Research on the Impact of Delivery Software on the Economic Development of Physical Catering in China

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Abstract. The role of delivery software in the development of economic, and physical catering in China has become quite profound in recent years. The topic under question is significant because it embraces the phenomenon of technology and consumer behavior, which, in turn, implies the need for traditional restaurants to move in the direction of changing circumstances. However, the pandemic sped up online food delivery growth. Thus, opportunities and challenges arose for the catering industry. Besides, delivery platforms can help increase sales volumes and expand market reach for a lot of food businesses; however, they can also intensify competition in the market space and erode profit margins. Delivering these results means we must understand that the use of delivery software in the catering sector not only leads to income growth but also requires businesses to adjust their approach strategically. Suggestions for the mitigation of these problems consist of embracing technology to bring about operational efficacy and creating service models that ensure customer engagement. Grasping both the role of delivery software and the balance of the catering field is critical for people who want to succeed in this competitive industry. This study not only fills in knowledge gaps and contributes to academic discourse but also represents practical implications for both restaurant owners and investors and serves as a stimulus for policymakers. China's catering industry is now transforming, with technological innovation as an important driver.

Keywords: Delivery Software, Economic Development, Physical Catering, China.

1. Introduction

Caterers' adoption of delivery apps has revolutionized the way food is served in this industry and has moved away from traditional dining habits. Reports indicate that in China, the online food delivery market has grown by more than 20% each year, with Meituan and Ele. me gaining the largest market shares among other notable players. These platforms have made dining more accessible, and this approach creates a new customer base by bringing new people into the restaurant. The facility by mobile app food ordering not only affects consumer interactions with food services but also has impacts on developing new business models like ghost kitchens, which only serve for delivery.

Covid-19 pushed more restaurants and shops toward using delivery services, and they quickly switched to online platforms to avoid going bankrupt. From survey results, 73% of restaurants indicated their sales went up from delivery channels during the lockdown, a piece of evidence that technology played a big part in sustaining the continuity of business. Ultimately, these revolutionary software instruments are opening new sales opportunities for businesses, and at the same time, they are highlighting burdens, such as increased competition and profit margins. The economic effects of these variations are rather great.

Digital emergence has played a role in job creation, with the industry creating jobs in logistics, customer services, and tech development. However, traditional restaurants must solve problems that arise from the digital revolution. The recruiting of new technologies can be quite costly, depending on the scale of operations, which may result in decreasing profits, especially in smaller establishments. Restaurants that use delivery software are analyzed by Wang and Zhang to see what efficiencies they gain from it [1]. It has been revealed that these platforms increase consumer satisfaction since they tend to help speed up the order processes and improve overall service quality, which later leads to higher sales.

Zhang emphasizes the role of food delivery services in new jobs for the sector. Their research showed that these platforms have been central to achieving sales growth, and at the same time, new jobs appear in roles related to logistics and support services [2]. Li scheduled out shifting consumer behavior, which included shifting toward online food ordering, omnichannel, and emphasizing convenience as the main driver [3]. This engineered changes that programs of restaurants have to act with the already automated consumers. Chen threw light on how digital transformation put traditional restaurants in challenge [4]. His findings indicate that although delivery software generates amelioration, it causes a sturdy rival, resulting in changes in the current business model.

Although the existing literature has highlighted several aspects, there are still glaring shortcomings, particularly in terms of research that gives a comprehensive view that captures both the pros and cons of online delivery applications. Most studies essentially concentrate on either operational efficiencies or consumer behavior and tend not to look deeply into the wider economic implications and the challenges that come with the technological shift. Unlike the rest of the papers in the field, this essay attempts to cover this void through the provision of a generalized examination of how the catering market is shaped economically and operationally by delivery software.

Through this research inquiry, the study will begin by identifying the economic development advantages, where bringing on board the delivery software boosts sales, enlarges the customer base, and promotes operational efficiency. In the second place, it will show the problems that purely traditional restaurants encounter, like the increasing competition and retaliating attacks. Last, the evaluation will culminate in an overall synthesis of these findings, seeking to offer a neutral view supported by a data-based framework of thought for the industry.

2. Case Description

In the past 10 years, the catering industry in China has been witnessing tremendous development and transformation while becoming one of the weights in the economic body. By 2022, the catering industry market value in China hit approximately 4.7 trillion RMB (roughly 700 billion dollars), according to data from the Chinese Ministry of Commerce. This can be attributed to urbanization, changing consumption patterns, and the influence of information technology. Such growth is not only in terms of quantity but also in quality while the industry keeps pace with consumers' increased needs for better value.

One of the new main tendencies of the Chinese catering market is online food delivery. The streamlining of ordering food through platforms like Meituan and Ele.me has become a prominent part of people's everyday lifestyle. The reports found that around 60% of the urban population in China has ordered food online on at least a weekly basis. This trend has been even more supported by the outbreak of the COVID-19 pandemic which caused many consumers to rely on delivery services because dining out was no longer an option. Thus, many restaurants were turned to e-commerce sales which resulted in the majority of them reporting a rise in sales (73%) during the pandemic.

The industry embraces everything from upper-class restaurants to street food markets, all of which illustrate the plurality of Chinese delicacies. Such variation has been the cause of many enterprises adapting to changes to continue to be competitive. Traditional restaurants have even been developing innovative ideas and incorporating delivery software to keep up with these changes as well. Furthermore, ghost kitchens that serve only delivery and do not have an area for eating in person, which have been introduced, have contributed to the diversification of this market landscape.

While digital transformation has been a boon to the catering sector, it does bring along its fair share of challenges. Steep competition from both conventional restaurants that offer an alternative and new delivery companies has reduced profitability. As a result, many restaurants find themselves in a position where they have to drop prices or provide discounts to bring in clients, diverting potential profit, and potentially even affecting long-term sustainability. Smaller operators, in particular, tend to have a hard time investing in new technological advancements to stay permanently ahead in the market, creating bigger gaps in terms of market access.

The issue is worsened by labor shortages and increasing operation costs at every turn. Due to the growing e-commerce for delivery services, there is a greater need for sales and customer service positions. Nonetheless, the industry, with all its rapid changes, tends to be at the origin of having high turnover rates and creating difficulties when it comes to recruiting staff.

3. Analysis of the Problem

3.1. Positive Influences of Delivery Software

3.1.1 Improved market share and customer outreach

Delivery software is the most important thing for restaurants because it allows them to have a wider market reach. With platforms like Meituan and Ele.me, even small and medium-sized establishments can access a broader customer base beyond their immediate geographical location. This step reveals to us that even restaurants that normally don't have many customers because of geographical distance can start selling their food to people outside their area. This will obviously contribute to an increase in sales volume. More new customers also can become regular customers.

In particular, most people are busy with their lives and have to order food online, and this has greatly changed the way they consume. However, at particular times, some people prefer to eat outside rather than order food online. Such restaurants can create new cash streams with little marketing running. This expanding network not only helps in inventory management and operational planning but also paces up the supply chain using data analytics from such platforms in proper demand forecasting.

3.1.2 Enhanced productivity and lesser costs

Delivery software enables restaurants to accomplish all their operations with a great level of efficiency. The automation of order processing also reduces human error, and it turns out that the time needed for dispatch is even shorter, hence giving staff a chance to indulge in food quality and customer service. During peak hours, when the demand is at its height, this efficiency is especially helpful because it allows restaurants to handle more clients without compromising service quality.

However, owning delivery channels can also be less costly than traditional marketing. A key benefit of restaurants opting for delivering apps is that their marketing is done automatically by the applications, which not only showcase popular dishes but also promote their ratings and reviews among the users. This empowers businesses to have a better return on investment while at the same time improving their brand's positioning in the market.

3.1.3 Opening up of new commercial channels

On the other hand, the arrival of delivery service software has given rise to a new workflow model—ghost kitchens—a specialized facility aimed at cooking meals only for deliveries. This model provides a way for entrepreneurs to get around extra costs related to core dining space while offering more alternative ways to serve the growing demand for deliveries. Ghost kitchens help in network consolidation; they work in tandem with many brands, making better use of the resources and minimizing wastage.

Also, restaurants now try out delivery-only menus or among local farms whose businesses provide fresh and unique food, which in turn, enrich restaurant offerings. This variety serves the extra function of drawing a broader clientele and places companies in a better stand to gain from the trending health-conscious dining and local marketing.

3.2. Challenges Arising from Delivery Software

However, besides the multitude of advantages, the catering industry's software delivery will also face a significant challenge on the way.

3.2.1 Competition and profit margin flattened in increasing pressure on profit

The lunching cab market gets analyzed, and the easy entry into it functionally makes it less meaningful as its basis. However, conventional eateries that are not only losing their competition each other but also the whole restaurant scene to several new entities, like ghost kitchens and niche food brands, are affected. Although competition saturation can lead to low prices, which then translates to low markups of traditional businesses, whose market flexibility does not cover their operations at low prices, this also applies to new entrants.

As opposing tendencies become more acute, a restaurant is driven to take part in numerous promotions or similar activities, which will decrease their profit level. This environment is very difficult for small businesses because they do not have a stable financial standing to survive a period of losing margins or unprofitability.

3.2.2 Reliance on third-party platforms

Since online delivery software enhances markets, it does cause a dependence on outside platforms to tap buyers and make revenue. However, a different side of the coin is that it costs restaurants dearly; sometimes, about 20-30% of the money is paid by restaurants as commissions that may finally get eaten in their profits. Thus, this dependency can worsen and show that a restaurant cannot derive revenue from maneuvering unless it has value in delivery sales.

In addition, these food platforms often utilize embedded algorithms to pick and promote certain brands or schemes, which creates ambiguity among restaurant owners as to how they can make the product more visible to the customers. Such uncontrollability causes the weakening of positions and leads to stumbling when changing the platform dynamics.

3.2.3 Operational problems and labor concerns

As internet services and deliveries become more prominent in the economy today, many now encounter obstacles in their operations. The delivery designation management requires operational changes, for example, in the number of staff, training, and stock control. Businesses must be supported in a lot of ways, including driving services and customer service representatives. This increases the cost of labor.

Besides this, the problems that the industry encounters are high turnover and labor shortages regardless of area, especially in urban areas. The flight or loss of just a few employees could interrupt the operations and lead to poor service, which again perturbs customer satisfaction.

4. Suggestion

4.1. Strategies to Enhance Market Competitiveness

4.1.1 Delivery menu optimization

Restaurants must make it their top priority to provide dynamically updated delivery menus to maintain steady customer numbers and good sales. Using data from delivery platforms, these establishments may figure out what works best for them as an item both in terms of sales, and transport allowances, that serve to cater to what consumers want. This not only improves the client experience but also leads to a reduction in excess merchandise. Ultimately, this may result in good overall profitability. A study by Wang and Chen shows that menu design provides a key factor in the success of online food delivery services [5]. Such evidence from the literature leads to the conclusion that all the thoughtful adjustments do positively impact sales.

4.1.2 Foster customer loyalty

Customer loyalty is a key success factor that leads to continuous growth in a tough market. One way through which restaurants can work towards loyalty is through loyalty programs that reward repeat customers with discounts, special offers, or points that they can redeem for future purchases. Customizing marketing activity based on consumers' habits and choices along with them getting the full note and brand awareness. Liu and Zhao process research on the importance of customer loyalty in the food delivery sector, asserting that delivering staple revenues from loyal customers can help a business thrive [6].

4.1.3 Expand marketing channels

Using only a third-party service may prevent restaurants from being prominent with their brands and limiting their control over them. Cultural diversity will be achieved by expanding the marketing strategies of utilization to social media, email marketing, and offering their own delivery service. This method is not only effective in promoting brand awareness but can also help decrease the dilution of the brand by multiple media channels. Smith emphasizes that a complex marketing communication system helps to target customers, build brand awareness, and improve customer relationships through continuous communication [7].

4.1.4 Opt for data usage in decision-making

Devoting financial resources to data analysis may become a valuable process for restaurants due to the acquired data on the customer's preferences, spending habits, and market trends. These insights could be used in menu changes, promos, and adjusting operations so as to yield better business results. Zhang expounds on how data analytics can bridge the gap by providing actionable information that aids restaurants in making informed decisions that align with the desires of the target audience, and then enjoy a competitive edge [8].

4.2. Strategies to Address Challenges of Dependency and Operational Issues

4.2.1 Establish further relations with third-party platforms

To avoid the costs associated with third-party delivery, eateries should prefer cooperating with more than one platform. First, they can negotiate better commission rates, and second, by collaborating with locally owned delivery services, these restaurants are likely to enhance their profitability in the long run. Johnson argues that settlements can help restaurants diversify partnerships and increase the overall financial health of the business [9].

4.2.2 Enhance employee training and retention

Effective staff training is the precondition of high service quality and operational efficiency. Food establishments must put into place these programs to train employees in efficient customer handling and order management. Apart from that, providing competitive salaries and benefits may lead to staff retention in a high-turnover industry. Customer Service Southern Korea Lee and Kim found that applying recommended employee retention strategies can serve as an important basis for MRT-KP transportation service organizations to reach the highest customer satisfaction ratings [10].

4.2.3 Adopt consistency in operations management tools

Employing the latest operations management methods aids in bringing down barriers between different areas of restaurant functions such as order taking, inventory oversight, and staffing. Such systems permit real-time management and improvement that boosts overall operational performance. Another statistic appears to be Garcia and Martinez, who conclude that technology can play a key role in the company's own management strategies, which in turn may strengthen customer experiences and increase profits [11].

4.2.4 Optimize supply chain environment

Focusing on working with trusted suppliers during the supply chain is an imperative factor in having fresh and quality ingredients. To eliminate transportation expenses and improve consumers' feedback, restaurants can now partner with local suppliers and thus become responsive to consumers' demands. Chen and Wang identify that practical supply chain management occurs in the food sector where it addresses supply chain problems [12]. Localized shopping is one of the strategies to solve concerns of product quality and customer satisfaction.

4.2.5 Adopt flexible staffing arrangements

Restaurants may tackle the issue of understaffed and inconsistent labor demand by introducing flexible staffing arrangements. Thus, it may create some cross-training employees during busy times to fill different roles and need to use the part-time or on-call workers. Patel and Brown choose to embrace such flexible methods as they help make the organization more adaptive to change while accompanying a labor cost reduction [13].

5. Conclusion

Through exploring the impact of online delivery software on the economy of physical stores in China, this research yields noteworthy findings. With the implementation of delivery platforms, the restaurant business model has radically changed; it is not only attracting more customers but also creating wider markets for restaurants of different scales. The platforms have led to improved efficiency and cost-effectiveness by streamlining operations, in addition to eliminating expenses associated with the approaches of traditional marketing. On the other hand, the phenomenon of take-out restaurants has added its flavor to the market, addressing the demand for delivery and decreasing operational costs. Nevertheless, the issues are equally prominent. Fierce competition and dependence on digital platforms, in particular for small businesses that can endure less than others, which may struggle with operational expenses, may threaten the overall profit margins. These are mainly the difficulties faced by businesses by the delivery services, such as high turnover and labor shortage of the employees.

The importance of such research consists in the understanding of the way modern technology affects the traditional sectors of the economy. The implication of the presented findings is that they are useful for restaurant owners, investors, and policymakers who develop traditional business practices in a competitive environment. Therefore, the catering industry has no choice but to learn and adapt to technological changes as an important prerequisite for future prosperity.

However, this research is limited, particularly because it is based on secondary information, which is not complete enough to capture the thoughts of the restaurant owners. An effective solution for further studies would be to employ primary data collection methods like surveys or interviews so that such studies could be able to get deeper perspectives on consumers' points of view and the operational challenges. Through the exploration of these interactions, future work may discover a truer picture of the connection between the delivery software and the catering industry so that the appraisers can further shape the strategic approach for stakeholders.

References

[1] Wang, Xiaoming., & Zhang, Yahui. The Impact of Delivery Platforms on Restaurant Efficiency and Consumer Satisfaction in China. Journal of Food Service Management, 2021, 15 (3), 145-158.

[2] Zhang, Li. Job Creation in the Digital Era: Analyzing the Role of Food Delivery Services in the Catering Sector. International Journal of Hospitality Management, 2022, 29 (4), 362-375.

[3] Li, Jun. Shifting Consumer Behavior in the Age of Digital Transformation: The Case of Online Food Ordering in China. Journal of Consumer Research, 2020, 47 (2), 233-250.

[4] Chen, Huixin. The Challenges of Digital Transformation in Traditional Restaurants: Opportunities and Threats. Asian Journal of Business Research, 2019, 9 (1), 52-6

[5] Wang, Xiaoming, & Chen, Jie. Menu Design Strategies for Online Food Delivery. Journal of Culinary Science & Technology, 2022.

[6] Liu, Yifan, & Zhao, Yijun. Enhancing Customer Loyalty in the Food Delivery Industry. International Journal of Hospitality Management, 2021.

[7] Smith, Robert. Digital Marketing Strategies for Restaurants. Marketing Review, 2020.

[8] Zhang, Shanshan. The Role of Data Analytics in Restaurant Management. Journal of Hospitality and Tourism Technology, 2022.

[9] Johnson, Peter. Strategies for Reducing Third-Party Delivery Costs. Food Service Management Journal, 2023.

[10] Lee, Minji, & Kim, Jiho. Employee Training and Retention in the Restaurant Industry. Journal of Business Research, 2022.

[11] Garcia, Thomas, & Martineza, Alicia. Leveraging Technology for Efficient Restaurant Operations. International Journal of Operations & Production Management, 2021.

[12] Chen, Huiling, & Wang, Ling. (2020). Supply Chain Management in the Food Industry: Challenges and Strategies. Supply Chain Management Review, 2020.

[13] Patel, Rohan, & Brown, Jessica. Flexible Workforce Strategies in the Restaurant Sector. Journal of Service Management, 2023.