

Challenges Faced by Restaurants with Food Delivery Applications: A Critical Review of the Literature

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Abstract

The food delivery market in India is rapidly growing with agile lifestyles, especially post-pandemic. With cheaper mobile data and better digital infrastructure, the technology is disrupting a lot of traditional business models. With this, the food delivery aggregators do seem to be a boon to many stand-alone restaurants which got them a digital presence without any initial investments on the websites, APPs and marketing. However, this technological advancement has also introduced a range of challenges for restaurants. This research paper critically reviews the existing literature on the challenges faced by restaurants with food delivery applications. Experts from their papers have reiterated the importance and benefits of food delivery aggregators to restaurants. The paper explores the detrimental impact of delivery applications on restaurant operations, customer relationships, financial aspects, and the overall industry landscape. By analysing and synthesizing the findings from various studies, this paper aims to provide valuable insights for restaurant owners, managers, and policymakers to address and overcome the challenges posed by food delivery applications.

Keywords: Restaurant Business, Quick Service Restaurants, Online Food Delivery Applications, Challenges faced by restaurants.

Introduction

The food industry has witnessed a profound transformation with the advent of food delivery applications, especially post-pandemic. These technological platforms have revolutionized the way customers interact with restaurants, offering unprecedented convenience and accessibility. Food delivery applications have become a ubiquitous part of modern living, allowing consumers to order their favourite dishes from the comfort of their homes, offices, or even while on the go. While this trend has undoubtedly benefited customers, it has also brought about a myriad of challenges for restaurants seeking to adapt to this new digital landscape.

The increasing popularity of food delivery applications has presented both opportunities and obstacles for the restaurant industry. On the one hand, it opens a broader customer base and the potential for increased revenue streams. At the same time, the integration of restaurants into these platforms demands significant operational adjustments, altering traditional business models and introducing complexities that must be carefully navigated.

This research paper embarks on a critical review of existing literature to delve into the challenges faced

by restaurants with food delivery applications. By examining a wide array of academic studies, case analyses, and industry reports, this paper aims to gain a comprehensive understanding of the multifaceted challenges that restaurants encounter in this digital era.

The subsequent sections of this paper will delve into various aspects of the challenges faced by restaurants with food delivery applications. It will explore the operational challenges that arise due to increased order volume, the logistical complexities of managing deliveries, and the need for menu optimization to cater to the delivery model. Furthermore, the impact of food delivery applications on customer relationships will be assessed, particularly in terms of reduced direct customer interaction and the growing dependence on third-party delivery aggregators.

In addition to operational and customer-related challenges, this paper will also examine the financial implications of food delivery applications for restaurants. Commission and fee structures levied by third-party delivery platforms can impact profit margins significantly, and the fierce price competition in the online food delivery market may necessitate difficult pricing decisions for restaurant owners.

Furthermore, this research will explore how the rise of food delivery applications has influenced the overall landscape of the restaurant industry. Ghost kitchens have emerged as a novel concept, thriving solely on delivery and takeout orders, while small and independent restaurants may struggle to compete with larger chains that can afford to invest heavily in online delivery infrastructure.

To address these challenges effectively, restaurants have been forced to reevaluate their business strategies continually. From developing in-house delivery services to adopting a hybrid model combining dine-in, takeout, and delivery options, restaurant owners must adapt to these changing dynamics to maintain competitiveness and profitability. Negotiating commission rates and seeking better terms from third-party delivery aggregators may also become essential strategies for restaurants looking to thrive in this evolving digital environment.

Objective

- To investigate the challenges encountered by restaurants in establishing and maintaining strong customer relationships while utilizing food delivery aggregators.
- Identify challenges and limitations faced by restaurants in implementing effective omni-channel food delivery practices and explore potential solutions.

Methodology

The research paper follows a critical review of the literature approach. Extensive searches were conducted in academic databases, including Google Scholar, Scopus, PubMed, libraries, and other reputable sources. To identify relevant studies, we then performed a library search of journals in the field of hospitality, tourism & Quick Service Restaurants: (1) International Journal of Hospitality Management; (2) Journal of Retailing and Consumer Services; (3) International Journal Of Research And Analytical Reviews; (4) Atithya: A Journal of Hospitality; (5) International Journal of Contemporary Hospitality Management, etc. It should be noted that each online database has its search engine features. Hence, the search string had to be modified and adapted for each online database. To do so, our search was recorded in a separate text that includes the following details: source category, source name, search method and date of the search for each online database.

Review of Literature

The online food delivery system has undoubtedly provided restaurants with increased exposure in the business landscape. However, this exposure has also intensified competition, as multiple outlets find their business territories overlapping in the penetrated areas. The online delivery apps primarily focus on luring customers with attractive discounts, leading to a diversion of regular patrons to other restaurants. This, in turn, leaves customers feeling deceived, as the restaurants they once preferred are now perceived as expensive.

Initially, the online food delivery system was welcomed warmly by the food service industry, especially for its convenience factor catering to busy individuals, bachelors, differently abled and isolated senior citizens. However, as the online delivery platforms delved deeper into the market and conducted extensive market surveys, their true impact on restaurants and consumers began to surface.

When these delivery platforms were first launched, they relied heavily on well-established and renowned food service outlets in the city. Restaurants were enticed by the promise of increased business and revenue through online food delivery. Unfortunately, this proved to be a double-edged sword for both restaurants and customers. As online partners penetrated the market, some of them established an oligopoly, gaining significant control over the industry. Most food delivery apps and partners impose exorbitant charges, often up to 30% of the total food bill, substantially reducing the restaurant's profit margin while adding to the customer's expenses.

This scenario leaves customers with minimal benefits while restaurants struggle with narrow profit margins. In the absence of regulatory authority oversight, this situation poses a threat to small and medium-sized restaurants, slowly squeezing their viability in the market (Prof. Ajim Shaikh, 2021).

1. Operational Challenges:

Food delivery applications introduce several operational challenges for restaurants. These challenges include:

1.1 Surging Demand:

The integration of restaurants into food delivery platforms often leads to a surge in the number of orders. Managing this increased order volume efficiently while maintaining the quality of food and timely deliveries can be a daunting task. Studies show that this sudden influx of orders can strain restaurant operations, potentially leading to delayed deliveries and compromised food quality (Shantashree Das, Debomalya Ghose, 2019). Restaurants must adapt their kitchen inventory management and delivery processes to handle the higher order volume efficiently.

1.2 Supply Chain Challenges:

Ensuring smooth coordination between restaurant staff and delivery personnel is vital for providing a seamless customer experience. However, mismanagement of logistics and delivery can lead to delayed orders and dissatisfied customers. However, research highlights that coordinating delivery personnel and managing multiple orders simultaneously can be challenging for restaurants, leading to operational bottlenecks and dissatisfied customers (Marlin W. Ulmer, Barrett W. Thomas, Ann Melissa Campbell, Nicholas Woyak, 2020). Proper training and robust delivery management systems are essential to mitigate these challenges.

1.3 Menu Adaptation:

Restaurants may need to adapt to new menus to suit the delivery model. Certain dishes may not travel well, affecting their taste and presentation, and necessitating menu adaptations. Research suggests that

restaurants need to carefully curate their delivery menus to ensure that the delivered dishes retain their quality and appeal (Goh See-Kwong, NG Soo-Ryue, Wong Shiun-Yi, Chong Lily, 2017).

2. Customer Relationship Limitations:

Food delivery applications have a direct impact on the restaurant's relationship with its customers:

2.1 Reduced Personal Interaction:

With orders placed through delivery apps, the opportunities for face-to-face interactions between restaurants and customers decrease, potentially affecting customer loyalty and feedback. Studies indicate that limited personal interaction may lead to decreased customer engagement and hinder the development of a strong brand-customer relationship (Sheryl E. Kimes, 2011). Restaurants need to explore alternative ways to engage and retain customers, such as personalized marketing and loyalty programs.

2.2 Dependency on Aggregators:

Many restaurants rely heavily on third-party delivery aggregators for their online orders. This dependency can result in a loss of control over branding, customer data, and service quality (CHA Seong-Soo, SEO Bo-Kyung, 2020). Studies suggest that restaurants must strike a balance between leveraging third-party aggregators for increased visibility and establishing a direct connection with customers to retain their loyalty (Jignesh Shah, 2023).

3. Financial Challenges: Food delivery applications can also have financial implications for restaurants.

3.1 Commission and Penalties:

Third-party delivery platforms often charge significant commissions and fees for each order, affecting the profitability of restaurants (Darryll Rose Dano; Ashok Chopra, 2021). Studies show that these costs can be particularly burdensome for small and independent restaurants, leading some to question the long-term financial viability of using third-party delivery services (Kabir Ahuja, Vishwa Chandra, Victoria Lord, and Curtis Peens, 2021).

3.2 Price war:

The competitive nature of the online food delivery market may lead to a race to the bottom in pricing, impacting the profit margins of restaurants (Muhammad Imran Majeed, Prof. Dr Rosli Mahmood, Dr. Sahar Munir, 2022). Research highlights the need for innovative pricing strategies that balance competitiveness with maintaining financial sustainability.

4. Impact on the Restaurant Industry:

The widespread adoption of food delivery applications has reshaped the restaurant industry in various ways:

4.1 Rise of Ghost Kitchens:

Ghost kitchens, which focus solely on delivery and takeout orders, have proliferated due to the increasing demand from delivery applications. These pose a threat to traditional restaurants that have lesser margins (Yong Azrina Ali Akbar, Wan Shahrul Aziah Wan Mahamad & Ramli Saad, 2022).

4.2 Survival of Small and Independent Restaurants:

Smaller and independent restaurants may struggle to compete with large chains that have the resources to invest heavily in online delivery infrastructure (Felix Martinez, Jessica, 2023).

5. Mitigation Strategies:

To address the challenges posed by food delivery applications, restaurants can adopt several strategies:

5.1 In-House Delivery Services:

Research indicates that restaurants implementing in-house delivery services experience improved control over their delivery logistics (Benhardy, K. A. & Ronadi, M., 2020). By directly managing delivery personnel and processes, restaurants can better ensure timely deliveries and optimize route planning. The ability to oversee the entire delivery process can lead to enhanced efficiency and customer satisfaction. Developing in-house delivery capabilities allows restaurants to reduce their reliance on third-party delivery aggregators, thereby mitigating the impact of high commission fees and excessive competition (Charlene Li, Miranda Miroso and Phil Bremer, 2020). This reduced dependence on third-party services may lead to improved financial stability and profitability for the restaurant (Lau Teck Chai and David Ng Ching Yat, 2019). Studies highlight that in-house delivery services enable restaurants to maintain brand consistency throughout the delivery process. This consistency enhances the customer experience by aligning the delivery service with the restaurant's overall brand identity, resulting in a positive and cohesive customer journey. Developing in-house delivery capabilities allows restaurants to collect valuable customer data and insights directly from delivery orders (Goh See-Kwong, NG Soo-Ryue, Wong Shiun-Yi, Chong Lily, 2017). Analyzing this data can provide restaurants with valuable information about customer preferences and behaviour, enabling them to tailor their offerings and marketing strategies accordingly.

5.2 Hybrid Model:

A combination of dine-in, takeout, and delivery services can help restaurants diversify revenue streams and cater to different customer preferences. Literature suggests that adopting a hybrid model allows restaurants to diversify their revenue streams (Rezai & Teixeira, 2020). By offering multiple delivery options, including in-house delivery & and third-party delivery, restaurants can cater to a broader customer base and for order delivery (Huiwen Jia, Siqian Shen, Jorge Alberto Ramírez García, Cong Shi, 2022).

5.3 Negotiating with Aggregators:

Literature suggests that negotiating lower commissions with food delivery aggregators can lead to substantial cost savings for restaurants (Pnina Feldman, Andrew E. Frazelle and Robert Swinney, 2022). By reducing commission rates, restaurants can retain a higher portion of each order's revenue, ultimately increasing profitability. Negotiating more favourable commission rates can provide restaurants with a competitive edge over their peers (Ehsan Bolandifar, Zhong Chen, Jinxin Yang, Weihua Zhou, 2020). Lower commission fees allow restaurants to offer competitive pricing to customers while maintaining profitability. For smaller and independent restaurants with tighter profit margins, negotiated commissions can significantly impact their financial viability (Darryll Rose Dano; Ashok Chopra, 2021). Lower commissions enable them to participate in the food delivery market without compromising profitability. Successful negotiations can foster a more collaborative and mutually beneficial partnership between restaurants and delivery aggregators (Jack Collison, 2020). A fair commission agreement can enhance trust and cooperation between the two parties.

Conclusion

Food delivery applications have undeniably transformed the restaurant industry, providing both opportunities and challenges. This critical review of the literature highlights the operational, customer relationship, and financial challenges that restaurants face in the context of online food delivery. By

understanding and addressing these challenges, restaurant owners and managers can devise effective strategies to thrive in this rapidly evolving landscape. Policymakers can also play a role in creating a conducive environment for the sustainable growth of both restaurants and food delivery applications. Continued research and adaptation will be crucial to meeting the demands of this evolving sector and ensuring a positive future for the restaurant industry in the digital age.

Recommendations for future research –

The paper offers valuable insights into the current challenges and several areas for potential future research that can further enrich the understanding of this dynamic topic. Future research can incorporate other factors like Long-term Effects on Customer Loyalty; Sustainability and Environmental Impacts; Data Privacy and Ownership; Financial Viability of Delivery Models; Effect on Menu Innovation and Diversity; Regulatory and Policy Implications; Comparative Analysis of Global Food Delivery Markets; Customer Preferences and Behavior Changes; Strategies for Enhancing Restaurant-App Integration; Predictive Analytics for Demand Forecasting.

References

1. Prof. Ajim Shaikh (2021) “A study of negative effects of Online Food Delivery Platforms on Restaurants Revenue and Customer Relations in Pune City” *International Journal of Scientific Research in Engineering and Management (IJSREM)* Volume: 05 Issue: 07 | July – 2021
2. Feldman, Pnina and Frazelle, Andrew and Swinney, Robert (2022) “Managing Relationships Between Restaurants and Food Delivery Platforms: Conflict, Contracts, and Coordination” *Management Science*, Available at SSRN: <https://ssrn.com/abstract=3258739> or <http://dx.doi.org/10.2139/ssrn.3258739>
3. Dr. Mitali Gupta (2019) “A Study on Impact of Online Food delivery app on Restaurant Business special reference to Zomato and Swiggy” *IJRAR- International Journal of Research and Analytical Reviews* [VOLUME 6 I ISSUE 1 I JAN. – MARCH 2019]
4. Shantashree Das, Debomalya Ghose (2019) “Influence Of Online Food Delivery Apps On The Operations Of The Restaurant Business” *International Journal Of Scientific & Technology Research* Volume 8, Issue 12, December 2019
5. Bolandifar, Ehsan and Chen, Zhong and Yang, Jinxin and Zhou, Weihua (2022) “When Should Restaurants Subsidize Online Platforms? The Impact of Delivery Agents”. Available at SSRN: <https://ssrn.com/abstract=4092150> or <http://dx.doi.org/10.2139/ssrn.4092150>
6. Yong Azrina Ali Akbar, Wan Shahrul Aziah Wan Mahamad & Ramli Saad (2022) “Ghost Kitchen” FBM INSIGHTS Faculty of Business and Management Universiti Teknologi MARA Cawangan Kedah
7. Sheryl E. Kimes (2011) “The Current State of Online Food Ordering in the U.S. Restaurant Industry” *Cornell Hospitality Reports*, Vol. 11, No. 17 (September 2011)
8. Marlin W. Ulmer, Barrett W. Thomas, Ann Melissa Campbell, Nicholas Woyak (2020) “The Restaurant Meal Delivery Problem: Dynamic Pickup and Delivery with Deadlines and Random Ready Times.” *Transportation Science* 55(1):75-100.
9. Benhardy, K. A., & Ronadi, M. (2020). First-party and third-party food delivery apps, which is better in Indonesia?. *JOURNAL OF BUSINESS STUDIES AND MANGEMENT REVIEW*, 3(2), 32-38. <https://doi.org/10.22437/jbsmr.v3i2.9708>

10. Lau, Teck-Chai & ng, David. (2019). "Online Food Delivery Services: Making Food Delivery the New Normal" *Journal of Marketing Advances and Practice* 1. 62-77.
11. Jack Collison (2020) "The Impact of Online Food Delivery Services on Restaurant Sales" *Department of Economics, Stanford University*
12. D. R. Dano and A. Chopra, "Impact of Delivery Apps Commission Rates on U.A.E Restaurants," *2021 International Conference on Computational Intelligence and Knowledge Economy (ICCIKE)*, Dubai, United Arab Emirates, 2021, pp. 273-278, doi: 10.1109/ICCIKE51210.2021.9410736.
13. Baozhuang Niu, Qiyang Li, Zihao Mu, Lei Chen, Ping Ji (2021) "Platform logistics or self-logistics? Restaurants' cooperation with online food-delivery platform considering profitability and sustainability" *International Journal of Production Economics*, Volume 234, 2021.
14. Cortney L. Norris, Scott Taylor Jr and D. Christopher Taylor (2021) "Pivot! How the restaurant industry adapted during COVID-19 restrictions" *International Hospitality Review* Vol. 35 No. 2, 2021
15. Prachi Hajare Wani, Nandkishor Sarode (2019) "Challenge in the Restaurant Business" *Atithya: A Journal of Hospitality* 5(1)2019, 43-46
16. Madhu Kabra and Swapnapriya Sethy (2019) "Consumers and Restaurant Owner's Perception towards Online Food Ordering and Delivery Services" *Comquest JDBI Journal of Commerce*
17. Taru Saxena & Aviral Saxena (2020) "Impact of E-Commerce on Food & Beverage Industry" *Conference Proceedings 2020 -IHM Bhopal*
18. Poerava Brodien Hapairai, Bryan Tishmack (2020) "Restaurants' Partnering Behavior with Third-Party Online Food Delivery Services" *Culture, People and Technology: The Driving Forces for Tourism Cities Proceedings of 8th ITSA Biennial Conference 2020*
19. Rainer Alt (2021) "Digital Transformation in the Restaurant Industry: Current Developments and Implications" *Journal of Smart Tourism* Vol. 1 No. 1 (2021) 69-74
20. Muhammad Azman Ibrahim , Rafiatul Adlin Hj Mohd Ruslan , Nor Harlina Abd Hamid , Mohamad Fariz Bin Abdullah (2022) "The Impact Of Online Food Delivery Services On The Financial Performance Of Restaurant Businesses In Malaysia" *Journal of Entrepreneurship, Business, and Economics*, 2022, 10(2S2), 55–70.
21. Jack Shenker (2021) "They're stealing our customers and we've had enough': is Deliveroo killing restaurant culture?" *The Observer Publication*.
Dr. Chandan Gupta, Dr. Pradeep Joshi (2020) "Restaurants In India: Facing The Threat Of Online Delivery Platforms" *International Journal of Management (IJM)* Volume 11, Issue 5, May 2020
22. Goh See-Kwong, NG Soo-Ryue, Wong Shiun-Yi, Chong Lily (2017) "Outsourcing to Online Food Delivery Services: Perspective of F&B Business Owners" *Journal of Internet Banking and Commerce*, August 2017, vol. 22, no. 2.
23. Jignesh Shah (2023) "In-House V/S Third-Party Food Delivery System: Which Is Best For Restaurant?" <https://www.foodiv.com/in-house-vs-third-party-delivery/>
24. Darryll Rose Dano; Ashok Chopra (2021) "Impact of Delivery Apps Commission Rates on U.A.E Restaurants" *AgEcon Search Research in Agriculture & Applied Economics*
25. Kabir Ahuja, Vishwa Chandra, Victoria Lord, and Curtis Peens (2021) "Ordering in: The rapid evolution of food delivery" *McKinsey & Company Journal*
26. Jessica Felix Martinez (2023) "Online Food Delivery Platform Use By Restaurants" *Felix Martinez, Jessica, "Online Food Delivery Platform Use By Restaurants" (2023). Open Access Theses & Dissertations. 3791. https://scholarworks.utep.edu/open_etd/3791*

27. Charlene Li, Miranda Miroso and Phil Bremer (2020) “Review of Online Food Delivery Platforms and their Impacts on Sustainability” *Sustainability* 2020, 12, 5528; doi:10.3390/su12145528 www.mdpi.com/journal/sustainability
28. Lau Teck Chai and David Ng Ching Yat (2019) “Online Food Delivery Services: Making Food Delivery the New Normal” *Journal of Marketing Advances and Practices* Volume 1, Issue 1, 2019
29. Seong-Soo CHA, Bo-Kyung SEO (2020) “The Effect of Food Delivery Application on Customer Loyalty in Restaurant” *Journal of Distribution Science* Volume 18, Issue4, p5~12, Dec 2020
30. Huiwen Jia, Siqian Shen, Jorge Alberto Ramírez García, Cong Shi (2022) “Partner with a Third-Party Delivery Service or Not? A Prediction-and-Decision Tool for Restaurants Facing Takeout Demand Surges During a Pandemic.” *Service Science* 14(2):139-155.