Influential Factors of Sales Revenue in the Fast-Food Industry

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ABSTRACT
Fast food refers to popular catering that commercial enterprises quickly supply. The fast-food industry, which can be processed quickly and eaten anytime and anywhere, has become increasingly important in the wake of COVID-19. The purpose of this article is to study the different factors that affect the sales revenue of the fast-food industry. This study took two approaches to examine the elements that influence sales income. It is from the perspective of affecting commodity prices, and on the other hand, it is to analyze the factors affecting sales. The results are generally in the whole fast-food industry, and it demonstrates two things. Firstly, market supply and demand affect price fluctuations, which affect the sales volume of the fast-food industry. Secondly, there are positive relationships between delivery systems, e-commerce, advertisement, and sales volume. Indeed, their relationships are particularly strong during the pandemic. The contribution of this work is presented as follows: it can help the catering industry to stay strong under the strike of the global pandemic.

Keywords: Fast-food industry, Price, E-commerce, Advertisement

1. INTRODUCTION

The fast-food industry has entered a mature stage. According to the data of the National Bureau of Statistics, in recent years, the market scale of China's catering industry has continued to grow, exceeding 2 trillion in 2011, 3 trillion in 2015, and 4 trillion in 2018, reaching 4.27 trillion, accounting for 4.7% of the national economic output value (figure 1).

According to the American Catering Association statistics in 2019, 90% of consumers like to go to restaurants, 44% of consumers ordered takeout through restaurant apps or websites in the past year, and 22% prefer restaurants with Internet services (figure 2) [1].

Figure 1 The Market Scale of China's Catering Industry Increased between 2011 to 2018

Figure 2 People Most Likely Go to Restaurants

Its growth momentum is not reduced, the overall level is improved year by year, its comprehensive level and development quality are continuously improved,
and the pace of development is accelerated. For China's fast-food industry, since the Reform and Opening-up, with the rapid development of China's economy and the continuous improvement of production capacity and people's income level, China has gone from the "difficulty of making a living" in the 1970s and 1980s to the "satiety" in the 1990s, and then to the continuous pursuit of eating characteristics, health, nutrition, and convenience since the 21st century. With economic development, China's fast-food industry has not only witnessed the improvement of people's living standards and consumption capacity. Still, it has also gradually become a pillar industry to promote consumption and benefit people's livelihood. Meanwhile, "Internet plus" has become an era trend, with network technology's rapid development and popularization. The fast-food industry has become the largest entrance under the Internet connection. It influences the whole industry, including the field of catering material supply. The entry of the one-stop trading platform of the Internet fast-food industry has changed the development of the traditional fast-food industry, moved the traditional offline transactions to the online, and accelerated the circulation of the industry and the popularization of services.

However, since the beginning of 2020, affected by the epidemic, many industries have been hit greatly. As one of the most severely damaged industries under the epidemic, the turnover of the fast-food industry fell sharply from January to February 2020. The core reason for the serious damage is the rent and employee salary that catering enterprises need to pay continuously. In this case, the whole catering industry has a large-scale cash flow crisis [2]. Therefore, combined with the current special environment, this article will focus on the epidemic's impact on the fast-food industry's sales revenue.

In addition, with the development of network technology and "Internet Plus", the food delivery industry has become popular. People are increasingly pursuing a convenient and fast lifestyle. Many young people and white-collar workers need takeout and meal delivery apps. Meal delivery services have also driven the growth of sales revenue of the fast-food industry. This article will also combine the application of network technology to analyze the extent to which these services can affect the sales revenue of the fast-food industry. Although these two factors have a great impact on the fast-food industry, according to the survey, people need to further understand the impact of these two factors on the fast-food industry. Since 2020, the epidemic is still spreading. In this environment, it's necessary to know whether takeout and meal delivery services can improve the sales situation of the catering industry and to what extent network technology can provide a positive impact on the sales revenue of the fast-food industry.

This article mainly studies the influential factors of sales revenue in the fast-food industry. In general, when making statistics on the influential factors of sales revenue, the article analyzes them from two aspects: one is the factor affecting price, the other is the factor affecting the sales volume. From the perspective of economics, the factors affecting the price include the relationship between supply and demand, the style or uniqueness of the product, and the influence of the company's strategy, while consumer psychology and publicity techniques affect the sales volume.

Therefore, this paper studies the influential factors on the sales revenue of the fast-food industry and studies whether the meal delivery service can recapture the lost sales revenue and cover the loss for the fast-food industry under the epidemic conditions. This article assumes that meal delivery software and services can save the fast-food industry, analyzes it from the aspects of consumer groups, policies, and publicity means studies the current situation and causes of the fast-food industry, as well as the opportunities and challenges faced by the catering industry, and looks forward to the development of the fast-food industry in the next few years.

2. MAIN BODY

2.1. Facts about the Fast-food Industry

The fast-food business began in the mid-twentieth century, with the first fish and chip restaurants opening in the United Kingdom in the 1860s, drive-through restaurants were popular in the United States in the 1950s, and Merriam–Webster recognized the word "fast food" in a dictionary in 1951 [3]. A quick-service restaurant (QSR) is a restaurant that serves meals at a cheap cost and usually offers rapid service, a limited menu, and limited table service; they are more often referred to as fast-food restaurants. In the United States, the quick-service restaurant sector is one of the most well-established in the world, many of the most well-known worldwide QSR brands began in the United States and now dominate a significant share of the industry, and fast-food restaurants may be found in every state in the United States [4]. Fast food was developed as a business strategy to serve larger employees, travelers, and wage workers who did not have time to sit and wait for a meal. According to the report, the Fast-Food Industry was worth $636 billion in 2020, and it is expected to rise by 4% in 2021. The CAGR for the Fast-Food Industry is expected to be 4% each year from 2016 to 2022. McDonald's has a significant share of the fast-food market [3].

With the development of technology, the fast-food industry has been affected by the e-commerce boom, which provides more opportunities for the fast-food industry, and then increases sales volume. Mobile
devices such as phones and tablets are used to make most e-commerce purchases in the fast-food industry. The value of internet meal delivery sales passed the $4 billion level in 2015 [5]. In 2018, the fast-food business in the United States stated that more than 35% of customers used online food delivery services regularly [6]. The QSR sector has been increasingly moving online in recent years, with the global revenue of the online meal delivery market reaching 107.4 billion dollars in 2019. Furthermore, the market for quick service delivery in the United States is expected to reach $33.2 billion by 2022 [4]. McDonald's, Subway, and many other fast-food restaurants have been vociferous about the importance of e-commerce in their sales. The reason why more and more consumers prefer e-commerce in the fast-food sector is the simplicity of delivery that comes with fast food and the convenience of e-commerce apps in the fast-food industry, especially during the Covid-19. During the coronavirus (COVID-19) pandemic, when lockdown and social distancing measures made it impossible for customers to order in-store, this online market became critical to fast service restaurants. As a result of the coronavirus (COVID-19) pandemic, the overall revenue of the QSR industry in the United States dropped to $239 billion in 2020 from $273 billion in 2019 (figure 3) [4].

![Figure 3 Revenue of the QSR Industry in the US](image)

However, the global revenue of online food delivery increased during COVID-19. In 2021, the pre-COVID-19 estimate of 10% for online food delivery penetration in the restaurant business was forecast to climb to a post-COVID-19 estimate of 14% [4]. Although e-commerce helped the fast-food industry recover, the restaurant industry’s effect has been particularly dramatic, and the quick-service restaurant business has been particularly badly impacted. A few eateries have already declared bankruptcy, while others say they will soon be unable to pay their rent and employees. [7] The industry's overall revenues in 2020 were $240 billion lower than the National Restaurant Association's pre-pandemic projection. Despite the fact that restaurant and food service revenues are anticipated to rise by double digits this year, the Association predicts that it will not be enough to compensate for the losses [8].

### 2.2. Factors Affecting Price

Price formation and change are some of the most complex phenomena in the commodity economy. In addition to the basic factors of value forming price, the formulation and Realization of enterprise price, in reality, are also affected by many factors. Therefore, enterprises should pay full attention to it.

From the perspective of economics, the relationship between supply and demand impacts the market commodity price. According to the principles of economics, if other factors remain unchanged, the change of consumers’ demand for a commodity is opposite to the change of the commodity price. If the price of a commodity falls, the demand will rise. If the price of a commodity rises, the demand will fall accordingly [9]. Fast food pricing is an important link in sales and cost control. The price will directly affect the economic benefits of enterprises and reflect the product positioning of a restaurant. Typical scores for the price elasticity of fast-food restaurant food are 0.7 to 0.8 [10]. An interpretation of this elasticity is that the demand for the food or beverage is very sensitive to price changes. The demand for fast food products is elastic. In addition, they do not have a clear attachment to the food and beverage provided, so they cannot reduce their purchases or turn to alternative products. Therefore, McDonald's business is still vulnerable to factors affecting its commodity price and demand [10]. In addition, in 2020, due to the epidemic's impact, the price of limited-service restaurants increased by 6.2%. In contrast, the price of full-service restaurants increased by 2.9% [11]. At that time, restaurants were closed in states all over the country. During the epidemic, the demand for limited-service restaurants far exceeds the demand for full-service restaurants. Although the supply of full-service restaurants is limited due to seat restrictions and the closure of some locations, the rest of the business is not necessarily eager to significantly increase pricing to avoid losing customers [11].

Moreover, the development of technology and e-commerce is also an important reason affecting prices. The Pew Research Internet project reports that 87% of American adults use the Internet in 2021, up from 14% in 1995 (figure 4) [12].

![The numbers of American Adults Use the Internet](image)
The Internet has not only changed the way we communicate but also changed our shopping habits. The Internet adjusts prices and product characteristics according to consumers' specific whims and changing economic conditions. A popular view (such as Kannan and Kopalle in 2001) holds that the prices of goods and services sold online should be closed. In fact, the Internet makes it insignificant to compare prices among sellers, and the cost of publishing new prices is very low [12]. However, although the actual cost of price adjustment is small, the duration of price fluctuation in the online market is about 7 to 20 weeks, depending on the treatment of sales. Although this duration is much shorter than the price duration usually reported by physical stores, it is clear that online prices are not adjusting all the time. Generally speaking, there are views that price changes are independent of each other [13]. Therefore, even if e-commerce dominates the retail industry, price stickiness is unlikely to disappear because it does not seem to depend entirely on the search cost and the actual cost of changing the price tag. Decision-makers should not ignore the impact of e-commerce on the total price level and inflation because the online market's pricing is different from that in physical stores [12].

Market competition is also an important factor affecting price setting. According to the degree of competition, enterprise pricing strategies will be different. Companies want to build and maintain loyal customers, and they usually match the prices of competitors. In addition, the availability of alternative products will also affect the company's pricing decision. Businesses must consider alternatives, potential entrants, and direct competitors [14]. However, studies have shown that a monopolist may charge lower prices than a company facing competitors selling differentiated products [15]. In any case, an effective pricing strategy is very important to help enterprises formulate quotations consistent with the competition, maximize revenue and make rich profits [16]. With the increase of e-commerce sales and the realization of frictionless comparative shopping digital commerce, the market competition has become more intense and real-time.

### 2.3. Impact of E-commerce

With the development of technology, more recent attention has focused on e-commerce in the fast-food industry. Most people believe that e-commerce has a positive impact on the fast-food industry, helping the fast-food industry's sales volume increase. In 2018, Jim Butschli believed that, while accelerating online food ordering, fast food chains and mobile packaging cater to consumers pressing for time, increasing disposable income, and seeking convenience, resulting in significant growth in the fast-food industry's sales volume [17]. According to Fiserv's research in 2019, they pointed out that many top QSRs regard digital transformation as an efficient way to address growing customer demand for enhanced speed and simplicity of check-out as the industry continues to develop – with consumer spending producing $299.6 billion in the United States from 2004 to 2018 [18]. Varun Juyal, in 2021 reported that E-Commerce impacts QSR's Market Position. E-commerce has emerged as a key competitor to the brick-and-mortar retail industry in the early twenty-first century. The use of e-commerce platforms is a critical commercial tool to help QSR rapidly increase its customer base and then increase QSR sales [6]. Furthermore, many things have changed due to the pandemic, including where people eat and how they receive their food. E-commerce increases QSR sales volume, especially during the Covid-19. Digital strategies have assisted QSRs in connecting with consumers and growing revenue. According to Sarah Cavill, in 2020, digital initiatives have helped QSRs stay top-of-mind and relevant for consumers during the epidemic [19]. Brands updated their applications to make it safer for customers to order, such as enabling contactless delivery, seamless payment choices, and curbside pick-up. According to the report, businesses with high digital maturity levels saw low revenue reductions during COVID-19 compared to other enterprises [19]. Together, these studies outline that as e-commerce has grown in popularity, more consumers are opting for it, increasing the fast-food Industry's sales volume.

### 2.4. Impact of advertisement

People may now view advertising almost anywhere, such as on the internet, on websites, on social media, on television, and so on. Many people believe that advertisements boosted sales volume. Phillip Nelson, in 1975 argued that advertising increased sales and identified two reasons why advertising boosts the revenues of a business that promotes. One reason is advertising primarily works through altering customer preferences. Others concentrate on the informational role of advertising. The concept that advertising may influence people's tastes tends to pique the interest of advertising critics. On the other hand, this notion is consistent with advertising working in perfectly competitive marketplaces and advertising enhancing well-being [20]. However, in 2007, John Philip Jones provided new proof. According to "established wisdom" in advertising, ad campaigns are useful for creating long-term good will and awareness, but not for immediate sales impact, according to "established wisdom" in advertising. John Philip Jones argues the contrary in When Ads Work, claiming that well-planned and executed advertising campaigns may and should have an instant influence on sales. Jones demonstrates that the strongest efforts can treble...
revenues. At the same time, the worst campaigns may actually cause sales to decline by more than 50%, using a tool he calls STAS (short-term advertising strength), a measure of the immediate influence of advertising on sales [21]. In 2019, the paper found a strong relationship between advertising and sales volume and that a firm should maintain a cost-effective advertising strategy that includes high-quality employees. The advertising system should be governed by a process that promotes positive reputations for the company and its goods [22]. Overall, these studies show a link between advertising and sales volume, and advertising does not always increase sales volume; in fact, ineffective advertising might reduce sales.

3. RESULTS AND DISCUSSION

The review shows that influential factors of sales revenue in the fast-food industry are mainly from three aspects. Firstly, there is a close relationship between price and sales volume. Many factors determine prices in the market, and certain conditions can be particularly important at special times. Secondly, whether a company has a mature e-commerce system determines whether or not they can achieve stable sales revenue. Thirdly, the food delivery system also affects sales revenue, especially during the pandemic. In today's global environment, these factors interact with the market to determine whether fast food companies can achieve competitive advantage and significant sales. The outbreak eliminated many unprepared companies. On the other hand, it also boosts companies that already had well-established e-commerce systems and transportation systems in place before the outbreak. During the pandemic, social distancing, travel limitation, stay-at-home orders policies were implemented. Under the influence of the environment, the factors affecting prices in the market fluctuate greatly.

The interaction of supply and demand affects the price of goods in the market. The fluctuation of people's income determines the quantity demanded. Many people have experienced economic losses as a result of the outbreak. According to the PEW research center, among those who say their financial situation has gotten worse during the pandemic, 44% think it will take them three years or more to get back to where they were a year ago – including about one-in-ten who don't think their finances will ever recover [23]. When incomes fall, demand for cheap or inferior goods increases. Fast food is inferior compared to other food products. As a result, fast food restaurants have seen the increased price and sales revenue due to the pandemic. According to Restaurant Business reports, 'over the course of 2020 driven up the price of menu items of fast food and other limited-service restaurants by 6.2 percent.' According to Business Insider, McDonald's saw same-store sales increase by 4.6 percent, Taco Bell by 3 percent, and KFC by 9 percent with a corresponding 60 percent increase in traffic for their drive-thru [23]. The availability of alternative goods also affects demand. During the pandemic, policies such as the dining-in ban and social distancing closed many restaurants that relied on in-room meals and good service. The decline in alternatives has increased sales in the fast-food industry. The review's conclusions about price changes could explain the increase in fast food prices during the pandemic. And the conclusion can be used as a reference in the real market. Fast food companies are basing their sales strategies during the pandemic on the fluctuating factors that affect price changes. Indeed, the results of the review can be used to make future predictions.

Efficient delivery systems and e-commerce platforms play an important role in boosting sales. During the pandemic, the ban of in-door dining has made delivery and drive-thru the two primary ways consumers get their food. Consumers' demand for fast and easy delivery has become the key to the fast-food industry’s sales. According to the NPD Group, By December, drive-thru lanes accounted for 44% of off-premises orders across the entire restaurant industry [24]. Before the outbreak, fast food like McDonald's already had a well-established delivery service. This allowed it to quickly gain a competitive advantage in the pandemic. Much of the growth in consumer demand for delivery services stems from security concerns. The contact-free delivery service ensures the safety of consumers. Take China as an example. In Beijing, Meituan used self-driving vehicles to deliver meals to contactless pick-up stations. The company also provides cardboard boxes as a barrier to prevent droplets from spreading among customers while eating in the workplace. In Shanghai, Ele.me employed delivery drones to deliver to quarantined people in the most affected areas. Online food-ordering software laid the groundwork for increased sales. Stay-at-home orders have led most people to order food online. The fast-food industry's quick and convenient ordering platform has helped them attract consumers. The conclusion that delivery services and e-commerce boost sales could explain the surge in demand during the pandemic. The conclusion can be used as a reference. The opening of restaurants, vaccination, and the relaxation of epidemic control make the future market uncertain. Therefore, the results of the review cannot predict the future.

Based on the concept of economics and the 'invisible hand' role, this paper examines the price fluctuation in the epidemic market. The paper concludes that the prices go up when demand goes up. This is consistent with the conclusion of the predecessor. Indeed, this paper complements the previous conclusions by listing the factors that influence the supply-demand relationship. As for the factors affecting sales, this paper is consistent with the previous
conclusions. It concludes that delivery service and e-commerce largely increase fast-food sales during the pandemic. This paper mainly has two limitations. Firstly, when considering e-commerce and delivery services to boost sales, only during the epidemic period was taken into account, and post-epidemic market changes were ignored. Secondly, this paper mainly uses the U.S. market to test the conclusion without considering other countries' markets [25].

4. CONCLUSION

This article discussed and studied the factors affecting the sales of the fast-food industry in the context of the research on the hit of the food industry during the epidemic. In this way, it used the method of literature review to summarize the relevant conclusions and answers. The final result is that supply, demand, price, e-commerce, delivery services, and advertising are closely related to sales. The origin and development history of the fast-food industry were introduced in the literature review. It talked about factors affecting price from an economic perspective and how those factors were reflected in the market during the pandemic as well. The impacts of e-commerce, delivery service, and advertising on sales were reviewed. In the result and discussion section, the conclusions drawn by the review are compared with the previous conclusions, and the similarities are summarized. It also talked about the two major limitations of this paper. This paper draws three main findings. Firstly, Market supply and demand affect price fluctuations, which affects the sales volume of the fast-food industry. Secondly, there is a positive cause-and-effect relationship between delivery systems and e-commerce and sales. Fast food companies with efficient delivery and online ordering systems have more sales. This relationship is particularly strong during the pandemic. Thirdly, advertising plays an important role in determining sales. Fast food companies should improve delivery efficiency and improve online ordering services in the context of the pandemic. Consumers should be provided with a safe, fast, and convenient dining experience during the outbreak. In addition, fast food companies should regularly conduct market research to analyze the fluctuations of market factors that affect prices. Companies should also study advertising strategies that are appropriate to the current social context. Although the research object of this paper is the fast-food industry, the factors that influence sales mentioned in this paper are related to the whole food industry. It's a topic that can help the restaurant industry stay strong in the volatile market of the pandemic.

REFERENCES


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