



REVIEW ON CUSTOMER PERCEPTION TOWARDS ONLINE FOOD DELIVERY SERVICES

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Abstract:

Purpose – The main object of the study is to review the customer perception towards online food delivery services. The paper explores different dimensions involved in consumer perception towards online food delivery services which is an emerging industry.

Design/methodology/approach – This research investigates a wide range of empirical and conceptual studies on consumer perception towards online food delivery services. The study reviews the literature between 1994 and 2021. The paper uses secondary data gathered for the review of consumer perception.

Findings – The study focused on understanding the main drivers to consumer perception towards online food delivery services. Through a systematic review, it was understood that there is a need for in-depth analysis of the association between different factors influencing the perception of consumers to order food online and to find the relationship between these variables.

Practical implications – Online food ordering is a relatively new phenomenon in the worldwide marketplace. Growth and accessibility of the internet, along with people's hectic work schedules, have pushed businesses to respond to new customer demand: food delivery to their doorsteps. Understanding the consumer perception better would aid in realizing the e-commerce platform's full potential, which in turn shape people's quality of life, companies and economy in a macro way.

Originality/value – The online food delivery industry is in the nascent stage, necessitating more study for academics and practitioners to gauge its full potentials. This paper reviews the limited existing research related to online food delivery business and explores consumer perception on food delivery. From a managerial perspective, the paper contributes for finding the research gaps, if any, and understanding consumer perception more broadly.

Keywords Online food delivery, Consumer perception, E-commerce, Online Shopping, Factors affecting consumer perception.

Paper type Review paper

I. INTRODUCTION

Economic progress and greater internet access are the driving forces behind the global rise for e-commerce. Consumers are increasingly flocking to online services as their discretionary money grows, electronic payments become more secure, and the number of suppliers and their area of their delivery networks expanded.

The term "online to offline" refers to a kind of e-commerce in which customers are induced to a product or service and then persuaded to purchase at a physical location. The popularity of digital Food Delivery (FD) platforms is a fast-growing field of e-commerce.

The growth of online FD has transformed the way many customers and food suppliers engage all over the globe, as well as the sustainability implication of the industry (sustainability implications for FD sector is defined by three factors economic, social and environmental concerns of the industry) to understand the scope for further improvements which has not been assessed yet [1].

II. OVERVIEW OF THE ONLINE FOOD DELIVERY SECTOR

2.1 Size of the E-commerce Sector

People are increasingly moving towards online shopping, which has fuelled tremendous growth in the e-commerce business during the last decade. This transition in consumer shopping habits has been spurred by a set of attributes, some of which are market or region-specific, while others are the consequence of global shifts. An increase in disposable income, mainly in developing countries; longer work schedules and commuting times; increased bandwidth coverage and enhanced electronic payment security; a tranquility of trade barriers; an increase in the number of retail chains with a digital platform; and an increased awareness of e-commerce by customers are among these notable improvements that spurred the swift [2].

According to United nations Conference on Trade and Development (UNCTAD) estimates, the substantial surge in e-commerce under COVID-19-induced limited mobility raised online sales transactions' percentage to overall retail sales from 16 percent to 19 percent in 2020. Online sales increased significantly in various nations, with the Republic of Korea represents the strongest volume of 25.9% in 2020, rising from 20.8 percent the previous year [3].

Table 1: Exhibits the Online Retail Sales, selected Economies, 2018-2020

Economy	Online retail sales (\$ billions)			Retail sales (\$ billions)			Online share (% of retail sales)		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Australia	13.5	14.4	22.9	239	229	242	5.6	6.3	9.4
Canada	13.9	16.5	28.1	467	462	452	3.0	3.6	6.2
China	1,060.4	1,233.6	1,414.3	5,755	5,957	5,681	18.4	20.7	24.9
Korea (Rep.)	76.8	84.3	104.4	423	406	403	18.2	20.8	25.9
Singapore	1.6	1.9	3.2	34	32	27	4.7	5.9	11.7
United Kingdom	84.0	89.0	130.6	565	564	560	14.9	15.8	23.3
United States	519.6	598.0	791.7	5,269	5,452	5,638	9.9	11.0	14.0
Economies above	1,770	2,038	2,495	12,752	13,102	13,003	14	16	19

Source: UNCTAD, based on national statistics offices

These statistics illustrate how prominent web usage has become. They also emphasize the importance of having such information when the governments, particularly developing countries, trying to rebuild their economies.

2.2 Online Food Delivery

Many new types of companies have emerged as a result of the rapid rise of e-commerce, including B2B (Business to Business), B2C (Business to Consumer), C2C (Customer to Consumer) and O2O (Online to Offline) [4]. Online food delivery is an offshoot of such a trend that is based on digitalization, in which customers order food for goods or services online and obtain them at a physical location [5]. The proliferation of smartphones and tablets has allowed the immediate payments; and development of physical infrastructure for timely delivery have been major factors accelerated to e-commerce growth. O2O services have developed in several industries, including the procurement of a wide range of products and services, like cuisine, accommodations, real estate, and automobile rentals [6]. Integrated online food delivery platforms like Zomato, Swiggy, Uber Eats, etc have led to the growth of this industry. Online food delivery portals perform many functions including providing consumers with a wide range of food choices, the taking of orders and the forwarding of these orders to the food producer, the tracking of payment, the institution of the delivery of the food, and the facilitation of tracking facilities. Food Delivery App (FDA) are part of online FD since they allow customers to purchase food using mobile applications [7].

Figure 1. Exhibits online food delivery process



Source: www.21twelveinteractive.com [8]

2.3 Delivery System of Online Food Services

Restaurant-to-Consumer Delivery and online Platform-to-Consumer Delivery are the two kinds of food delivery services available. Restaurant-to-Consumer Delivery companies, such as McDonald's, KFC, and Domino's, prepare food and deliver meals to customers. The order can be placed either through the restaurant's website or through a third-party platform such as Eleme in China, Uber Eats in the United States, Just Eat in the United Kingdom, and Swiggy or Zomato in India. Third-party platforms provide online food delivery services through partner restaurants. Partner restaurants do not necessarily offer delivery. Online FD services needs real-time delivery capabilities that are both flexible and effective. Restaurants can use current employees for self-delivery, such as waiters in local restaurants, or they can recruit specialized delivery teams, as seen with some of the large restaurant franchises like Domino's, Mc Donald's, and KFC. Restaurants can also use outsourcing logistics, which is a network of freelance contractors and delivery workers that offers an efficient, minimal cost strategy to food delivery [9]. Online food delivery platforms may either hire and train competent delivery workers themselves, or they may use outsourcing logistics to use delivery persons who aren't necessarily their staff.

2.4 Evolution of Online FD Globally

In terms of developing new markets and cultivating customers' dietary behaviours, the online food delivery business has been highly aggressive. For example, in 2018, the India-based online food delivery service provider Food panda ran a promotion campaign that offered consumers substantial discounts, resulting in a tenfold increase in the number of users [10]. Even though online food delivery seems to be quite popular in some countries, its growth is not even globally, and it will require significant investment to support promotions and advertising as well as give incentives to member restaurants [11]. For instance, a restaurant might run a campaign on a food delivery interface offering an 8% discount, if the actual amount ordered approximately \$20. In reality of course, because the restaurant will receive a \$6 subsidy from the food delivery portal, this rebate may only cost the restaurant \$2 (the official rules may vary from one portal to another) [12]. A restaurant will benefit from such a strategy since it will gain new consumers and orders. The cultivation of customers' dietary habits by exposing them to the buying of food online is critical to the sustainability of online food delivery. Consumers are being encouraged to forego cooking at home or heading out to eat by online food delivery portals and suppliers offering lower-cost meals or other amenities such as free delivery.

In 2021, the worldwide online food delivery business is estimated to generate a revenue of \$151.5 billion in sales covering 1.6 billion consumers, representing a 10% increase Year-over-Year (YOY). According to the Statista report, the online food delivery market generated \$76.2 billion in sales in 2017. This sum has risen to \$107.4 billion by the end of 2019, a 41 percent increase in only two years. Meanwhile, the COVID-19 pandemic produced a jump in the number of online food orders, as individuals turned to meal delivery services amid restricted or no-dining alternatives. Statistics report reveal that the worldwide online meal delivery market's sales rose by 27 percent year-over-year, exceeding \$136.4bn in 2020. The upward trend is expected to continue in the next years, with the total expected to reach \$182.3 billion by 2024. As per Statista, platform-to-consumer delivery sales will increase by 32% YOY to \$70.7 billion in 2020. This sum is expected to reach about \$97 billion in the following three years. During the pandemic, several eateries offered delivery and expect to continue engaging in the service. The worldwide restaurant-to-consumer delivery market generated \$53.6 billion in revenue in 2019. In 2020, this sum has increased by 22.5 percent to \$65.7 billion. The upward trend is expected to continue in the next years, with sales expected to reach \$85.5 billion by 2024. The COVID-19 pandemic resulted in a considerable rise in the number of individuals utilizing online meal delivery services, in addition to a considerable rise in income. The total number of users in 2019 was 1.17 billion. According to statistics, this amount increased by 25% year over year, reaching 1.46 billion in 2020. The number of individuals utilizing online meal delivery services is expected to reach about two billion in the next three years. Statistics reveal that during the coronavirus pandemic, the number of users in the platform-to-consumer category increased by 30%, from 539 million in 2019 to 704.7 million in 2020. This number is predicted to rise to 791 million by 2021. In 2020, the restaurant-to-consumer industry will have 760 million users, up 20% from the previous year. According to Statista, the number of individuals buying meals from restaurants online will exceed 821 million in 2021. When broken down by region, China is the world's largest online food delivery business, with \$51.5 billion in sales expected in 2020, a 28 percent increase in the wake of the COVID-19 pandemic. According to the data from Statista, the Chinese market's revenues are projected to reach nearly \$57 billion in 2021. With \$28.4 billion in revenue in 2021, the United States being the second-largest market, is expected 30% in only two years. The third-largest online meal delivery business in the world is in India and is expected to exceed \$11.6 billion in revenue 2021. The United Kingdom and Brazil come in fourth and fifth, with \$6.5 billion and \$3.8 billion, respectively. Based on Statista data, the total sales of the five largest online meal delivery businesses are predicted to reach \$107.3 billion in 2021, up 40% in only two years [13]. Even though online food ordering is gaining popularity in India it is limited to metropolitan areas. There has been no discernible increase in rural regions due to the limitation of internet access [14].

2.5 Food Delivery App Revenue and Usage

Food delivery is a worldwide sector, fueled by the new economy that has spread throughout North America, Europe, and Asia over the last decade. With over 650 million users and market penetration, China's food delivery apps have the highest userbase and market penetration and their delivery aggregators are considered to be the second biggest market and the most well-funded.

Table 2: Exhibits the list of Online Food Delivery Aggregators Globally

Uber Eats	The most commonly used meal delivery service, operating on six continents and ranking first or second in gross orders in the majority of nations.
Just Eat	Food delivery leader in the UK, with operations in Europe and Australia, and a holding in Brazilian food aggregator iFood.
Grubhub	Up until 2018, the first aggregator in the US, along with Seamless, managed over 50% of online meal delivery in the US.
Takeaway.com	A European aggregator accountable for the majority of online food delivery in Germany, the Netherlands, and Belgium (through subsidiaries).
DoorDash	The global market leader in online food delivery in the United States, as well as the creator of the platform-to-consumer model.
Postmates	An affiliate of Uber Eats since 2019, accountable for about 10 percent of online food delivery in the United States
Deliveroo	It competes with Uber and Just Eat in 13 countries, having pioneered platform-to-consumer in the UK.
Delivery Hero	Delivery Hero owns a majority interest in food delivery systems in over 40 countries through its many companies (including Food Panda).
Ele.me	Ele.me is one of China's two main meal delivery services, and it is owned by Alibaba. It has a user base of around 200 million.
Meituan Dianping	The other half of the online food delivery industry in China. Tencent is the largest stakeholder, with a 20 percent stake
Rappi	Backed by Soft Bank, Rappi has aggressively pushed into the South American market, currently active in nine countries

Jumia Food	Part of the African e-commerce behemoth Jumia, which became Africa's first company to be valued at over \$1 billion.
Damae-Can	Damae-Can, Japan's most popular takeaway app, boasts over 20,000 eateries and 2.3 million active users.
iFood	By far the most popular aggregator in Brazil, accounting for over 70% of all online takeout orders in the nation.
Zomato	In January 2020, it purchased Uber Eats India, the most popular of India's domestic meal delivery apps.
Yandex.Eda	Due to the absence of Uber in Russia, Yandex.Eda has been handed complete control over the platform-to-consumer industry.

III. OBJECTIVES OF THE STUDY

The objectives of this review paper are as follows:

- (1) To understand the broad idea of online food delivery and factors that affect the online food delivery business.
- (2) To identify the issues relating to customer perception towards online food delivery employing systematic review of literature from 1994 to 2021.
- (3) To arrive at ideal characteristics of customer perception towards online food delivery system.
- (4) To find the research gap between current status and desired status of the studies on online food system.

IV. METHODOLOGY

This study is based on secondary data for the period 1994-2021 - gathered from a variety of published data like sales reports from various businesses official websites, survey reports, and journal articles, research papers, studies from various marketing research firms, and reports from government organizations.

V. RELATED RESEARCH WORK

5.1 Online Shopping

Since 2008, for a multitude of factors, including changes in consumer lifestyles, technical improvements, increased consumer affluence and knowledge, and swift worldwide financial growth, e-commerce has flourished. People began buying online to save time and energy. E-commerce has made people's lives happier and has provided a lot of value to them, making it a flourishing sector. Many researchers have explored studies concerning the usage of online services for shopping. Some of the scholarly papers on online shopping are shown in Table 3 below with the objective/ hypothesis of their study with input and reference.

Table 3: Related Publications on Online Shopping by Different Authors.

Sl. No	Authors Name	Objectives/ Hypothesis	Findings and Conclusions
1.	Ramsey, et al. (1999) [15]	The study investigates consumers who are both computer savvy and technology adopters' purchasing preferences between traditional and internet shopping modes	In 1994 and 1997, in-store shopping was the most popular form of shopping. However, in 1997, there was a rise in the number of individuals who bought things online.
2	Lohse, et al. (2000) [16]	To investigate consumer purchasing behaviour on the internet through time utilizing panel data, as well as attitudes on internet communication and privacy concerns, and study the factors to be considered before making an online purchase.	Never buys, dropouts, newbies, and faithful purchasers were the four categories of online shoppers. As time spent on the internet grows, the percentage of respondents who buy online rises. Significant predictive factors for internet purchases have been discovered.
3	Han-Sheng Huang (1998) [17]	To examine the main reasons why people choose to purchase online; to investigate the differences in the demographic profile of internet shopping adopters and non-adopter; to learn how early adopters of internet shopping influence purchasing decisions and to know what goods they buy online.	The major motivations for online shopping adopters to purchase over the Internet were ease, followed by time savings, enthusiasm, availability of the product, service information, and the lack of sales pressure. The most popular items acquired by student adopters were computer-related publications and equipment. The majority of non-adopters of online buying said that internet security was the most significant barrier to their desire to shop online.
4	Becker-Olsen, et al. (2000) [18]	To learn why some individuals, prefer to shop in stores while others prefer to shop online. To determine how three different categories of customers see the risks of online shopping. To look at the factors that influence client purchase decisions once they've decided to shop online.	Respondents with computers and previous online shopping expertise buy online because it is simple and comfortable, not because it is faster or cheaper. For those who have never done any online purchasing before, company/site trust is the most important factor to consider. The three most important reasons were the site's ability to load quickly, the availability of brand names, and a clear return policy.

5	Phau, et al. (2000) [19]	<p>H1: Product and service type classification will significantly influence the consumer choice between a retail store and an Internet shopping mall. H2a: Products and services that are relatively expensive and infrequently purchased are more amenable to be purchased via the Internet. H2b: Products and services that have intangible value propositions are more amenable to be purchased via the Internet. H2c: Products and services that are relatively high on differentiation are more amenable to be purchased via the Internet</p>	<p>Low cost and frequently purchased products are purchased online relatively more than high cost and occasionally purchased products Intangible or informational goods are more likely to be purchased online than tangible goods.</p> <p>Products with high differentiation are more appropriate to be sold online rather than products with low differentiation</p>
6	Chiang, Kuan-Pin (2001) [20]	<p>H1: When consumers believe that purchasing offline is cumbersome, they are more likely to shop online.</p> <p>H2: Consumers are more likely to purchase online for search products than for experience goods.</p> <p>H3: When consumers expect the price of a product to be higher than low, they are more likely to shop online.</p>	<p>The study's findings show that convenience and price have a significant impact on customers' willingness to purchase online. When customers consider offline shopping difficult, they are more likely to purchase online for experience goods than search products. The findings show that product type has no impact on online buying intention.</p>
7	Fernandez, et al. (2001) [21]	<p>To investigate risk perception among internet users with varying levels of experience.</p> <p>H1: Internet experience is associated with a lower perception of the risk of making online purchases.</p> <p>H2: Having concerns about the privacy and security of online purchases has a negative impact on Internet Experience.</p>	<p>Higher degrees of internet experience is linked to reduced levels of perceived risk when it comes to online purchasing, resulting in higher online purchase rates.</p> <p>When it came to online purchasing, respondents with more expertise on the internet said that privacy was their top worry.</p>
8	Wolfenbarger, et al. (2001) [22]	<p>To analyze the elements that contribute to customers having a satisfying and high-quality online purchasing experience and to have a better understanding of online shopper motives</p>	<p>According to the research, there are two types of shoppers: goal-oriented and experiential. Because of four main characteristics, goal-oriented buyers favour internet shopping for convenience and accessibility, information availability, section, and absence of sociality.</p> <p>During internet purchasing modes, they have more flexibility and power. Experiential customers are more interested in the pleasure aspect of shopping, and the process is more essential to them.</p>
9	Cheung, et al. (2005) [23]	<p>To research previous literature on internet purchasing. To determine the key elements that influence online shopping to create online shopping reference models Adoption</p>	<p>Perceived Web Characteristics, Attitude of the consumer, and Consumer Characteristics were the three categories of research factors that influenced intention to purchase online.</p> <p>Purchasing experience, overall uniqueness, trust, risk tolerance, relative benefit, and service quality were found to impact attitudes toward online shopping.</p>
10	Schibrowsky, et al. (2007) [24]	<p>To figure out how Internet marketing has changed in terms of quantity, substance, and distribution channels. To identify major patterns in the internet marketing literature, as well as to give insights into research gaps and future research implications.</p>	<p>Trust in the security and dependability of online transactions, privacy concerns, consumer behaviour, and customer relationships are all challenges that need to be addressed.</p>
11	Cheung, et al. (2005) [25]	<p>To give a synopsis of previous theoretical writings. To define key notions that are relevant to the context of online purchasing. To develop an integrated model of the elements that influence online customer behaviour. To indicate the way for future research</p>	<p>Theory of Reasoned Action, Theory of Planned Behaviour, Technology Acceptance Model, Expectation-Confirmation Theory, and Innovation Diffusion Theory was used in many of the research. Consumer traits, environmental influences, product/service qualities, medium features, and intermediate characteristics were identified as the major drivers of online consumer behaviour. Consumer shopping intention leads to online shopping adoption, which leads to repurchase.</p>

12	Wu, I. L., et al. (2014) [26]	To find out if the various forms of trust involved in online buying have any impact on customers' perceptions of risk and attitudes about online shopping. (Asian internet group-buying site)	The study states trust factor highly influences customers to shop online. Risk perception is revealed to be a strong predictor of attitude, suggesting that reducing ambiguity is still a major issue for online buyers. The degree to which you trust the website influences your attitude toward internet buying. Consumer trust in a website is facilitated by aspects such as privacy and security, as well as the website's IT quality.
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5.2 Consumer Perception

Perception is a system that addresses an individual's apparent viewpoint, even though observations can be influenced or altered by a variety of variables [27]. Perception is the fast reaction of sensory receptors such as the eye, nose, and ear to important stimuli such as colour or odour, which is a process by which individuals choose, organize, and interpret sensations. The stimulus is defined as something that activates a receptor. Perception research focuses solely on how customers react to make a choice and on the firm belief that each person has their unique reaction to stimuli, which is influenced by their own biases, needs, and experiences. Overall perception refers to the process of selecting, organizing, and interpreting information to create a meaning that will influence decision-making. For example, the consumer receives information inputs from what he or she sees or hears in advertising, smells, or touches a product, and these processes are collectively known as perception [29]. The use of sensory perception in marketing and advertising is known as consumer perception.

Consumer perception refers to how individuals create their own opinions about the applications and goods they provide by the purchases they make, much as sensory perception relates to how people interpret sensory inputs through their five senses. Consumer perception theory is concerned with how people create opinions about any online or e-commerce product or website. They utilize the same technique to build marketing and advertising plans to keep their current consumers and acquire new ones [28].

Moreover, many researchers have done significant studies to know consumer perception towards online food delivery. Some of the scholarly empirical papers on customer perception of online food delivery are shown in Table 4 along with their findings and references.

Table 4: Significant Empirical Studies of Customer Perception towards Online Food Delivery System

Sl. No	Sample	Findings	References
1.	224 samples of Malay, Chinese, Indian, and 13 Other ethnicity	There is a structural relationship between convenience motivation, post-usage usefulness, hedonic motivation, price and time savings, prior online purchase experience, consumer attitude, and behavioural intention towards online food delivery services	Yeo, et al. (2017) [30]
2	405 samples using OFD from Bandung, Indonesia.	Food quality has a direct impact on online loyalty, but e-service quality does not. Furthermore, this research reveals that customer satisfaction and perceived value play a partial mediating role in the relationship between food quality and e-service quality on online loyalty to OFD services.	Suhartanto, et al. (2019) [31]
3	30 companies operating in the online delivery sector in Brazil	The category "content" had the highest frequency of attendance, followed by "functionality" and "usability," according to the research. The disadvantage was the lack of access security requirements, with just 54% of websites employing encryption and secure sites.	Pigatto et al. (2017) [11]
4	153 respondents from Pune	Customers are most motivated by doorstep delivery, ease of use, rewards, and cash back, and location. Customers are hesitant to use online meal delivery services for two reasons: bad prior experiences and peer pressure.	Das, J. (2018). [32]
5	325 respondents of Turkey among university students	They used the Technology Adoption Model (TAM) to investigate the acceptance of an online food ordering system, finding that people's attitudes differed based on convenience, usefulness, innovativeness, trust in e-merchants, and a variety of other factors.	Alagoz, et al. (2012) [33]
6	212 students of four colleges of the Manipal University	Students access online food delivery services to manage their time, easy access to the desired cuisine, have simple access to the internet, excellent word of mouth, previous customer experiences, and participate in online forums. Students were influenced by their friends' families' opinions and discussions on internet forums.	Sethu, et al. (2016) [34]
7	470 samples of a company, US	Both users and non-users place a high value on perceived control and ease. Non-users, on the other hand, demand more involvement since they have a higher level of technical fear when accessing the services.	Kimes, et al. (2011) [35]

8	10 partner restaurants	In terms of ingredients, packaging, and delivery, customers have unfavourable sentiments and complaints. Few other unfavourable remarks may be mitigated by enacting strict rules drafted by internet food delivery platforms and restaurants, the government, and society as a whole.	Lan, Ya'nan, et al. (2016) [36]
9	302 respondents among Malaysian urban dwellers.	The study discovered that time-saving orientation (TSO), convenience motivation (CM), and privacy and security (PS) have a favourable impact on OFD service behavioural intention (BI).	Chai, et al. (2019) [37]
10	605 US respondents.	Performance and self-image congruency were the most important predictors of intentions to use OFDs. Habit and knowledge were minor predictors, but impulsive purchasing had a negative impact on intentions to use OFDs.	Gunden, et al. (2020) [38]
11	158 samples Malaysia	As a result of high perceived service quality, customer loyalty and satisfaction will improve. Personal innovation has a moderate influence on service quality or client loyalty, according to the research. There is a relationship between M-S-Qual and demographic information.	Yusra, et al. (2020) [39]
12	462 respondents from Bangalore	Frequency of purchase, perceived threat, perceived advantage, and product engagement was shown to be significant variables to inter-group variations among the five personal traits studied.	Mehroliya, et al. (2021) [40]
13	177 respondents from Bangladesh	The success of online food delivery is influenced by two variables. The first is delivery speed, service quality, pricing, and the condition of the food provided. Secondary variables, also known as indirect factors, encompass a wide range of alternatives such as the number of restaurants, menu, delivery monitoring service, and delivery person's personality.	Saad, et al. (2021) [41]
14	170 respondents	Consumer Satisfaction, Control, Technology Anxiety, and Ease of Information all have a major influence on Consumer Intentions, whereas Convenience has a big impact on Consumer Intentions.	Rawat, et al. (2012) [42]
15	395 respondents	The findings showed that customer experience, restaurant search, ease-of-use, and listing were important antecedents of food delivery aggregators' usage intentions.	Ray, et al. (2019) [43]
16	213 respondents	The top five qualities of customer demands are order compliance, politeness and friendliness of messengers and administrative personnel, cleanliness of the food box, good condition of the ordered food, and cheap delivery charges, according to the results. However, the top five technological needs identified include skill training for messengers and administrative personnel, frequent reviews of service performance, regular inclusion of food outlet members, a map feature on the firm website, and the availability of ordering applications.	Elvandari, et al. (2018) [44]
17	500 respondents	Moral duties and people's value systems have an impact on adoption decisions.	Roh, et al. (2019) [6]
18	296 consumers in Bogotá city.	Even while early deliveries indicated a modest connection with the number of comments made by consumers after getting their items at home, researchers discovered that traffic circumstances had no practical influence on transaction volume and delivery time fulfilment.	Correa, et al. (2019) [45]
19	300 users of online food delivery apps and 100 non-users of Kochi	The chief reason for electronic ordering is convenience, tracking system, less human interaction, discounts, and special offers. The study discloses that youngsters are more persuaded to online food delivery system as compared to older generation people. Some consumers do not use food applications due to health and quality concerns	Jacob, et al. (2019) [46]
20	120 respondents in Jammu	Females are more likely to order food online. The bulk of customers are between the ages of 22 and 35. The majority of customers use a smartphone app to order food.	Vashishtha, et al. (2020) [47]
21	100 respondents	The findings show that respondents think about their motivation, interest, expectation, attitude, knowledge, experience, object, and circumstance.	Triyana, et al. (2020) [48]

22	250 respondents of Kerala	India's young population is particularly interested in online food ordering. The move towards online ordering of meals is slowing the dine-out trend, and the reason for this is the simple availability of the internet at low cost, as well as the increased usage of electronic gadgets around people. The majority of respondents preferred fast food as a cuisine. Working folks might save time by using online meal delivery services. Other benefits that individuals appreciate include convenience and ease of payment. Unawareness, fear of online payment, and the fear of disclosing personal information are some of the issues that prevent individuals from ordering meals online.	M Prabhash, A. (2020) [49]
23	170 respondents	The safety element is highly essential in the online meal delivery sector. When a client's food product is delivered following safety regulations, the consumer feels safe, protected, and secure.	Sankar, et al. (2021) [50]
24	150 respondents from varachha region Surat.	There is a substantial positive link between website quality and website trust, and also between service quality and customer satisfaction. Loyalty is also important for a company's success, which leads to significant earnings and long-term growth.	Kedah, et al. (2015) [51]
25	353 respondents	The service quality, location of the food outlet, and atmosphere have a positive impact. Food quality discovered an unpredicted result of a negative relationship. The study found that although the insight of customers towards food quality was low, their satisfaction was still high.	Abdullah, et al. (2009) [52]

5.3 Behavioural Intentions

The motivating variables that drive a specific action are referred to as behavioural intention. Customers' opinions on service, dedication, and web security of online purchases demonstrate considerable influence to their online buying intentions [53]. Some of the scholarly papers that have employed a theoretical perspective of customer's behavioural intention towards online food delivery are shown in Table 5 along with references, predictor variable, and the outcome variable.

Table 5: Exhibits key studies on Behavioural Intentions toward Online FD.

Sr. NO	Reference	Theoretical perspective	Predictor variable	Outcome variables
1	Ketabi, et al. (2014) [54]	Theory of Planned Behaviour	Behavioural Control, Subjective Norms, Friend's Role, Attitude, (Social Influence), and Perceived Credibility	Purchase Intention
2	Anderson, et al. (2003) [55]	Contingency Framework	Purchase Size, Inertia, Convenience Motivation, Trust, and Perceived Value	E-satisfaction influences E-loyalty
3	Rezaei et al., (2016) [56]	Extended Model of IT Continuance and Theory of Information	Postage Usefulness, Self-Efficacy, Disconfirmation, Apps Satisfaction, Facilitating Conditions, Perceived Information Overload, and Apps Continuance Intention	Continuance Behaviour
4	Yeo et al. (2017) [30]	Contingency Framework, Extended Model of IT Continuance	Prior Experience, Hedonic Motivation, Price Saving Orientation, Time-Saving Orientation	Convenience, Motivation, Attitude, Post Usage Usefulness, Behavioural Intentions
5	Cho et al. (2019) [57]	Mobile Application Quality Attributes	Convenience Quality, Design Quality, Trustworthiness, Price Quality, Various Food Choices Grouping Variable: Single/Multi-Person Household	Perceived Value, Attitude Toward an App, Intention to continuously use
6	Roh, et al. (2019) [6]	Tam (Technology Acceptance Model)	Subjective Norm, Convenience Orientation, Compatibility, Usefulness, Ease of Use	Purchase Intentions
7	Suhartanto, et al. (2019) [58]	Composite Loyalty	Food Quality, E-Service Quality	Customer Satisfaction, Perceived Value, Customer Loyalty

8	Gunden et al. (2020) [38]	UTAUT2, Modified and Extended	Impulse Buying Tendency, Performance Expectancy, Congruity with Self-Image, Mindfulness, Habit	Intentions (to use and recommend)
9	Annaraud, et al. (2020) [59]	E-Service Quality by evaluating OFD service as a Self-Service Process and uses a multi-dimensional E-SELFQUAL scale	Customer Service, Perceived Control, Service Convenience, Food Quality, and Service Fulfilment	Intentions

5.4 Factors Influencing Consumer Perception towards Online Food Delivery System

Individual customer perception for online food ordering differs; and such perceptions are limited to some extent by the availability of adequate internet access and availability of online food services. Based on their personal beliefs, the consumer's perception varies as a result of numerous similarities and variances. With the steady influx of professionals into cities and the rapid urbanization of India's environment, the food delivery and restaurant industry are currently thriving at a rapid rate. As a result, the number of smart phones and meal delivery applications has increased. Food delivery applications have become quite popular among Indian technophiles [60]. Following are the factors influencing consumer perception towards online food delivery system.

a. Price: The growth of online food delivery services is rising rapidly due to numerous advantages, including delivering food to customers' doorsteps, a multitude of payment options, enticing discounts, incentives, and cashback offers [61]. Consumers can access online retail stores and find their choices at lowest price [62][63][64]. The price and quality of the product together with the quality of service has an impact on customer satisfaction and also on customer choices [65] where consumers are price and value-conscious. Therefore, many restaurant owners do not opt for outsourcing to food delivery aggregators as the delivery charge has to be borne by the customers affecting the customer's affordability [66]. Consumers will also evaluate the nutritional content and pricing of the food item they want to purchase [67]. Studies confirm that consumers compare costs while browsing various sites, and choose the products of cheaper price [68][69][70].

b. Timely Delivery: Delivery speed is a critical component in delighting and maintaining consumers [51], time-saving features and customers' time-consciousness are favourably connected to the usage of ordering online [71]. Regardless of the road or weather circumstances, a delivery delay that exceeds the estimated delivery time will reduce customer satisfaction [72]. Customers strongly relate the product and delivery as very important [73]. The majority of customers of food delivery apps like Swiggy and Zomato have delivery difficulties. It is critical to be aware of all routes to ensure timely delivery [74]. With reduced time and energy, consumers tend to expend (convenience) to purchase a product [75][76]. Customers generally prefer OFD services because of the speed, ease, and precision with which orders are processed [77]. Owing to opportunity costs, it has also been discovered that higher-income customer's value time [78].

c. Prior-experience: Online purchases can be defined as the purpose of an individual to obtain products online [79]. The process of making an online purchase entails exchanging time, effort, and money via the internet [80]. As a result, due to some missing aspects such as physical engagement with the goods, online transactions are still deemed riskier than offline ones [81][82]. Users having online purchase experience will have less uncertainty, which will lead to a higher likelihood of repeated purchases. Moreover, online buyers who have previously shopped online are more likely to do so again due to the trust that has been established. Repurchase intentions will be influenced by expectations from previous successful online purchases [83]. There are two different sorts of online shopping experiences. The first is direct product experience, which occurs when a user interacts directly with the product. The second type is an indirect online experience, in which the consumer has simply engaged with the product's ads [84][85]. A post-adoption happens when a consumer interacts directly with the product, whereas a pre-purchase adoption arises when a user interacts with the product through advertisements [86]. The online shopping experience can also contribute to loyalty to online retailers, particularly if customers are happy with the variety composition [87]. Thus, prior -experience aids to increase customer purchases [88]. In addition to prior online experience, when customers desire to place an order online, they are looking for sensory stimulation, symbolism, or enjoyment during the ordering process. Such an emotional arousal, which is generated during ordering process is called as hedonism, which acts as a significant motivator for the purchase and consumption.

d. Convenience: TAM claims that when a user encounters a new technology, several factors influence how they adapt and use it [89]. Such technologies include business graphic programs, online shopping for apparel [90], mobile internet [91], smartphone usage [92], social media like instant messaging services [93][96], mobile policing [94] and teleworking [95]. The factors like perceived usefulness and perceived ease of use have shown how easy or difficult it is for consumers to access various technology.

e. Food Quality: When customers order food online, the process of ordering experience is highly influenced by their interactions with the company's website, features, and product quality. Food quality is a broad term that encompasses food presentation, variety, healthy alternatives, flavours, freshness, and temperature [97]. Food quality is a crucial factor for customer's dining experience [98] and it speaks about the perception of customers towards restaurants [99][100], institutional foodservice [101], and online food delivery services [102] [31]. The quality of food motivates a customer to choose a restaurant [103]. Therefore, food quality is an important element for customer satisfaction [104][97][105][98]. In addition, proper packaging of food items to be delivered is essential, as it attracts customers' attention and generates a positive brand image. Packaging protects food from infection, maintains proper food temperature, and keeps beverages from spilling. When done correctly, packaging aids in maintaining the food's quality and improves the customer's entire experience.

f. e-Service Quality: For the service industry, quality of service is very important to increase customer satisfaction. Prior studies have examined online food delivery systems, website e-service quality as a one-dimensional construct and have found, there is a favourable link between e-service quality and customer satisfaction [31]. Online service quality has four elements perceived control, customer service, service convenience, and service fulfilment [106][107][108]. Excellent customer service is the most critical instrument for sustainable business development; therefore, customers grievances related to poor food quality, faulty packaging, delayed delivery, wrong delivery, etc must be resolved in priority by the customer service representative. Timely redressal of such problems related to online food delivery will enhance customer loyalty and satisfaction. In addition to grievance redressal, online food delivery aggregators must ensure service fulfilment that is placed order must be delivered properly to customers doorsteps.

VI. FINDINGS & SUGGESSTIONS FOR IMPROVEMENT OF THE STUDY

The findings of the study are as follows:

1. Factors such as quality of the food, e-service fulfilment and customer service will impact on positive perception of customers. Hence, favourable perception of customers will lead to customer satisfaction. The study found that online food deliverers should ease the selection process by right information in their website. Further, it is essential to monitor food quality to positively influence customer satisfaction. Therefore, proper care must be taken to preserve food and temperature while in transit.
2. It is found, healthier and nutritional value the food gives, better is the perceived value among customers. Customers these days have become classier in their food demand, therefore they expect meals that are customized with their dietary limits and personal likings. Therefore, online food delivery services should give options for the customers to order food as per one's requirements.
3. Customer's fear sharing their personal details on the online food delivery apps owing to the risk of personal data theft. Therefore, privacy and safety measures must be ensured to influence more orderings.
4. Customers especially the older generation find it difficult with technology access therefore, they prefer not to order food through online portals with the fear of complexity in operating the apps. A simple process and easy description may assist in helping customers who are not techno-friendly. Certain options can be introduced like integrating a call button into the mobile application, support e-mail address, or integrating a chatbot.
5. Customer experience regarding food quality, service, or inconvenience for payment must be addressed quickly. Many customers do not come in contact with customer service representative unless there is some issue. It is necessary that business representative have to be easily accessible if customers experience an issue with either placing an order or the delivery of quality of the food. If the experiences turn to be negative, then it will affect their post usage decisions. The fidelity of the food deliverer is having a lot of bearing on customer perception.
6. Service fulfilment quality is an important factor to be considered for online food ordering companies. Customers expect to receive the food items as per the order placed. Wrong food items if delivered will create dissatisfaction towards the service provider and such an issue takes time to resolve, as placed order cannot be immediately remade due to a terrestrial distance.
7. Hedonic motivation is an essential component in determining a positive attitude and purchase intention. This indicates that people with higher hedonic drive have a more positive view of OFD services, which leads to a desire to place an order. Users are more likely to have a favourable attitude and utilize OFD services when they believe these services may give enjoyment and pleasure.
8. The simplicity of usage of apps and their utility saves time which increases attitude. Users are more inclined to use online food delivery services if they can save time.
9. Ease of searching and comparing different prices on the internet, price wars may flare up. As a result, when choosing between two suppliers, buyers prefer to go for the lower-priced food product.
10. The appropriate temperature maintained by the food packaging is vital to keeps the meals intact. Therefore, online food delivery service provider must invest in high-quality packaging with the use tight-fitting lids to keep the dishes safe and tamper-proof and to avoid beverages from spilling.
11. Vegans who eschew eating meat products for health, social or environmental reasons find it difficult to place order on online food delivery platforms as some restaurants aren't vegetarian or vegan-friendly, and others may not advertise their vegetarian or vegan alternatives. Therefore, online food delivery apps must ensure proper information on their website of partner restaurants providing vegan food with proper delivery to build customer trust and loyalty.

VII. GAPS IDENTIFIED IN THE STUDY

- a. Loyalty is an important contributing factor towards online food delivery services. Prior research conducted in Bandung, Indonesia, used a casual effect relationship with a cross-sectional method which did not explore the factual association between the variables. Therefore, a robust model such as SERVQUAL is required for a future study incorporating the constructs like image, trust, and involvement with socio-demographic dimensions influencing customer satisfaction and loyalty toward online food delivery services with more accuracy using longitudinal data to find an association between different variables for a larger population [31].

b. Information and Communication Technology (ICT) apps and individual online purchase both of them are critical in the trade process. Individual perception towards online food delivery varies according to age, income, education, ethnicity, and sex; a favourable attitude toward technology. This conclusion has been arrived in a study polled 177 online food ordering clients, between the ages of 18 and 24 as a student group, or between the ages of 24 and 35, indicating that they were office workers [41]. There is a need to find the perception of usage of technology to different categories of customers along with customer choices across different demographic groups.

c. Online food delivery platforms are booming; they are obtaining a larger number of orders, offering a range of services employing advanced technology. This has resulted in an additional challenge to health nutrition policymakers. There is a need to find the different strategies adopted by online food delivery services for providing healthy, diet-based, and good quality food and the perception of consumers towards nutritional benefit they receive through online food delivery services.

d. The two issues- perceived control and perceived convenience are important to app users and non-users of app, but it is found that app non-users require a better need for personal interaction as they faced technology anxiety in comparison to the users of the online food delivery services. From the customer's point of view, it is required to know how they perceive convenience and personal interaction while ordering food through online services.

e. Further studies can be conducted to find the influencing dimensions for the consumer to order food online. There is a gap to understand the integration of various variables, which needs to be critically evaluated such as a change in lifestyle, gender, trust, social groups influence, pricing incentives, service quality, choices, health benefits, time and price saving orientation, perceived threat, and attitude influencing customer for purchase and behavioural intentions.

VIII. CONCLUSION

With the rise in internet usage and change in lifestyle of people, online ordering of food delivery systems has become an emerging sector. Consumers are driven to buy online not only because of the convenience but also because of the wide range of options such as greater access to precise information, and lower costs. This study is noteworthy since it provides a comprehensive assessment of the literature on consumer perception towards online food delivery services. The study made a systematic review of different scholarly papers which focused on exploring the driving forces for consumer perception towards online food delivery services. Many key variables associated with customer perception were studied but they require further in-depth analysis. The literature review confirmed that this paper has a theoretical basis and that it contributes to the existing body of knowledge and current research. Future studies can help online food delivery service providers to focus on the aforementioned factors to break into the untapped e- market.

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