the products online, especially when they have to interact with a system instead of a person.

"…when you are buying something online there is no person that you are kind of trusting on. It's just simply a website with which you interact, and you get the product but I want to meet people or deal with people…" M05

People perceive the outcomes of their shopping outcomes. Different interviewees shared different sorts of apprehension related to online grocery shopping. In general, we can say both groups – those who had tried online shopping and those who had not tried online shopping – were apprehensive.

## The threat of getting poor quality

A substantial number of people stated that they were afraid that the quality of products delivered by online sellers might not be up to the standard. Some people feel that there are quality issues even in brick-and-mortar stores, so online stores are more prone to this problem.

"…There is always a risk when you buy things online that you might get something that's not of good quality…" F06

"…I really want to buy good quality product for my family for in terms of their monthly supplies because that's what from the food is made…" M04

A few respondents also shared a similar concern about fruits and vegetables. They were afraid that the fresh produce or the meat might get stale on the way even if the seller sent the grocery in good condition.

"…I guess specially for the perishable goods issue can be that they can go stale when they reach you if you have bought them online…" F03

## Miscommitment to delivery time

This problem was shared by people who had some online shopping experience with the grocery or other forms. Online shopping is often opted by people who have busy schedules, so they place an order and keep themselves available for the delivery time at their homes. However, the online vendors are not able to keep the commitment. Sometimes the order arrives a few hours late, and at other times, it is even delayed by a few days. This increases the risk for a customer

and reflects negatively in terms of the seller's reliability.

"They told me that they will bring my order at 4 o'clock but they were quite late like the delivery arrived somewhere around like 6:30... didn't keep the time commitment" F07

"…when we placed the order, they promised to deliver it in one day, but it actually arrived after 3 days…" F03

## Delivery errors

Besides the punctuality issues, some customers reported problems of other nature with the deliveries. Few customers complained that sometimes the delivered items are not the same as the items ordered. At times, the size of the product is not same, it is altogether a different product or the product ordered is missing.

"There are chances that I don't get the item that I have ordered. It happened many times with many people who shop online. They order something else and get something else" F03

One of the respondents even reported that she was charged for an item in the bill in one incident, but it was not included in the items she received.

"when you order grocery for a week, they are lot many items. It's difficult to telly all the items against the bill at the time of delivery. I later realised that the shampoo mentioned in the bill was not delivered" F08

## Distrust

Most of the male respondents have shown distrust towards online sellers in general. This lack of trust keeps them away from online grocery shopping as they consider it a susceptible area of their domestic management.

"I don't please any order on the online shopping websites in Pakistan because I believe they are cheater" M02

One respondent was very specific amount not sharing financial information on the websites and applications.

"I would never share my credit card details on any website to make online purchases." M01

## Channel limitations

Some of the online grocery shopping barriers that emerged were specific to the online shopping channel.

## Complicated return procedures

The neighborhood convenience store shoppers purchase through a format similar to online shopping as they place an order to receive their groceries. However, they were reluctant to switch to online shopping because of the return and exchange flexibility they get at the neighborhood stores. In comparison to this flexibility, often similar facility is either not available or quite complicated in the online shopping atmosphere.

## Lack of variety of options in each product category

Interviewees who had tried online shopping were not satisfied with the variety of brands or size options available on websites for grocery shopping. One of the respondents said that she stoppers purchasing groceries online because they could not get the brand of rice and lentils that she purchased from the regular store. A respondent reported being loyal

"the only problem that I faced was that the items that I want to buy the brand actually were not available." M06

"sugar and rice and lentils from Imtiaz under a private brand name but those brands definitely are not available on the Hum Mart." F06

"you know why the size we buy of milk pack is 1 litre, but one litre milk pack was not available on Hummart … I am not comfortable with 250 ml packs that were only available." F07

## Time required to search for shopping items

Participants with online shopping experience also pointed out that It is a myth that one saves time with online shopping. The time a shopper spends searching for the required items and later receiving the delivery is almost the same as they spend in a store to buy the products.

"It's only a myth that online shopping can save your time it's not true when you are searching for goods it takes a lot of time you search." F03

## Long lead time

Many online shoppers noted that groceries arrive mostly after two days of placing an order or even afterward if the residence is far from the sellers' warehouse.

"I made the order on Friday and they give me time somewhere on Monday or Tuesday so that took almost two three days to deliver." F07

## Deprives customers of pre-purchase interaction

While shopping for groceries, online customers cannot interact with the product, and they can not physically see the size, check the freshness of the product or compare two products. The customers are deprived of the assurance they get through sensory examination of the product.

"It's different to have a personal experience at the store by touching those things and looking at the sizes and comparing the different prices. F03

"you can check the expiry date and you can see the sizes that which package is bigger than the other." F06

## Limits customer exploration of products

Shoppers of brick-and-mortar stores get to explore the newly launched product and the new promotions as they walk through the aisles without any additional effort, and this is not possible with online shopping.

"oh this new brand is here in the market… Oh, let's try this new product …" F01

## No shopping reminders

Some female shoppers feel that they don't need to make a shopping list; they are reminded of the required purchase items as they walk through the store. The online grocery store does not provide this support.

"I prefer going to the stores because when I move around the store and I look at the miles I am reminded of many things that are needed at home you can just see what you would need I don't make any list." F03

## Infrastructure and technology-related issues
## Unfamiliarity with the technology

Some participants reported unfamiliarity with the technology or unavailability of the smartphone as a prime reason for not opting for e-grocery. These

participants were diverse in terms of the demographics, i.e., gender, age, income group, and employment status.

"I don't have a smartphone so it's quite a hassle to turn on the computer and then place the order." M01

"generally, I don't use Technology a lot in my life" M04

"I don't know how to place orders online … even when I have placed orders for some other items, I ask my husband to place that order or once I asked one of my daughters." F06

### Fluctuations in electricity and internet connectivity

Online shoppers are faced with the challenge of the availability of electricity supply and internet connection. In many households, an internet connection is provided by a cable operator. This connection goes off the hook as soon as there is an electricity cut. Online shopping is made unreliable by this issue.

"it's really frustrating when you are halfway through… you have added a lot many items in the cart, and suddenly there's a power cut" F09

"it's not always possible to place an order… sometimes there's a power cut at the cable guy's place." F05

**Table 2**

| Themes | | |
|---|---|---|
| Grocery shopping habits | Frequency | mostly packed groceries monthly basis while fresh produce every week |
| | Channel | Omnichannel purchase preference: supermarkets or convenience stores and neighborhood shops for daily purchases |
| Perceived barriers to online grocery shopping | Familiarity with e-Grocery | People are aware of e-grocery but rarely think about buying online. Only a few had tried |
| | Social Factors | • Influence of family members<br>• Lacks hedonic motivation<br>• Not used to online shopping |
| | Financial Factors | • Perceived high prices<br>• Delivery charges |
| | Infrastructure and Technological Factors | • Unfamiliarity with the technology<br>• Unavailability of the smartphone<br>• Unavailability of internet connection<br>• Unavailability of power supply |
| | Perceived risks | • Threat of getting poor quality<br>• Miscommitment of time<br>• Delivery errors<br>• Distrust of the seller |
| | Channel limitations | • Lack of variety and serving sizes in each product category,<br>• complicated return procedure |

- long delivery time
- long order placement process,
- limits customer exploration of products
- tests customer memory

## Discussion

### Statement of principle findings

Online grocery shopping was available in Karachi. Most of the people in the city were aware of the service and even appreciate the benefits of this service but have not completely shifted to it. People made grocery purchases for different places; even regular online grocery shoppers were omnichannel shoppers. Pack grocery products were reported to be bought mostly once or twice a months while fresh products were purchased on weekly basis. The fndings were in line with previous literature (Fahim et al., 2021; Irshad et al. 2022; Rehman et al., 2021). Study participants had a perception that online products are priced highly priced. Most the online grocery websites do not offer a complete range of band and size options. Online sellers don't keep their commitments about delivery time. Another inhibiting force is the influence of the family members who prefer going out for shopping to enjoy family time together. Moreover, some people even reported their unfamiliarity with the technology or unavailability of the smartphone as a key reason for staying away from online shopping.

### Strengths and limitations of the study

For this study, sample selection was made with maximum variation to include participants from different demographical backgrounds. Moreover, transcription of the interviews was sent to the participants for respondents' validation. Analysis of the data was initiated after first five interviews to maintain iterative approach.

There could have been some limitations of this study. Views of all different potential shoppers might not have been collected. To counter this problem, I conducted two more interviews after the data saturation point. I wanted to have viewpoint of the male shopper in equal proportion as femalesMale respondents were less than females. However, through semi-structured in-depth interviews I ensured effective male representation.

### Implications for policy, practice, and research

Businesses should work in two different areas related to online grocery shopping. First of all, they need to develop trust among the buyers by fulfilling their needs and promoting success stories. They should adjust their offerings to match the customer's need while keeping their culture and norms in mind. More product variety should be added to each category. Delivery timings and accuracy should be improved, possibly, by involving external service providers. Besides operations improvement, online sellers would need to work on the perceptions of the customers too. Their belief about high prices should be tackled in a smart way. Government can also play a vital in improving the IT infrastructure of Karachi. The government should work on providing better internet connectivity and undisrupted power supply to ensure progress in e-commerce. Further research can be conducted on exploring the ways in which customer trust on e-commerce can be improved.

### Transferability to the other contexts

The results of this study are transferable to the other LMICs and other countries who are transiting to this new channel of grocery shopping. Some of the minute details of the context might be different in other countries, but overall the context and findings of this research are similar to those of the findings in other countries.

### Conclusion

With the passage of time, people would become more aware of e-commerce applications in grocery shopping in Pakistan and other low-income countries. Some the myths related to online shopping will be demystified as people would be exposed to the virtual shopping more. The government is actively working on enhancing the system of digital payments and Information technology. This will definitely have a trickledown effect on the other areas of e-commerce. Entry of new players or partners from abroad can prove beneficial for this

industry as these players would bring in expert knowledge of other countries to be implemented in Pakistan.

## Disclosure statement

There is no conflict of interest for authors in writing this report.

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