CONSUMER BEHAVIOR AND SUSTAINABILITY IN THE ONLINE FOOD DELIVERY INDUSTRY: A COMPREHENSIVE REVIEW (2015-2024)

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ABSTRACT

The rapid growth of the online meal delivery industry, which is expected to reach USD 133.7 billion by 2026, has dramatically altered consumer behavior and market dynamics. This research investigates the changing consumer behavior toward online meal delivery services, with a specific emphasis on sustainability issues. This study conducts a comprehensive assessment of literature from 2015 to 2024 to analyze the variables influencing customer decisions, the impact of online reviews and ratings, consumer preferences for sustainable practices, and the sustainability practices used by the online meal delivery industry. Our findings indicate that, while convenience, perceived value, and technological advancements continue to influence consumer purchases, there is an increasing emphasis on environmental sustainability. Consumers are increasingly favoring sustainable food delivery methods, such as eco-friendly packaging and local sourcing. Meanwhile, the industry is reacting with innovations to reduce its environmental impact, such as biodegradable packaging and efficient delivery routes. This study emphasizes the necessity of connecting corporate practices with consumer expectations for sustainability, providing insights for researchers, policymakers, and practitioners seeking to promote environmentally friendly innovation in this rapidly increasing area.

1. INTRODUCTION

The online food delivery market has expanded rapidly in recent years. The global market is estimated to reach USD 133.7 billion by 2026, representing a 9.6% compound annual growth rate (CAGR) over 2021 (Mordor Intelligence, 2023). The digitalization of the food sector has fundamentally altered how consumers order meals, promising enhanced convenience, accessibility, and choice for customers (Peng et al., 2023). Understanding consumer behavior and emotions has become

crucial for establishing a competitive advantage in this ever-changing industry (Saad, 2021). Previous studies have highlighted the significance of service quality, meal diversity, and food safety in determining customer satisfaction and loyalty (Ali et al., 2023). However, environmental sustainability has become a critical issue for corporations to solve (Cheng et al., 2022). Growing worries about packaging waste have prompted the food delivery business to embrace more ecologically responsible procedures (Arunan & Crawford, 2021). Against this backdrop, this paper provides a thorough evaluation of academic research on online meal delivery and related customer perspectives from 2015 to 2023. The purpose of this study is to critically assess significant shifts in customer attitudes and sustainability concerns in this industry. This will provide scholars, policymakers, and practitioners with valuable theoretical and practical insights into fostering environmentally friendly innovation in the rapidly increasing sector in a timely manner that is consistent with customer psychology.

2. CONSUMER BEHAVIOR IN THE ONLINE FOOD DELIVERY INDUSTRY

Technological innovations and mobile applications have transformed the online food delivery industry, dramatically altering consumer expectations and behaviors. This transition is mostly due to improved user interface design, tailored experiences, and the influence of social proof on customer decisions (Sia et al., 2024). According to research, app usability and aesthetic appeal are important factors in customer satisfaction and loyalty (Shankar et al., 2017; Lee et al., 2019), while personalized recommendations have been proven to enhance order frequency by improving the user experience (Riegger et al., 2022; Jusuf, 2023). Furthermore, user reviews and ratings are effective methods for increasing trust and influencing potential buyers (Wang & Somogyi, 2018; Kim et al., 2016). The use of advanced analytics and machine learning has allowed for more personalized products based on individual tastes and purchasing histories. Gamification techniques have also been used to increase consumer engagement by offering awards and interactive aspects to encourage repeat business (Bitrián et al., 2021; De Canio et al., 2021). These advancements highlight a move toward more engaging and interactive consumer experiences, which use technology to not only meet but anticipate consumer wants (Arshad et al., 2015; Mitra & Debnath, 2023).

3. FACTORS INFLUENCING CONSUMER DECISIONS

Building on Jawabreh et al. (2023), this section investigates the factors influencing consumer decisions for online food delivery, with a focus on sustainability (Li et al., 2020). Perceived value, convenience, and environmentally responsible activities all influence preferences and loyalty. The importance of sustainability and ethical behaviors in brand loyalty is becoming more widely recognized (Kim & Johnson, 2016; Mahajan et al., 2023). Convenience is still an important factor, with time savings and simplicity of use impacting preferences (Vatamanescu et al., 2017; Prasetyo et al., 2021). Perceived value, which includes quality, price, and service satisfaction, is critical for driving loyalty (Suhartanto et al., 2019; Hong et al., 2023). Eco-friendly activities have a favorable impact on decisions, matching the growing trend of supporting sustainable firms (Sia et al., 2024; Chen and Lee, 2022). Furthermore, social factors like word-of-mouth and internet reviews have a significant impact on customer behavior (Schwichtenberg, 2015; Jun et al., 2021). Technological developments

and personalized marketing improve user experiences and influence decisions (Roozen and Raedts, 2018; Su et al., 2022). This complicated consumer landscape underscores the importance of taking a comprehensive approach to meeting and understanding the changing demands and preferences of online meal delivery service users (Al-Youssef, 2015; Hoang & Le Tan, 2023).

4. IMPACT OF ONLINE REVIEWS AND RATINGS

Meta-analyses have shown that online customer reviews have a considerable impact on platform adoption as well as meal or restaurant choices. Higher ratings link with higher order conversions, although a large number of reviews indicate widespread consensus, lowering consumer risk perception (Wu et al., 2020; Luca, 2016). The difficulty of bogus reviews jeopardizes legitimacy, emphasizing the necessity for improved screening algorithms (Wu et al., 2020). The emotional content of reviews has a significant impact on consumer decisions; for instance, even if the overall rating is high, unfavorable comments can turn away potential customers. Authentic narratives in reviews increase trust and engagement (Sarma & Choudhury, 2015; Kim & Kim, 2020), whereas company replies to reviews are critical in retaining consumer trust and loyalty (Yuan et al., 2020; Miah et al., 2022). Visuals in reviews increase persuasiveness by presenting concrete evidence (Filieri et al., 2021; Tussyadiah & Park, 2018). The concept of social proof, in which popularity influences perceived quality, emphasizes the significance of successfully managing online reviews and ratings (Bi et al., 2017; Begho and Liu, 2020).

5. CONSUMER PREFERENCES FOR SUSTAINABLE PRACTICES

According to surveys, consumers are increasingly interested in sustainable food delivery options such as eco-friendly packaging and local sourcing, despite the continued importance of pricing, punctuality, and quality. Young customers enjoy the combination of sustainability and convenience (Kowalska et al., 2021). Increased environmental awareness is driving demand for transparency and sustainable practices in supply chains (Joshi & Rahman, 2015; Ali et al., 2021), with customers willing to pay extra for environmentally friendly items. Local sourcing is emphasized for its dual benefits of lowering carbon footprints and boosting local economies (Sander et al., 2021; Haines, 2021), while innovations such as biodegradable packaging are gaining popularity for their low environmental impact (Lakatos et al., 2021; Alamsyah et al., 2020). Digital platforms that promote sustainability have a substantial impact on consumer choices, highlighting the link between technology and sustainable practices (Rashid et al., 2024; Geng & Maimaituerxun, 2022). Social factors and the idea of "green loyalty" are critical in creating sustainable purchasing habits and building consumer loyalty to services that represent environmental principles (Nagar, 2015; Kalaiselvi & Dhinakaran, 2021; Kumar & Kaushik, 2020; Chen et al., 2020).

6. SUSTAINABILITY PRACTICES IN THE ONLINE FOOD DELIVERY INDUSTRY

The online food delivery industry is increasingly focusing on sustainability, implementing methods such as biodegradable packaging and optimal delivery routes using advanced analytics to reduce plastic consumption and carbon emissions (Li et al., 2020; Read et al., 2020; Chu et al., 2023). Furthermore, the promotion of plant-based

diets addresses health and environmental problems by lowering the impact of meat production (Viroli et al., 2023; Hallström et al., 2015). Efforts to promote responsible consumption include cutlery opt-in features, trash reduction (Ahmad et al., 2020; Wongprapinkul & Vassanadumrongdee, 2022), and the use of electric vehicles, which is backed by green legislation. Packaging innovations such as compostable materials and reusable containers demonstrate a growing commitment to environmental stewardship (Cammarelle et al., 2021). Critics argue for a systemic sustainability approach that addresses operational impacts and promotes a sustainable culture among consumers and the supply chain (Arunan & Crawford, 2021; Canitez, 2020; León-Bra et al., 2019; Djellal & Gallouj, 2016). A joint effort is required to considerably reduce the industry's environmental impact, indicating a trend toward more comprehensive sustainability initiatives.

- Environmental impact of food delivery services

A lifecycle analysis uncovers a wide range of environmental impacts linked to the operation of online meal delivery services. These include, but are not limited to, enormous packaging waste, high electrical usage, and the hidden expenses of aluminum manufacture. According to research, this sector accounts for more than 4% of urban transportation emissions, which is increasing (Moberg et al., 2019). Notably, packaging materials (mainly plastic, paper, and cardboard) account for up to half of the stuff in landfills. The accumulation of these items endangers both terrestrial and marine ecosystems, notably through the spread of microplastics and the leaching of toxic chemicals (Chen et al., 2021). Furthermore, eutrophication, which results from fertilizer runoff from agricultural practices used in food production, exacerbates the loss of aquatic biodiversity by encouraging excessive algae development (Delgado et al., 2020). This detailed analysis emphasizes the critical need to address the food delivery industry's numerous environmental concerns.

- Strategies to Minimize Carbon Emissions in Food Delivery Services

In response to rising climate-related concerns, experts advocate for the implementation of circular economy principles, the use of renewable energy sources, and increased supply chain transparency as critical strategies for reducing the carbon footprint associated with daily food delivery operations. Recommended measures include using packaging materials that are both sustainably sourced and fully recyclable, optimizing delivery routes through advanced digital logistics, transitioning to delivery fleets powered by electricity or human effort, implementing renewable energy solutions across all stages of the supply chain, introducing menu items based on plant or insect proteins, and using blockchain technology to verify environmental claims. Notably, innovative practices have been observed in the sector, such as Glovo, a Spanish startup that uses electric trikes for delivery services, and DeliverZero in Seoul, which has introduced bicycle messengers and bamboo food containers, demonstrating how these recommendations can be applied practically.

- Barriers and Prospects for Advancing Sustainability in Online Food Delivery:

Research has identified a number of barriers limiting the transition to sustainability in the online food delivery industry, including insufficient urban infrastructure and consumer reluctance to renounce convenience or incur additional prices (Cosme et al., 2022). Nonetheless, the shift in societal values, along

with the implementation of tough regulatory measures aimed at promoting a carbon-neutral future, creates opportunities for major environmental innovation. These innovations could be effortlessly integrated as core aspects in emerging economies prior to the creation of entrenched barriers (Rehman & Batra, 2022). Pioneering projects, such as Nuatan's use of agricultural byproducts to make biodegradable tableware and Demae-Can's investment in solar-powered delivery vehicles, highlight the early stages of exploring sustainable potential in this fast-growing sector.

7. CONCLUSION

This study delves deeply into customer behavior and sustainability in the online meal delivery industry, indicating a substantial movement toward environmental concerns among both consumers and businesses. The findings highlight the importance of sustainability in affecting consumer preferences and decisions in the online meal delivery business. Our findings show that factors such as app usability, tailored marketing, and, most importantly, sustainable policies are increasingly affecting customer decisions. The increased customer demand for eco-friendly practices, together with the industry's innovative approaches to sustainability, such as biodegradable packaging and electric delivery vehicles, point to a promising trend for mitigating environmental repercussions. However, challenges persist, such as customer unwillingness to pay higher rates for sustainable services and the need for enhanced urban infrastructure to enable sustainable delivery models. Despite these impediments, the shift in social attitudes toward environmental sustainability creates a potential for significant innovation in the industry. This study adds to the body of knowledge by identifying changing customer expectations and corporate practices regarding sustainability, providing useful insights for supporting environmental innovation in the booming online meal delivery market.

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