

Research Article

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A Study on consumer satisfaction and loyalty towards online grocery shopping

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Abstract

This study emphasizes the significance of variables that both have a significant impact on logistics needs and affect consumers' ultimate decisions about online grocery shopping. In Bangalore, Karnataka, India, a stated preference survey was conducted using the following criteria: lead time, social influence, economic value, time pressure, and physical effort and delivery-service price. The interviewees' ages and genders were considered before making this choice. There were 100 interviewees in the sample. The data and their interactions were examined using Mixed Logit models and Decision Trees

The most critical factors were determined to be economic value and physical effort. E-groceries might be seriously harmed if the order is not fully fulfilled at the time of buying. When preparing special offers, the grocer should take into consideration some interactions among the variables, such as those between order fill rate and delivery-service price. For routine e-grocery purchases, short lead times do not seem to be a top priority. In order to better understand consumer behaviour regarding e-grocery, this research approach combines two statistical techniques. It also offers grocery retailers insights into the significance of specific attributes for the effectiveness of e-grocery and their effects on business logistics, which are particularly difficult during pandemics.

Keywords

Grocery,
Satisfaction,
Consumer,
Shopping,
Behaviour,
Loyalty

Introduction

The exponential rise of global web and technology-based services has created several chances to boost corporate operations' effectiveness. The selling of groceries and food is similar since this sector has also seen an unexpected increase in customer expenditure on

groceries through online platforms. According to market forecasts, this development will be driven by a rise in the number of smartphone users and young professionals. With a major portion of the population being busy and having less time for domestic chores or food shopping, India's market for online groceries is growing.

Anusha (2017) in his research paper titled, "Factors affecting satisfaction and loyalty in online grocery shopping: an integrated Model" stated that online grocery shopping (OGS) offers both consumers and businesses a number of benefits. For merchants, it enables them to connect and gain access to potential customers around-the-clock and provides a dynamic virtual shop to make it easier to buy and sell groceries, services, and information whenever they want. It lessens the physical and mental effort needed by consumers to make traditional grocery store purchases. Grocery shopping, especially for vegetables, is an almost daily need in a regular family. OGS services not only minimise these efforts but also help customers avoid waiting in line at checkout counters and different stores.

Online grocery shopping has advanced significantly in a short period of time; there are already more than 2 million users registered with the OGS websites. The next problem is getting them to become regular customers. This is quite relevant in the Indian market context.

Future difficulties for OGS may come from three directions: (a) adjusting and diversifying their product offering; (b) honing their marketing strategies; and (c) modifying their supply chains to satisfy the needs of online merchants and prevent the danger of being unnoticed online. Given that competitors are only a click away in the online grocery market, keeping current customers has become a herculean task for online rather than offline grocers, as online shoppers today may be interested in more than just price today. They may also want a wide selection of products, to be entertained while shopping, etc. Therefore, consumer loyalty is a crucial trait that has to be researched specifically with regard to OGS.

The proposed study is a unique effort that focuses on the S-O-R paradigm to examine how social influences, situational and economic factors, and individual traits interact to determine the satisfaction and loyalty of online grocery customers in India. The use of the S-O-R framework in the context of OGS also has the

following benefits: (i) it proposes a constrained and theoretically justifiable approach to investigate features of OGS as environmental stimuli; and (ii) it makes it possible to analyse how users' cognitive and affective responses to features of OGS affect their loyalty behaviour.

Problem Statement

The paper goes on to investigate and analyse how factors like financial worth, physical exertion, and time constraints relate to customer loyalty and happiness when they buy for groceries online. The study has ramifications for the situation of the new normal. Generally speaking, the scenario that exists after a crisis has happened is referred to as the new normal. Governments, civilizations, communities, and organizations all innovate or improvise during this period to adapt to the new environment and function well. Here, social factors have a significant role. The pandemic changed the customers' perspectives. This caused some volatility in the clients' typical purchasing patterns. As most of the changes took place during and after the pandemic, it becomes an important time frame to study.

Originality

This study looks into how customers' purchasing decisions are impacted by psychological and economic aspects. There have been many studies conducted in the same field of study in the past, but this one stands out since it aims to determine the impact of the recent pandemic-related issues on the pleasure and loyalty of online grocery buyers.

Review of Literature

Online Customer Experience: The Rose, Hair, and Clark (2011) seminal work conceptualised OCE. In contrast to the in-store customer experience, a number of unique factors have been shown to affect consumers' attitudes and behaviours when shopping online (Scarpi, Pizzi, and Visentin 2014), such as the tangibility of products and the spatial and temporal separation

between the retailer and the customer. Online shoppers can perceive greater unreliability of infrastructure and systems (Pavlou 2003; McCole, Ramsey, and Williams 2010), as well as lowered trust and higher perceived risk (Laroche et al. 2005). In a second study, Rose et al. (2012) empirically tested the antecedents, components and outcomes of the OCE model. Although perceived risk has been recognised as an important construct in studies of online behaviour (Forsythe et al. 2006; Moore and Mathews 2006), neither study examined the impact specifically, although the authors acknowledged perceived risk may be significant (Rose, Hair, and Clark 2011). In concluding, Rose et al. (2012) called for research in the context of purchasing frequency. In a broad managerial sense, it is important to understand market segments based on purchasing frequency because frequent shoppers contribute a far higher volume of sales than infrequent shoppers and cost less to service (Anshuetz 1997; Kotler 1999).

Online grocery shopping: The experience of shopping online for food and groceries is fundamentally different from other forms of online shopping due to the perishability and variability of the product, and frequency of shopping. Hansen (2006) found that some shoppers attached lower relative advantage and higher complexity specifically to online grocery shopping. This differs from general online shopping where shoppers often report convenience and ease of use as positive drivers of adoption (Sin and Tse 2002). Further, where online shoppers will visit multiple e-retailers, making sporadic purchases often linked to their disposable incomes, online grocery shopping accounts for a much larger proportion and regular outlay of consumer income (Ramus and Asger Nielsen 2005). Products such as fresh produce, baked goods and meat tend to fall into the see/touch/smell category (Huang and Oppewal 2006), which presents a challenge in an online environment (Citrin et al. 2003). Even though superior freshness and quality can be claimed online, a shopper must contend with the risk that the product purchased may deteriorate prior to delivery (Tsiros and Heilman 2005).

The repetitiveness of grocery shopping (Blaylock 1989) and similarly, online grocery shopping (Chiagouris and Ray 2010) tends to be more frequent than general online shopping (Opreana 2013), again due to the habitual nature of grocery shopping (Mortimer and Weeks 2011). Finally, the very nature of general online shopping conjures up notions of excitement, flow and enjoyment (Wolfenbarger and Gilly 2001), as shoppers search sites for exclusive and novel products. In contrast, the activity of online grocery shopping is mostly considered a mundane, routine task (Dawes and Nenycz-Thiel 2014; Brengman and Geuens 2002)

The S-O-R Framework

According to Mehrabian and Russell's (1974) S-O-R framework, the environment contains stimuli (S) in a variety of forms that may alter an individual's personality or organismic (O) states, which may then result in a behavioural response (R). Many consumer behaviour studies have used this paradigm.

For an OGS website, a number of elements, such as website features, the variety of product assortments available, the presence of exciting promotional and discount offers, and time constraints, are crucial stimuli of a conducive shopping environment that may influence the psychological processes leading to purchase. As a result, these impulses prompt a methodical expansion of knowledge pertaining to purchases.

Shoppers' emotional and cognitive states are influenced by atmospheric signals, which subsequently trigger a behavioural response—the loyalty behaviour—in the consumers. In order to study the connections between relational ties, customer value, and customer loyalty in the retail banking sector, a research model based on the paradigm has also been developed. S-O-R has also been used to look at the purchasing patterns of high-tech products outside of online or physical retailers and businesses. According to the research, stimuli including technological innovation, aesthetic appeal, product prototypes, and self-expression have a significant impact on

purchasing behaviour through attitude (cognitive state) and enjoyment (affective state). According to our examination of the literature, while S-O-R paradigms have been applied in numerous studies in the marketing field, there are few examples of them being used in the context of online grocery shopping.

We try to use the S-O-R framework in the OGS setting in the current study. Perceived ease of use, perceived usefulness, and social influence are used as the cognitive and affective states of the organism, while the OGS context-specific factors (such as look and feel of websites, physical efforts, entertainment and economic values, etc.) that drive or facilitate the adoption of online grocery shopping are treated as the environmental stimuli. Prior research characterised the organism's cognitive and emotive characteristics as subjective utility and satisfaction.

Technology acceptance model

Ankit (2017) in his research paper titled, "Factors affecting satisfaction and loyalty in online grocery shopping: an integrated Model" stated one of the fundamental theories for analysing how people use technology is model for accepting technology (TAM). According to TAM, a person's willingness to try something new two ideas, "perceived utility" and "perceived easiness," determine technology of usage". Azjen (1985) who researched the connection between intention and behaviour, asserted that not all intentions are carried out; some are completely abandoned, while others are amended to account for shifting conditions. Perceived behavioural control (PBC) is the conviction that one has control over both internal and external circumstances that may help or hinder taking the necessary actions to accomplish desired goals.

The theory of planned behaviour (TPB), incorporates this element as an antecedent of both behavioural intention and actual behaviour. It is one of the most effective persuasion theories because it connects a person's attitude toward behaviour with their behavioural intentions.

In the current study, we choose TAM as the foundational technology adoption model because, of the three, it has received the most widespread recognition and endorsement from its use in a variety of innovation adoption situations. In light of this, we anticipated that customer impressions of "perceived ease of use" and "perceived usefulness" could influence their decision to conduct their grocery shopping online (Davis et al., 1989; Davis, 1993). It was shown by Bruner and Kumar (2005) using TAM in the context of internet services that a user's perceived ease of use (PEOU) is a primary source of their perceived usefulness, which results in behavioural intention (Davis, 1989) and e-loyalty (Cyr et al., 2006).

Based on these findings, we assumed that all TAM interactions would likewise show significant associations when viewed in the context of OGS.

Social Influence

As stated by Sneha (2017) in her research paper titled, "Factors affecting satisfaction and loyalty in online grocery shopping: an integrated Model", along with two belief evaluations (PEOU and PU), theory of reasoned action (TRA), which forms the conceptual basis of the technology acceptance model (TAM), also cites social influence (also known as a subjective norm) as a factor in why consumers act as they do. Innovation diffusion theory, a theory of deliberate action, contends that a user's desire to embrace IT is impacted by the social system surrounding them. The degree to which a person believes that others share his or her opinion that they should adopt the new technology is known as social influence.

We presume that if someone or a group of people who are significant to the users thinks that buying food online is advantageous since it would improve the user's social presence or reputation within the reference group.

Additionally, when the user base grows as a result of others adopting new technologies, additional users are influenced and are more likely to do the same.

Technology acceptance behaviour has been widely acknowledged to be influenced by social factors. The majority of earlier research have focused on subjective norm to comprehend the nature of nevertheless, they have seen conflicting outcomes, and its impact on technology has also been inconsistent. Social influence only has a substantial effect on technology adoption in contexts where it is required, and its influence lessens as users have first-hand experience with the target system. The relationship between social impact and technology acceptability has to be clarified more.

While the TRA and TPB are both based on compliance and there is a clear correlation between subjective norm and intention, the theoretical extension of the technology acceptance model (TAM2) includes two new theoretical constructs: internalisation and image.

Internalization is the process of incorporating another person's beliefs into one's own belief structure when they believe that one should utilise a certain system. Internalization is the tendency to accept information from another as proof of reality. It is an informational (as opposed to normative) social impact. In the current situation, if a family member, friend, or co-worker suggests using the internet as a banking channel, the individual may also think it is genuinely beneficial and develop an ambition to utilise it. According to research, people are particularly susceptible to social normative pressures in order to establish or keep a positive reputation within a reference group. Moore and Benbasat (1991) defined image as "the degree to which usage of an invention is considered to increase one's status in one's social system" based on research on the spread of innovations. According to Venkatesh and Davis (2000), subjective norm has a positive impact on image because, if influential members of a person's social group at work believe that he or she should use a system, then employing that system is likely to raise that person's social

standing within the group. We projected that social factor will have an impact on an individual's perception of the utility of and behavioural intention to utilise online grocery services by drawing conclusions from these two linked notions.

Economic Value

A similarity between acquisition value and transaction value is the definition of economic value. It serves as a temporal, behavioural, psychological, and financial investment resource for customers' return on investment.

Economic value is the overall benefit that customers receive from purchasing a good or service. The net benefit to OGS customers may be monetary, such as savings on travel costs or bargains, discounts, or promotional offers. This can also result in non-monetary benefits like time and effort savings. As a result, consumers find OGS valuable since it may reduce both financial and nonfinancial costs. Therefore, we argue that perceived usefulness can be influenced by economic worth. Therefore, we argue that perceived usefulness can be influenced by economic worth.

Additionally, it has been shown that customers typically feel a feeling of privilege, excitement, enjoyment, and joy when they receive an exclusive deal and believe that buying online is enjoyable and cost-effective. To get the greatest deals available, many customers still use OGS to search through the websites of various sellers. Additionally, because of various on-site discounts provided by vendors and off-site discounts provided by banks and payment processors, it is increasingly difficult for customers to determine the actual/final cost of a product. Some dealers may just advertise the product price without delivery costs, while other vendors may display the price inclusive of tax and shipping. To get the greatest deals available, many customers still use OGS to search through the websites of various sellers. Customers typically think that all of these strategies are fun and interesting ways to find the

greatest offer to purchase. Consequently, we predicted that:

Physical Effort

Physical work is required for offline food shopping, including getting to and from the store and bringing the groceries you buy home. It takes extra work to carry the groceries after making parking arrangements or if customers take public transit. OGS lessens the consumer's effort because it allows them to choose, purchase, and get their groceries while remaining in the comfort of their own homes. Online grocery shopping saves time and effort because the groceries are delivered to your home.

Consumers, who purchase online feel less exertion because they are working groups in big cities. Therefore, the more physical effort needed for food shopping, the consumer perception of how simple it is to buy for groceries online.

Time Pressure

Consumer perceptions of their own busyness are referred to as time pressure. Consumers believe that shopping for food offline takes more time because of how time-constrained the modern workplace is.

Customers must allocate time for driving to the physical store and for travelling around the store during busy times to pick up groceries. Additionally, having customers stand in line to pay may add to the time strain. Online shopping is a fantastic option, particularly for those who have limited spare time due to their long workdays. The situational stimulus "time pressure" therefore has a moderating effect on the association between attitude and customers' propensity to purchase online. Consequently, it is assumed that:

Customers often spend less time making judgments for any given item while shopping under relatively high time limitations, according to an exploratory study, which indicated that time pressure frequently influences buying decisions. Customers under pressure to act quickly

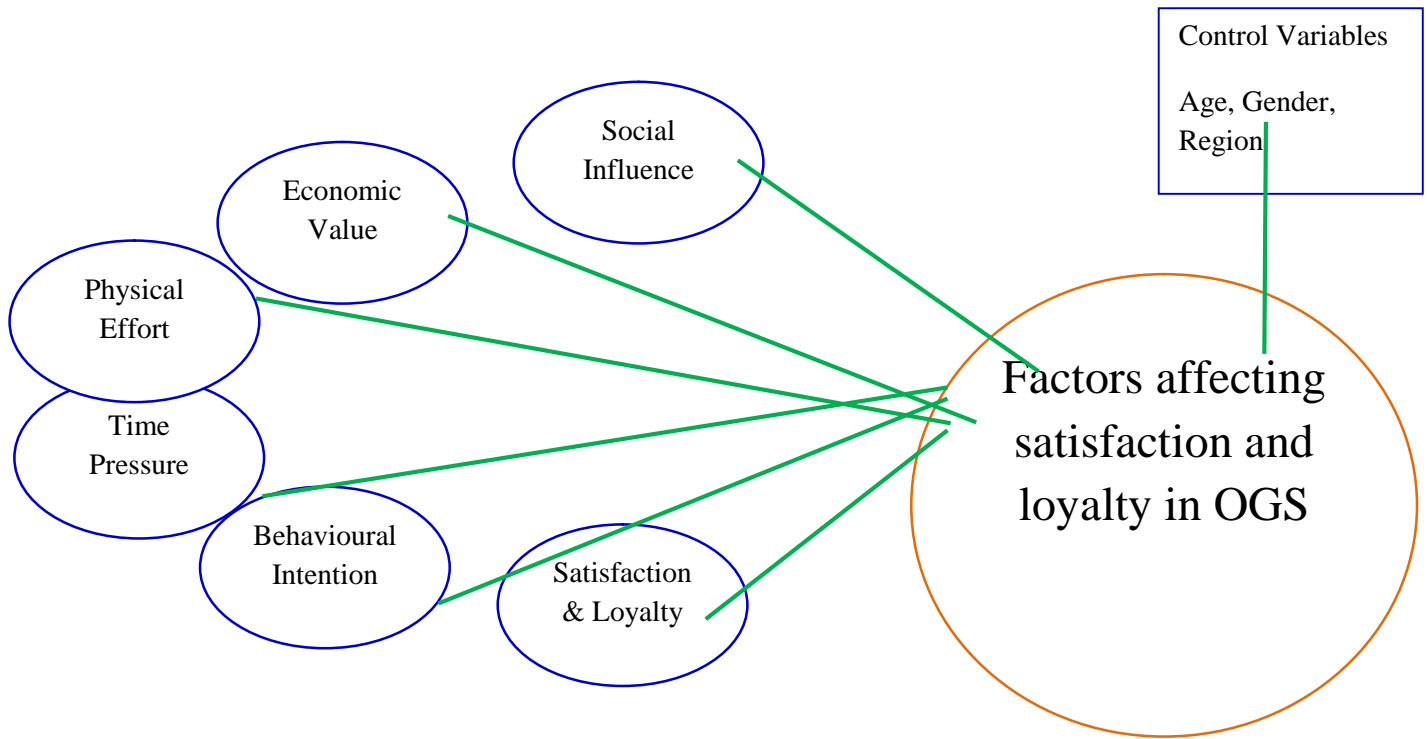
frequently end up making impulsive purchases. Customers typically turn to relevant individuals in similar circumstances to help them make purchasing decisions. In online impulsive purchases, word-of-mouth, advertising, peer influence, and trend setters, particularly for socially visible items, also have an impact. Customers are impacted by situational stimuli, a significant cause of social influence, when they purchase online due to time constraints, a lack of mobility, geographic distance, and a variety of options.

Behavioural Intention

According to the theory of reasoned action (TRA), intentions that directly relate (in terms of action, target, and context) to a behaviour can be used to forecast that behaviour. Furthermore, prior research has indicated that consumer perceptions of service quality and satisfaction positively affect purchase intentions, which in turn promotes contentment and loyalty. E-loyalty is the perception of a future desire to visit or utilise a website for commercial purposes. According to the findings of other studies, the current study has likewise concluded that customer purchase intentions serve as a reliable substitute for actual behaviour.

Satisfaction and loyalty

E-loyalty was re-defined as the desire to visit a website and make purchases from it in the future by Cyr et al. (2006) in research that looked at website design as a cross-cultural predictor of e-loyalty. In a business-to-business service setting, Lam et al. (2004) discovered that customer pleasure fosters loyalty, which in turn motivates patronage of an online vendor as well as further contact with that vendor. In order to understand consumer OGS behaviour and if customer happiness influences e-loyalty, we proposed the following hypothesis:



Data interpretation

H0: Shopping online groceries doesn't have any effect on consumer satisfaction level and consumer loyalty.

H1: Shopping online groceries have a significant effect on consumer satisfaction level and consumer loyalty.

Construct and Measures

Age, Gender
Region

Social Influence

Descriptive Statistics

My friends and colleagues have supported the use of online grocery shopping.	
Valid	103
Missing	0
Mean	3.650
Std. Deviation	1.118
Minimum	1.000
Maximum	5.000

Decision Variables

Independent (6)

Time
Behavioural Intention
Satisfaction & Loyalty
Physical Effort
Economic Value
Social Influence

Main - Factors affecting satisfaction and loyalty in OGS

Friends and relatives are an important source of social influence. According to our collected data, they play a vital role in influencing the consumers

to shop groceries online. The consumers tend to agree on such factors and behave accordingly.

Economic value

Descriptive Statistics

	The online grocery stores offer high-quality products at reasonable prices.	The pricing on the online food purchasing websites often s:
Valid	103	103
Missing	0	0
Mean	3.709	3.621
Std. Deviation	0.976	1.011
Minimum	1.000	1.000
Maximum	5.000	5.000

A lot of factors prove to be crucial in the economic value segment, factors like pricing and return on investment prove to be crucial role in determining the economic value in online grocery shopping. The consumers tend to agree on such factors and behave accordingly.

Physical Effort

Physical efforts like offline and in-store shopping determine the buying behaviour in online grocery shopping. The customers tend to disagree on the fact that offline shopping impacts the online grocery shopping behaviour.

Descriptive Statistics

	I consider shopping (OFFLINE) a big hassle.
Valid	103
Missing	0
Mean	2.922
Std. Deviation	1.194
Minimum	1.000
Maximum	5.000

Time Pressure

Consumers consider a few factors like “one stop solution”, “free home delivery” and “lack of time” which makes the concept of “Time Pressure” important. The aspect of time has always been a major role player in different fields of research. It has been significant in this study as well. The customers do believe that time pressure is an important aspect and needs to be considered while shopping, but with the advancements in other aspects of shopping such as technology and experience, there has not been any discoverable changes.

Discussion of findings

E-commerce is one of the trade sectors that is expanding the fastest. Online shoppers can purchase practically anything. Online grocery shopping is becoming increasingly popular, according to a number of studies. In this regard, there are several distinctions between online and conventional shopping. Customers can escape the restrictions related to location or business hours in supermarket e-stores. They can purchase goods more quickly and conveniently.

The ability to save time (by not having to leave the house and stand in long lines) is, in the perspective of customers, the most significant benefit of online grocery shopping. However, because of the subpar website presentation, there is a chance that you will overestimate the value of some products when doing your grocery shopping online.

Online buyers often miss out on the chance to adjust their selections based on product expiration dates. It should be recognised that certain needs, such as those for sensory stimulation or social interaction, are restricted when purchasing online. According to research, people generally have positive sentiments toward doing their grocery shopping online and are satisfied with their experiences. However, a lot of people still have reservations about making electronic payments and disclosing their personal information.

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Appendix

Questionnaire: Online Grocery Shopping Survey

The respondents were asked about their ages, their preferred online grocery shopping platform/application and their locality of residence, their gender, and their email ids, followed by these questions which were based on the rating scale (5-1).

S.NO.	Measurable Factors	5	4	3	2	1
		SA	A	N	D	SD
1.	Do you actively participate in and practice online grocery shopping?					
2.	I often shop grocery online.					
3.	The online store's excitement is contagious, and it makes me shop comfortably.					
4.	The online grocery stores offer high-quality products at reasonable prices.					
5.	The pricing on the online food purchasing websites often satisfy me.					
6.	My friends and colleagues have supported the use of online grocery shopping.					
7.	Online grocery shopping provides a “one-stop shop” for my grocery shopping.					
8.	Whenever possible, I intend to use online grocery shopping to purchase groceries.					
9.	I intend to use online grocery shopping when the service becomes widely available.					
10.	I intend to use online grocery shopping when there is free home delivery.					

11. I would continue to use the online grocery shopping websites in the future.
 12. I would suggest the grocery shopping websites to others.
 13. I consider shopping (OFFLINE) a big hassle.
 14. While shopping groceries online, I usually find myself pressed for time due to work and other commitments.
 15. I am often in a hurry while using the online grocery website; I wish I had more time to spend on the website.
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