

# **A STUDY ON CONSUMER PERCEPTION ON ONLINE GROCERY SHOPPING-A STRUCTURAL EQUATION MODELING-MODERATING EFFECT OF PERSONAL ATTRIBUTES**

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## **ABSTRACT**

The manner that customers purchase goods and services is fast changing due to the Internet.

Data was collected from Indian consumers who currently buy their groceries online. The Majority of the users are found to be younger than 40 years of age and have children who buys grocery online. There are several factors which found to be significant for inducing the behaviour of customer to buy grocery online which are performance expectancy, social influence, Hedonic motivation and perceived benefits. The responses were evaluated using structural equation modelling . It has also been found that personal charatertics of consumes as having children at home has positive and significant impact on behavioural intention of consumers to buy grocery online. These results might make it easier for online merchants to comprehend consumers' worries when they shop online. The present study's limitations are examined, along with its theoretical and managerial implications.

**Key Words:** *Indian consumers, structural equation modelling , online grocery shopping*

## 1. INTRODUCTION

The Internet is rapidly changing the way consumers buy goods and services. Many companies are starting to use the internet aim to reduce marketing costs and thereby lower prices for products and services stay ahead in the highly competitive market. Businesses also use the Internet to send communications and disseminate information We sell our products, collect feedback, and conduct customer satisfaction surveys. Customers can not only buy products online using the Internet, but also compare prices. Product features and customer service facilities you receive when you purchase the product From a specific store. Many experts are optimistic about the outlook for online business. In addition to the huge potential of the e-commerce market, the internet A unique opportunity for companies to reach existing and potential customers more efficiently. It's been more than a decade since enterprise-to-consumer e-commerce first appeared. E-commerce scholars and practitioners are constantly striving to improve Insights into consumer behaviour in cyberspace. With the development of electronic retail, researchers continue to declare eco-consumers Actions from various perspectives. Much of their research assumes new emergence Factors or assumptions based on traditional models of consumer behaviour Then examine their effectiveness in the context of the Internet.

### 1.1 Models Of Ecommerce

- B2C-From business to consumer

B2C companies sell to end users. Since the B2C model is the most popular business model, there are many unique approaches under this umbrella. Everything you buy from an online store as a consumer runs as part of a B2C transaction, including clothing, household items, and entertainment. The B2C purchase decision-making process is much shorter than business-to-business (B2B) purchases, especially for low-priced items. Think about it. Deciding on a new tennis shoe is much easier than looking up and buying a new email service provider or grocery caterer in your business. Due to this short sales cycle, B2C companies typically spend less marketing costs on sales, but have lower average orders and fewer regular orders than B2B companies. And B2C includes services as well as products. B2C innovators have used technologies such as mobile apps, native advertising, and remarketing to market directly to their customers, making their lives easier in the processthere. In addition, home service companies use Housecall Pro's plumbing software app to track employee routes, send texts to customers, and process credit card payments on the go for consumers and businesses.

- B2B – Business-to-business transactions

In a B2B business model, one company sells its products or services to another. The buyer may be the end user, but in many cases the buyer resells to the consumer. B2B transactions usually have a longer sales cycle, but higher order amounts and more repetitive purchases. The new B2B innovator has opened up space by replacing catalogues and order sheets with e-commerce storefronts and improving targeting in niche markets. By 2020, nearly half of B2B buyers will be millennials. This is almost double that of 2012. As the younger generation enters the era of commerce, online B2B sales become increasingly important.

- C2B – From consumer to business

C2B business allows individuals to sell goods and services to companies. This e-commerce model allows customers to post the work they want to complete and have the company bid on that occasion using a website. Affiliate marketing services are also considered C2B. Elance (now Upwork) was an early innovator of this model by helping companies hire freelancers. The competitive advantage of the C2B e-commerce model lies in the pricing of goods and services. This approach allows consumers to choose between naming prices or allowing businesses to compete directly to meet their needs. Recent innovators are using this model creatively to connect businesses with social media influencers and sell their products.

- C2C – between consumers

The C2C business, also known as the online marketplace, connects consumers to the exchange of goods and services and typically makes money by charging transactions and listing fees. Online businesses such as Craigslist and eBay pioneered this model in the early days of the Internet.

## **1.2 Online Grocery Shopping**

Online grocery shopping is a way to buy groceries and other household items through web-based shopping services. There are two basic methods you can use to buy these items online. One is to order from a local grocery store that participates in online shopping. The customer can then deliver the order directly from the store to their home, or the employee can complete the order and then receive the order at the store. Another common method is to order groceries from large companies such as Amazon and Bigbasket. This will deliver the item to your home. Grocery delivery is a convenient option for everyone, whether it's the elderly, people with restricted mobility, or people without transportation. Busy families also tend to look to online grocery shopping services. When receiving a grocery order, the customer can usually specify a receiving window. This ranges from 30 minutes in some stores and 4 hours in others. Other retailers offer next day pickup or delivery. Delivery usually includes

service charges and, in some cases, fuel costs. Orders from large online companies are usually packed in a warehouse rather than a grocery store and then delivered to the recipient via a commercial delivery service. There are so many benefits to buying groceries online. If a customer has a specific list of products they want to buy, it is less likely that the customer will deviate from it by making an impulse purchase while browsing the aisle of the store. In addition, shoppers can usually save even more by using online and manufacturer coupons when ordering online at a local grocery store. Large companies like Amazon usually exempt regular customers with orders or subscriptions that exceed a certain amount.

### **1.3 Indian Players in Online Grocery Service**

- Big Basket

In India, Big Basket is the most famous online grocery app. The company offers over 10,000 groceries through smartphone applications and websites through its online shopping portal. Big Basket works with top brands to digitally offer all grocery stores, from new produce to fruits and dairy products. Other competitors in the Indian food app market are Jiomart, Grofers, Flipkart and Amazon.

- Blinkit(Grofers)

Grofers is one of the best grocery shopping apps in India. Grofer's smartphone app and website allow consumers to order supermarket products online. Like the major basketball growers operating in more than 20 locations, including all major Indian cities. The organization is expanding its market to Tier 2 cities. Grofers offers thousands of items for online shopping in India on its website, including staple foods for rice, milk, biscuits, chips and other groceries. The company sends items to your door by signing up for the smartphone app and searching for the item you want to buy. The app was ranked among the top online grocery service.

The purpose of the study is to know the consumer behavior and perceptions towards online grocery shopping and the issues they face. Hence the objective of the study is to:

- To study the preference of the customer regarding attributes of online shopping websites.
- To identify issues faced by user while shopping online (main focus for grocery)
- To study the impact of identified factors on behavioural intention of consumers to buy grocery online

## **2. LITERATURE REVIEW**

"India is among the fastest-growing markets and has been identified as one of the significant potential markets for the company, Indian consumers said they opposed Similar to the trend of eBay buyers, buy high-margin products such as clothing and shoes In the West, not the most popular choices of electronics and books But now they are achieving smaller profit margins and shopping less often. For those who buy train, plane and movie tickets, they are in the midst of a rise as a young person. As per Statista report 2023 Technology-savvy middle class is increasingly shopping online in fast- paced countries A growth on the internet. Consulting firm Technopak expects an annual market of \$ 60- \$ 70 billion by 2020. One million, which is only 0.05% of the world's online shopping. eBay itself is in India The online shopping market will grow almost 100% in 2012.

E-commerce: A boon for the current economic First Data Corporation and ICICI Merchant Services have recorded several facts, including: India's commercial market reached nearly 50,000 rupees by the end of 2011. Although less than 10 million Internet users are actually using e Trading Activities India has about 150 million internet users or about 75 million internet users Households ready for e-commerce. Entry and operating costs are relatively cheap compared to other countries such as the United States, so in late 2011 and at the beginning of the current calendar, Numerous new e-commerce sites across different business women Fashion, men's clothing, shoes, followed by accessories, groceries, sports, toys, home Furniture, jewellery, automobiles, bicycles, electronic devices, electrical appliances, etc.

Key drivers for success for e-commerce, Since the entire company can move online, it reduces operating costs, needs Physical stores are old. There are few infrastructure investments and related tasks The cost exceeds the profit margin. Comparing the price of the product online is much easier to compare with customers with customers. Information for determining the correct price or concept for yourself. In service like COD, Customers can trust the online and purchase process. Market penetration is also much accessible to e-commerce(Jain et al, 2021). It is possible to A Mumbai businessman for reaching his hand in the northeastern city or rural village Connected to the online network. E-commerce makes it easy to shop for almost anything, anytime, anywhere. animation Consumers prefer this to restrictions on when malls / stores are open or need to do so .In India, companies are now starting to do so as the trend towards social media grows. Integrate your customers into social networking portals such as Facebook. These are likely A rapidly evolving marketing channel for the future.

"These businesses are difficult to turn into profitable ventures due to the low margins and the logistics costs involved." Gaurav Saraf, director of Epiphany Ventures, talks about the concept of an online grocery store. Shopping faces the problem of transforming its business into a profitable venture(Kardes et al, 2011). Is

new to the market and brings low margins along with low margins and high costs Regarding logistics. There are also fresh produce such as fruits & Vegetables will have a shorter shelf life if these items are not delivered before they expire Durability It causes waste and also totals costs. From the comments above In this regard, it has been concluded that these ventures have very little margins when it comes to Business management.

Consumer's Attitude towards Online Grocery Shopping in Delhi City (Kaur and Shukla,2022) . In addition to delivery schedule and cost factors, there is also an aspect of time spending Orders (whether they are perceived as a waste of time or a save of time) are also A systematic problem. Most respondents agree that online shopping is possible(Kardes et al, 2011). There are no restrictions on internet surfing, so you can always do it. Also, as most Respondents are working class and therefore seem to want to deliver their orders as follows: You can also pay additional shipping charges at your convenience (Manzoor, 2010). One of the important practical implications of this study is that it is needed by Indian grocery stores.

## **2.1 Changing consumer behaviours towards online shopping – an impact after pandemic**

The status of COVID 19 is People dynamically and timely reflect how their families adjusted their spending What are the characteristics of households that responded to online shopping? The fastest and strongest. ordinary person. All industries and all individuals were affected Strong from this fad. Online marketing and shopping trends between customers I was hurt by this uncertain epidemic. If the situation is prolonged, It's possible for big companies like Myntra, Flipkart, and Amazon to keep their employees that way. You have huge sales that came to the full turn. Depending on the current situation Coronavirus infection (COVID19) affects more than 2.8 million people worldwide (worldwide) Health Organization, 2020). According to medicine it mainly spreads

Connecting the local kirana stores with the buyers while storing inventories on the Cloud"Vijay Singh, CEO and MD of Aaramshop.com, says they will reduce their costs. They operate a business that applies the concept of cloud computing that connects locally. Kirana shop and buyers. This allows the company to reduce overall inventory transportation costs. Inventory levels are controlled by local suppliers.

"Create a work-life balance"Vijay Singh, CEO and MD of Aaramshop.com, describes the concept of an online grocery store. Shopping creates a work-life balance in urban areas that employ urban couples Can't make time for their work culture and their daily needs

Consumer buying behavior studies how organizations, individuals, and groups behave. Choose; sell goods, buy ideas, services, or experiences to convince their desires and needs(Mihaela, 2015). Consumer purchasing behavior can be clarified as an individual's physical activity and decision-making method when acquiring, evaluating, using, or selling a service or product. Some features of this announcement require elaboration and emphasis in order to better understand their implications. Consumer buying behavior is independent of social, cultural, psychological and personal factors. Most of these issues are out of the control of marketers and are unmanageable, but they need to be reassured to identify simple consumer behavior. A consumer is a study of the processes by which an individual or group is involved in selecting, using, purchasing, or selling a product, idea, service, or experience to meet their needs or needs(Mellens et al, 1996).

## **2.2 Factors influencing the behaviour of customers to buy grocery online**

### **2.2.1 Performance expectancy**

Performance expectancy, or PE, is the measure of how much customers will profit from using technology to do particular tasks. (Venkatesh et al, 2003) claim that performance is enhanced when a user is introduced to new information technology and quickly picks it up. The likelihood of the user using this technology in the future has increased. Validating the findings of prior studies, it is determined that performance expectancy was the most important element in behavioural intentions to use shopping applications.

H1- There is a significant impact of Performance expectancy on Behavioural Intention to buy grocery online.

### **2.2.2 Social influence**

Social influence (SI) is the term used to describe how consumers view other people (friends,family, and coworkers) ability and impact over how they use new technology. A person is more likely to use new technology if they believe it will help them maintain or elevate their status or place in the group(Chopdar et al, 2018) also provided evidence in support of this assumption, showing that friends, relatives, coworkers, celebrities, and other seasoned users.

H2- There is a significant impact of Social influence on Behavioural Intention to buy grocery online.

### **2.2.3 Hedonic motivation**



Hedonic motivation (HM) is the pleasure or enjoyment that comes from using the technology. Fun and enjoyment are two crucial components that motivate people to embrace and use new technology. Similarly, hedonic motivation may be controlled and transformed into a sensation of pleasure which had a favourable impact on customer acceptance and the usage of new technology.

H3- There is a significant impact of Hedonic motivation on Behavioural Intention to buy grocery online.

#### **2.2.4 Perceived benefits**

It is possible to view online purchasing as innovative in Jordan. Relative advantages are another term for perceived benefits in the context of inventions. Relative advantage, to Rogers (1995), is the extent to which an innovation is thought to offer more advantages than its replacements. Wu (2003) defined perceived benefits as the total of advantages that satisfy a consumer's demands or wants. This concept is similar to the definition of relative advantage but relevant to the situation of online buying.

H4- There is a significant impact of Perceived benefits on Behavioural Intention to buy grocery online.

The willingness of the consumer to really use the technology in the near future or at this time is known as technology acceptance. Technology developers can gain insight into the customer thought through behavioral intention, which also persuades the user to accept the technology.

Previous research has demonstrated that a customer mentality is favorably predicted by their behavioral intention (Chawla and Joshi, 2018; Wilson and Mbamba, 2017).

H5- There is a significant impact of Behavioural Intention to buy grocery online on actual acceptance.

Impact of Personal characteristics on adoption of online grocery buying. Numerous research endeavours have attempted to pinpoint the distinct personality or psychographic characteristics that are associated with the acceptance of novel technologies generally, and online purchasing specifically.

H6- Having children has a significant moderation impact on behavioural intention of consumers to buying grocery online

### **3. RESEARCH METHODOLOGY**



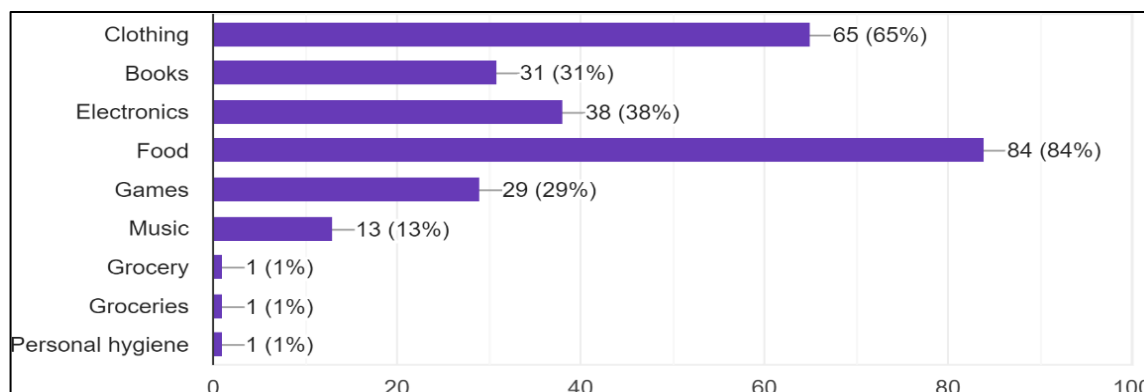
Primary data was collected with the help of a structured questionnaire and with web journals and articles respectively. The questionnaires were filled by 100 respondents. The questionnaire is designed in such a way that it can be used to collect the needed primary data. Close ended questions were used to collect data. Sampling methods used is convenience sampling. Sample Unit in this survey is done through individual units.

#### 4. DATA ANALYSIS

A survey was conducted by floating a questionnaire to the people/individuals for having their feedback and responses in the survey, 100 individuals participated and provided their valuable feedback. So, we have 100 individual responses all of which are clubbed together in the form of graphs, charts, etc. and then are analyzed collectively as whole.

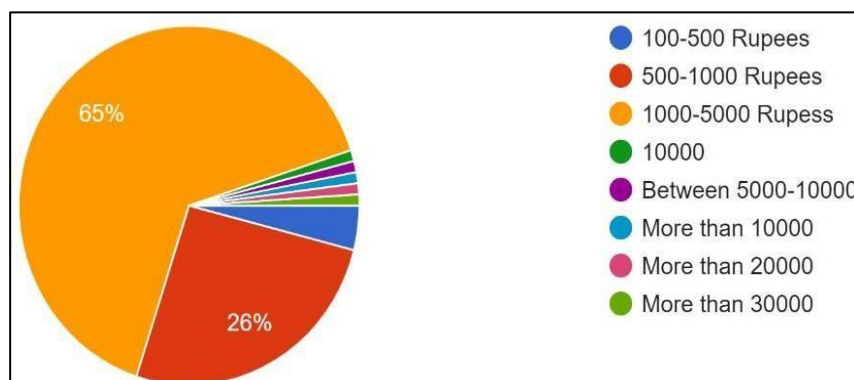
**The data collected can be analysed and interpreted as follows:**

**Figure I Item customers often shop on online**



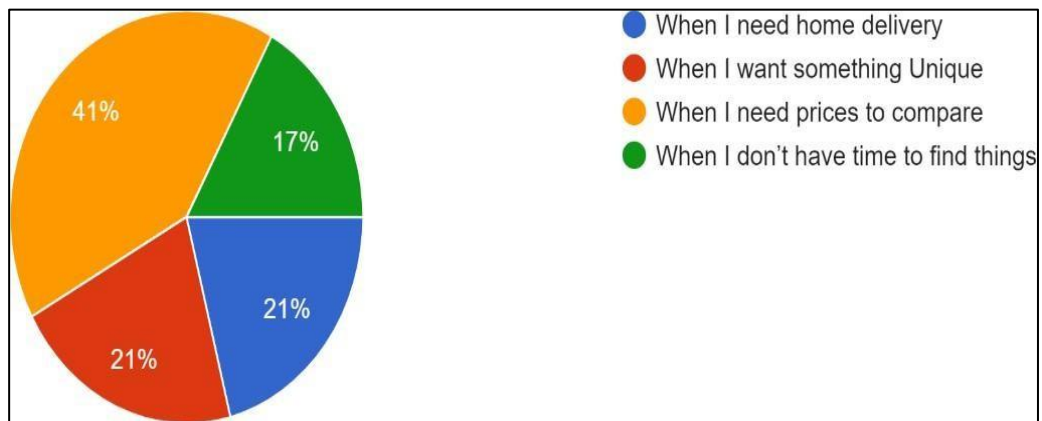
In the survey 84 percent of respondents said that they shop food online and also they love buying clothes online the least they are searching for is the personal hygiene and the music shopping.

**Figure II Money spent by customers in online shopping**



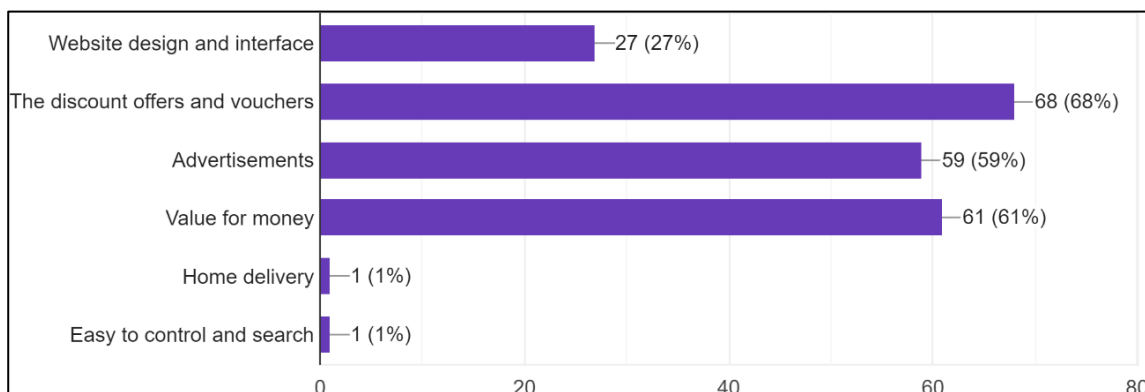
In the survey 65% percent of respondents said that they almost spent 1000-5000 rupee on online shopping and 26% spends very less amount, that they don't like spending online

**Figure III Reason Customers need to shop online**



In the survey 41% of the people are using online shopping sites to compare the price of the product from the traditional market, followed by 21% who need the home delivery and want to buy something unique and interesting.

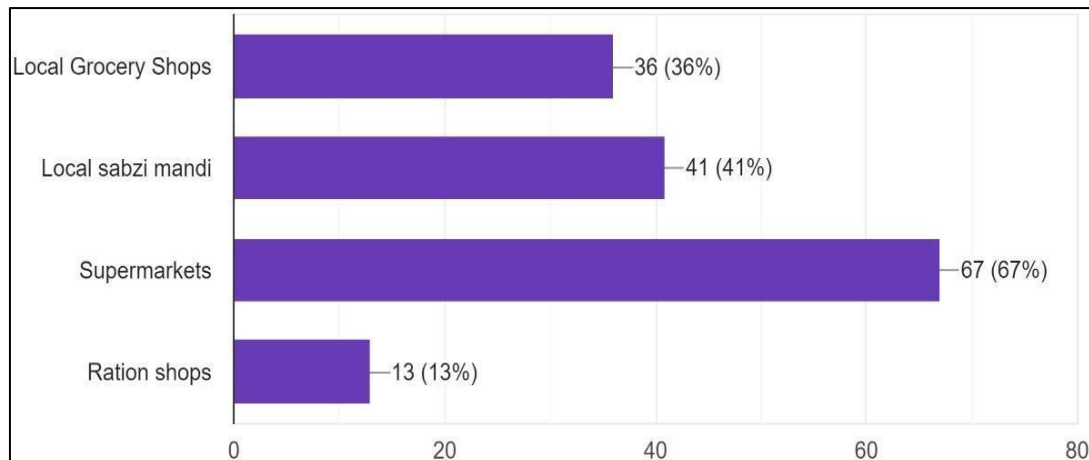
**Figure IV Features in online shopping app/websites that attracts most customers**



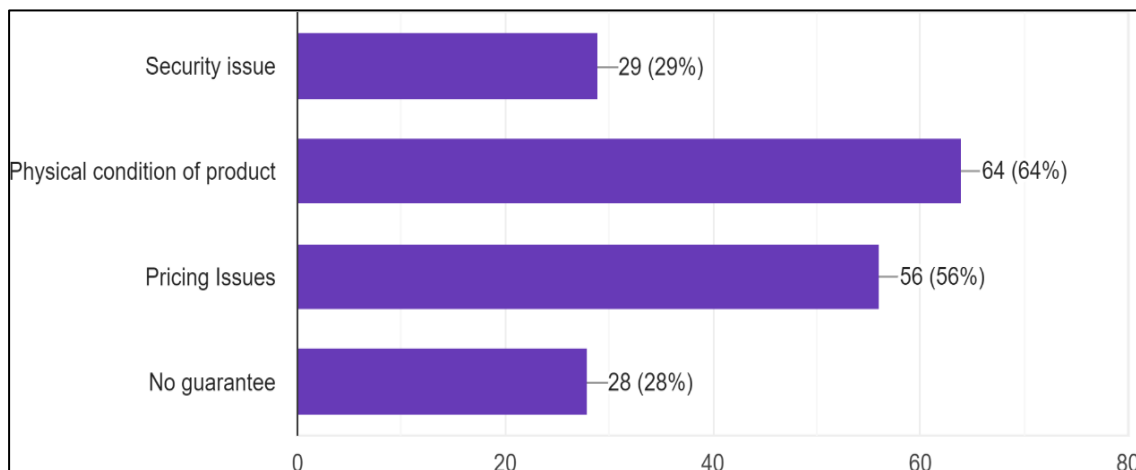
In the survey we get to know that people like discounts and offers very much and the type of advertisements run by the online shopping apps .They fall into 59% of the category also 61% found that online shopping is value for money due to discount and low pricing as well.

In the survey people replied to this question as 67% percent of people Prefer going to the supermarkets and 41% buy it from local mandis .

**Figure V Places of grocery shopping**

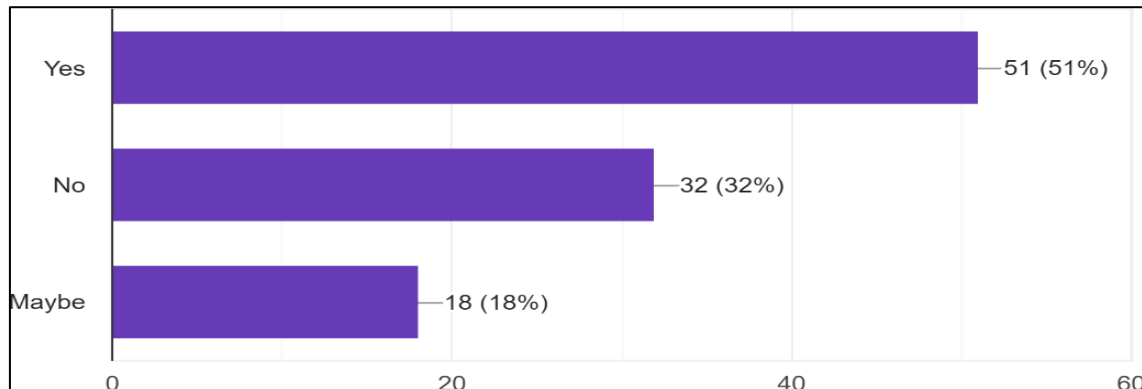


**Figure VI Problems faced while shopping online**



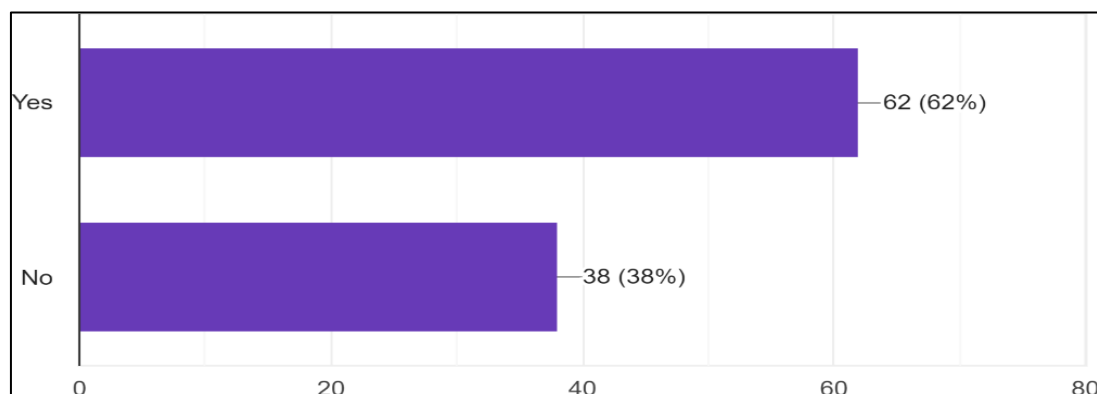
In the survey 64% percent of people said that they worry on the physical quality of the product, and also the pricing of the product whether they are charging more or less.

**Figure VII Choice of grocery shopping online**



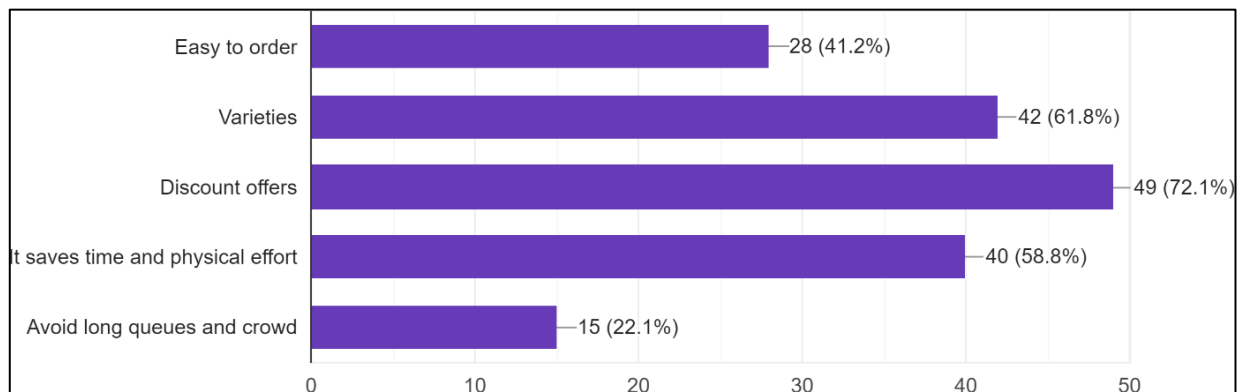
In the survey 51 percent of people said that yes they are willing to buy groceries online, 32% still don't feel comfortable buying it online.

**Figure VIII Is buying grocery online is beneficial**



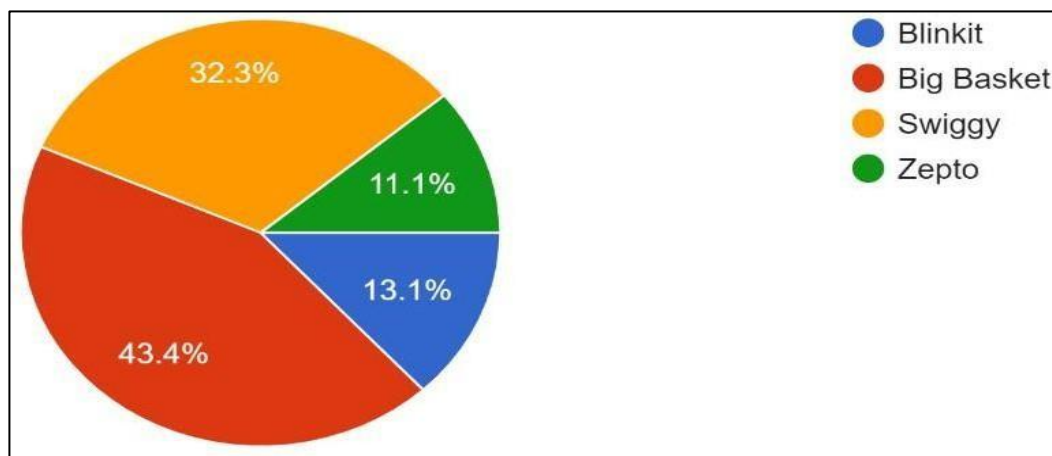
62% of people believe that yes buying grocery could be beneficial for them and 38% still feel afraid of buying it from online and don't find it worthy.

**Figure IX Reason buying grocery buying is beneficial**



In this survey 49% people believe that the discount offers are the main reason buying grocery online and also we can find varieties online and 40% believe that it saves your lot of time going to mart and then finding grocery for yourself instead you just have to put order online.

**Figure X Most familiar app/website to you for online grocery shopping**



Bigbasket is the most popular online grocery app and known by almost 43.4% of the people followed by the Swiggy and Zepto is the least known app as only 11.1% people are aware of it.

### **To study the impact of identified factors on behavioral intention of consumers to buy grocery online**

There are different factors that can impact the adoption of online grocery store. To evaluate the impact of identified factors partial least square method has been used. The model tested on SMART-PLS has been explained below:

Although there are many ways to assess the validity and reliability of an instrument, one technique that is frequently used to assess the precision of an item's validity and reliability is the Cronbach alpha approach. A Cronbach's

alpha value of 0.7 or above is regarded as acceptable, 0.8 or higher as outstanding, and more than 0.9 as exceptionally good. All the variables in our investigation have a Cronbach alpha between 0.945 and 0.841, indicating that all of the items were dependable. For every item, the composite reliability and average variance of each construct are also computed. Internal consistency reliability is most frequently evaluated using composite reliability. Higher levels of reliability are often indicated by a higher composite reliability value. According to Drolet and Morrison (2001), dependability values, for instance, fall into two categories: acceptable in exploratory research (between 0.60 and 0.70) and “satisfactory to good” (between 0.70 and 0.90). All of the model’s constructs have composite reliability that range from good to satisfactory.

**Table I Reliability Test**

	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted (AVE)</b>
<b>PE</b>	0.934	0.958	0.883
<b>BIU</b>	0.937	0.960	0.888
<b>PB</b>	0.917	0.960	0.923
<b>SI</b>	0.841	0.926	0.863
<b>HM</b>	0.936	0.959	0.887
<b>TA</b>	0.945	0.964	0.900

The discriminant validity was assessed using (Fornel and Larcker, 1981) by comparing the square root of each AVE in the diagonal with the correlation coefficients (off-diagonal) for each construct in the relevant rows and columns.

**Table II Discriminant Validity**

	<b>PE</b>	<b>BIU</b>	<b>PB</b>	<b>SI</b>	<b>HM</b>	<b>TA</b>
<b>PE</b>	0.940					
<b>BIU</b>	0.922	0.943				
<b>PB</b>	0.903	0.914	0.961			
<b>SI</b>	0.681	0.693	0.658	0.929		
<b>HM</b>	0.915	0.911	0.879	0.680	0.942	
<b>TA</b>	0.918	0.900	0.893	0.703	0.910	0.949

## Result of Hypothesis testing

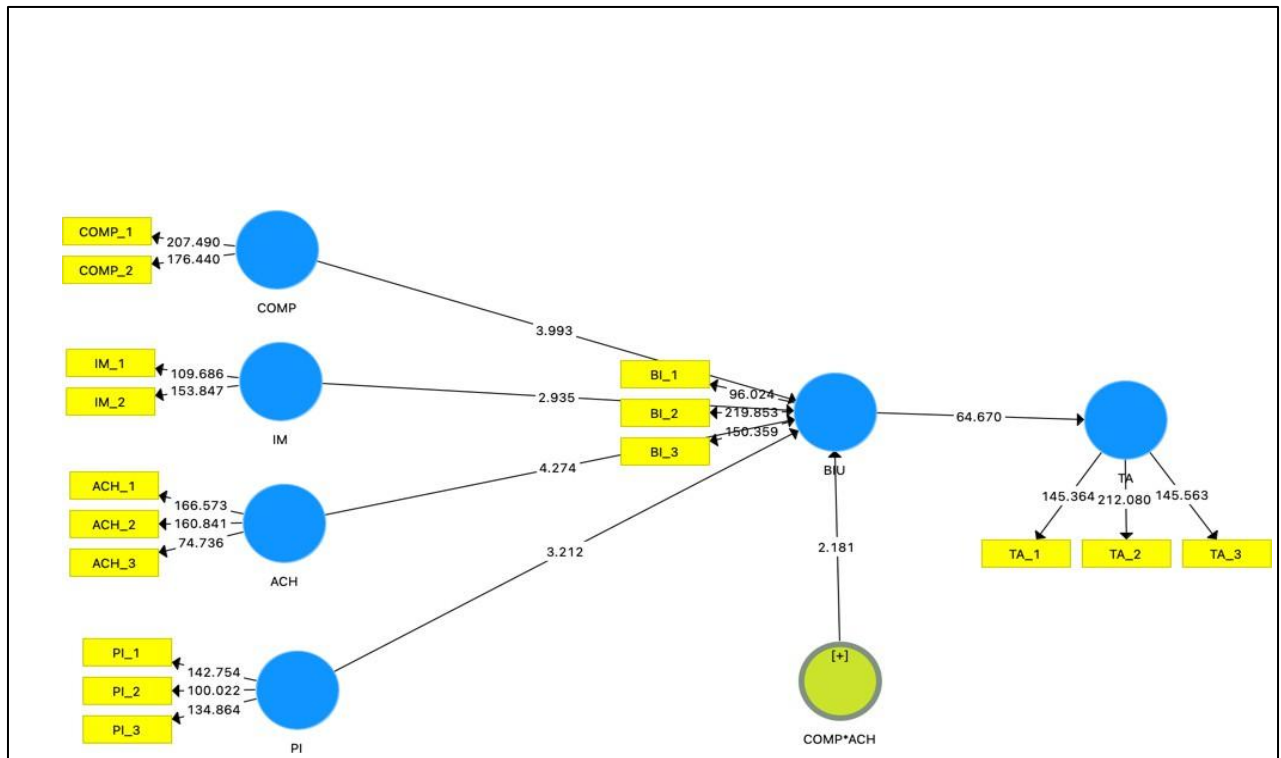
The table represents the Original Sample, Sample Mean standard error value, and R square of the endogenous constructs. The significance level is 0.05. The results of hypothesis testing are also shown below H1, H2, H3, H4, H5, and H6 are supported. The most significant factor influencing the “behavioural intention” is “COMP” as compared to other factors (T statistics= 3.993>1.96, P value= 0.001<0.05), followed by “PI” (T statistics= 3.212>1.96, P value= 0.002<0.05). Further it can be concluded that having children has a significant moderation impact on behavioural intention of consumers to buy grocery online.

**Table III Hypothesis testing**

	Relationships	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
<b>H1</b>	PE -> BIU	0.318	0.323	0.074	4.274	0.000
<b>H2</b>	SI -> BIU	0.349	0.348	0.087	3.993	0.000
<b>H3</b>	HM -> BIU	0.061	0.063	0.021	2.935	0.003
<b>H4</b>	PB -> BIU	0.244	0.237	0.076	3.212	0.001
<b>H5</b>	BIU -> TA	0.900	0.901	0.014	64.670	0.000
<b>H6</b>	HAVING CHILDREN-> BIU	-0.065	-0.068	0.030	2.181	0.030

**Figure XI Model tested in SMART-PLS**





## 5. FINDINGS

More than 50 percent of respondents said that yes, they often order stuff like clothing, groceries and other pantry items online as they find it worthy and workable. People also shared the issues they have faced in the online shopping like the loading time, the billing page error. Payment issues and more than 30% of the respondents said that they are not familiar with the online shopping, and they find the traditional supermarkets and local mendes more accessible. 50% of the people want to stick to the online shopping as they find it more efficient.

Big Basket is the most familiar app for online grocery shopping among the respondents. Zepto is the least known by them. The online grocery shopping is loved by people because of the discounts that they provide. While some still fear of buying things online as they are afraid of the physical quality of the product or the pricing they are charging for the particular product.

## 6. CONCLUSION

Consumer behavior is a critical part of every industry. With each passing year, we are witnessing the emergence of new business models based on shifting customer preferences, with internet business models on the increase. This is due to the fact that our living pattern is always changing. Even with its limitations that are constantly being solved by present participants, India's online grocery market appears to have a bright future, with the potential to produce considerable profits.

The present internet industry for F&G is still in its infancy, but it is rapidly expanding with new prospects. The nationwide curfew has had an impact across the country, with Indians purchasing more online than ever before.

As a result of the epidemic, the online grocery market has seen a significant surge in sales, but one of the company's main issues is low profit margins. People have turned to internet food shopping as a result of the present pandemic crisis, and customers have gained trust in doing so. It is a steppingstone to the future of online grocery shopping in India; however, once the situation has stabilized, further research into the Indian market is required.

The growth rate will be exponential with over 400 million mobile users. The capacity of a mobile phone to enable access from anywhere and at any time will alter how consumers purchase in the future. With the outbreak of the pandemic, the future of online food shopping appears to be bleak. incredibly safe Grocery platforms are gaining traction due to variables such as convenience, comfort, smartphone penetration, and ease of use, as well as the hassle-free shopping experiences of online grocery customers. Consumers acquire things from online shopping sites based on criteria such as advantages, discounts, and diversity of available products, free courier, site simplicity of use, and cash on delivery payment alternatives, according to the above data study.

According to the results of the above data study, the majority of individuals would like to shop for groceries online rather than at local markets and supermarkets. The majority of those who agreed to buy groceries online believe that it would be good to shop for groceries online. online on the basis of factors which are easy to order, variety, discounts/ offers, saves time and avoid crowds.

## **7. MANAGERIAL IMPLICATION**

- Online grocery stores should also expand their services to tier 3 cities, since there is a sizable market that is now untapped owing to the lack of online grocery store services.
- People have responded positively to online grocery services and are eager to continue using them after the pandemic, thus online grocers should implement innovative techniques to make their services more efficient and user pleasant in order to keep these clients.
- Today's online systems struggle to communicate to customers what things are genuinely in stock, what is fresh, and what alternative options there are for the product they desire, and this confusion frequently prompts customers to purchase from the nearest shop. To avoid this, automation should be used in every situation. features of the company Customers are attracted to a wide selection of items, here fore they should make sure that they have a wide choice of products that are easily accessible to them.

- Because physical examination and guarantee are the two most significant barriers that consumers face when purchasing online, internet retailers should concentrate on product evaluations. As a result, customers will have a better understanding of another consumer's experience with the product and if it meets the consumer's expectations. It is vital for establishing consumer loyalty since they must have faith in the website from which they are shopping.

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