

# **A Study of Factors Influencing Restaurants Sales in Online-to-Offline Food Delivery Platforms: Differences between High-sales Restaurants and Low-sales Restaurants**

*Completed Research Paper*

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## **Abstract**

*This study examines the relative importance of factors affecting restaurant sales volume on O2O food delivery platforms and the asymmetric effects of influencing factors in different levels of sales. Based on the data from 1,117 Chinese restaurants, we study the critical factors influencing sales volume from three aspects of logistics, price and word-of-mouth (WOM). Results show that the number of reviews is the most important factor for sales volume in the food delivery platform business and is positively associated with sales; whereas the delivery fees have a negative impact on sales. Additionally, the results indicate that for high-sales restaurants, WOM is the most important factor, reflected by the number of reviews and ratings. While for low-sales restaurants, all three attributes have a significant impact on sales, and the platform effect is more significant, which is not found in high-sales restaurants. Managerial implications, limitations and recommendations for future research are discussed.*

**Keywords:** Food delivery platform, O2O mode, asymmetric effects

## **Introduction**

Online-to-offline (O2O) services have recently gained popularity by applying the convenience benefit of online services to offline reality, especially for the restaurant industry. Objectively, there are two reasons to promote the popularity of O2O (Roh and Park 2018). First, the rapid advances and developments in information and communication technologies change people's consumption preferences. For example, people are used to getting cooked meals delivered to their doorstep by online ordering rather than calling restaurants according to paper menus (Goh et al. 2017). The increase in population density that accompanies urbanization is another driving force behind the rise of O2O services. A typical example is the emergence of virtual restaurants, which eliminate space for diners in hot spot for ordering. Although logistic costs become high, rent is saved (Roh and Park 2018).

Compared with the traditional industry, the users of online food delivery platforms are more dependent on the merchant information provided on the platform. In e-commerce, consumers obtain perceived price and perceived trust through browsing web information, which leads to great uncertainty of consumers on products and services (Kim 2012; Paul 2007). Adding product information on website dose reduce uncertainty, however, providing too much information is not conducive to consumption. According to the research of Lee et al. (2004), information overload results in less satisfied, less confident, and more confused consumers. This requires us to identify what is relatively important to the users, in a way that reduces both uncertainty and negative influence of information overload.

Prior research findings have presented extensive evidence showing that price, word-of-mouth (WOM) and logistics are important in online purchase decision and choice behavior. The convenience of the Internet makes it easier for consumers to get the lowest possible price. O'Keefe et al. (1998) also pointed that, consumers will collect more information to compare as many similar products as possible before purchasing. Besides price information, people can make their opinions easily accessible to other Internet users via message boards, forums, or online communities. To reduce uncertainty and perceived risks, consumers are willing to search for e-WOM before purchasing, such as opinions and experiences of peer consumers.

Prior researches has shown the importance of price and WOM to sales in online restaurants (Zhang 2014). However, a very important part of the food delivery business model is getting cooked meals delivered to doorstep. In other words, factors related to delivery influence the repeat consumption behavior and recommendations of consumers, such as the on-time delivery rate, the integrity of food and the attitude of deliverymen. Therefore, prior research results cannot be directly used to guide online food delivery services. In addition, consumers share preferences and priorities when it comes to online ordering food. They also may hold different expectations according to restaurants sales. Hence, this study was designed to specifically combine these three kinds of factors and study the relative importance of multiple factors. Furthermore, we studied the influence factors of restaurants sales at different levels.

## **Theoretical Background**

### ***O2O Food Delivery Services***

O2O combines offline physical commerce with online marketing. In essence, it is through the Internet, a low-cost way to connect consumers with merchants, breaking the restrictions of channels and geographical location. The object of this paper is the online food delivery platform, a combination of restaurant industry and O2O model. Services closely linking convenience online with dietary life have increasingly attracted the interest of the public and then many food delivery platforms become popular. For instance, Grubhub and Uber eats in the US, Elem and Meituan in China, are all representative mobile platforms that connect individual consumers with local restaurants.

The basic operation mode for the online food delivery platforms contains two steps. Firstly, the online platform invites a large number of restaurants to settle in, and then attracts consumers to order on the platform. If there is a virtuous circle between the two steps, the platform can operate and develop well in the long run. For restaurants, adding food delivery services helps them remain competitive in the market. Cho et al. (2019) also points that in Los Angeles, California, restaurants that began partnering with food delivery platforms then, saw their sales revenues rise on average, from 3% to 35%, or between 200–250 new orders per week.

Exacerbated time poverty (Roh 2018) due to longer working hours and convenience (Goh 2017) are primary reasons for ordering food on the platform as the steps required to make an order is as simple as few clicks on mobile. Therefore the users of online food delivery platforms are mainly single-person householders (Schmidt 2011) and families in which both partners work (Carina 2015). Single-person households, usually students and white-collar workers, prefer to outsource meal preparation and full-time working parents have less time for food provision activities. In addition, for the sake of logistics cost, the food delivery business scope is concentrated in large and medium-sized cities.

At present, the researches about the online food delivery platform are mainly focus on operation model and consumers behavior. Some researchers compared O2O platforms in different fields in the way of

case analysis (Sun 2016; Chen 2015). The studies of consumer behavior on food delivery platforms mostly used the survey to collect the data and examined different people's perceived results (Cho 2019; Roh 2018; Filipe 2016; Lee 2017). There is no literature specifically studying the factors influencing the sales volume of merchants on food delivery platforms, and this article examines the influence factors of the restaurant sales and collect data directly from the online food delivery platform.

### ***Important Attributes on O2O Platform***

Haub and Trifts (2000) proposed while making purchase decisions online, consumers tend to use two-stage processes to reach their decisions. At the first stage, consumers typically screen a large set of available products and identify a subset of the most promising alternatives. Subsequently, they evaluate the latter in more depth, perform relative comparisons across products on important attributes, and make a purchase decision. This also proves that the website design of e-commerce is very important (Ahn et al. 2007). Highlighting important attributes that consumers are willing to compare in depth is convenient to make decisions, which is conducive to increasing sales.

Previous researchers have generally agreed that three main attributes that influence the purchasing decision are price, WOM and logistics. Transaction prices and sales promotion (Chen et al. 2015) are the most direct influencing factors. Sales promotion can reduce the purchase delay of consumers and increase emotional impulse consumption (Aydinli et al. 2014), but it does not mean that the greater the intensity and the higher the frequency, the better effect in sales. According to the research results of Liu et al. (2012), it would be better to reduce the promotion frequency and inform the promotion information in advance. Hu et al. (2015) studied the consuming behaviors of college students, a special group, and found that different products should have their own ways of promotion. As for transaction price, it is associated with perceived risk, and when the perceived risk is high, consumers tend to purchase other alternatives (Wu et al. 2011). In the context of our study, the related factors are the starting price and delivery fees. Only when the total price of the order reaches a certain price, the restaurant will deliver food. That means that if the starting price is high, customers who can't order enough food may give up ordering or choose alternative restaurants. Compared with eating in the restaurants, there is an additional delivery fee in the delivery food price. The customers have a perceived price of the delivery service, and if the delivery fee exceeds their expectation, they will not order the meal at this restaurant. This leads us to hypothesize the following:

Hypothesis 1 (H1). The starting price is negatively related to the sales volume.

Hypothesis 2 (H2). The delivery fee is negatively related to the sales volume.

Positive WOM could reduce the perceived risk and increase consumers' desirability. The quantity (Zhang et al. 2014), quality (Nabi and Hendriks 2003) and timeliness (Zheng 2018) of WOM all affect consumers purchasing decisions. The large quantity of WOM indicates that the audience is wide and there is a potential for repeat purchases. With a certain credibility, high quality WOM is of great value for consumers to refer to, from which consumers can obtain authentic and effective information to assist decision-making. If the e-WOM timely contains the latest information about products or services and reflects the changes of current consumer demand, it contributes to the increasing of consumption. In the online food delivery platform, the number of reviews and the overall ratings represent restaurants' WOM online. The large number of reviews means that there are many times of consumption, and many of these reviews come from regular customers. And the high overall rating represents a lot of praise and customers are satisfied with the food and services. All these factors will influence people's preference and then affect the restaurant's sales. Therefore, we hypothesize the following:

Hypothesis 3 (H3). The number of reviews is positively related to the sales volume.

Hypothesis 4 (H4). The overall rating is positively related to the sales volume.

Logistics distribution is the last link of e-commerce, and the "last mile" is the bottleneck restricting the development of e-commerce (Lee and Whang 2001). Logistics price and quality (Parasuraman et al. 1988), including the delivery time and service attitude, can affect consumer satisfaction and purchasing decision. Hsiao (2009) believed that compared with offline shopping, online shopping was more concerned about price and time in the process. If the delivery time of goods in the e-commerce platform

is longer, the worse the shopping experience will be left to consumers. Zhu and Liu (2003) studied from the perspective of third-party logistics enterprises, and also pointed that delivery service quality positively affected consumers' decision-making. The time of delivery and the rate of time delivery are directly related to the consumer's service experience. If the delivery time is too long, or if it cannot be delivered within the scheduled time, the restaurant will give the customer an impression that the service is not good. Then the customer may not order at such a restaurant. Hence, we hypothesize the following:

Hypothesis 5 (H5). The time of delivery is negatively related to the sales volume.

Hypothesis 6 (H6). The rate of time delivery is positively related to the sales volume.

There are two types of delivery personnel for restaurants, one is the platform professional delivery riders, and the other is the restaurant clerks. The platform's food delivery riders generally have professional training, and their service awareness and ability are relatively high. If customers want a better service experience, they tend to choose the restaurants with platform riders service.

Hypothesis 7 (H7). The platform's delivery personnel is positively related to the sales volume.

There are many researches on the sales volume of e-commerce, but they are all single-factor researches. Few researches focus on the relative importance of multiple factors to sales volume. Moreover, this paper examines the influence mechanism of sales and the research model is shown in figure 1.

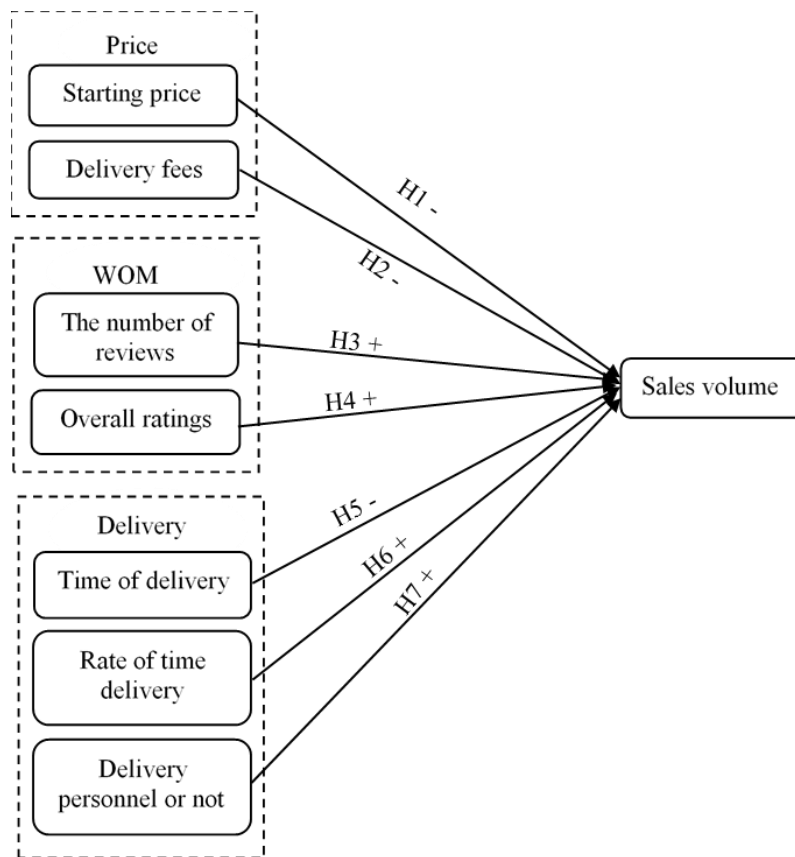


Figure 1. Research Model for the Factors Influencing Restaurants Sales

## Methods

### Data

We conducted our empirical analysis using online food delivery data from Waimai.meituan.com as it is one of the leading online food delivery websites in China. There are three aspects consumers may consider when they order food on the food delivery platform: price, logistics and WOM. As shown in

Figure 2, consumers can easily find each restaurant's starting price and the logistics distribution price per serving in the homepage. These are regarded as the price dimension of restaurants.

According to history delivery data, the platform calculates the average delivery time and the rate of time delivery. Consumers can also find them in the restaurant's own page and if the restaurant deliver food by the platform, there will be a yellow "meituan delivery" sign in homepage. The platform has trained a number of professional delivery personnel who normally perform well than merchants in keeping food's good condition, arriving in time, servicing with smile and so on. The overall factors are regarded as the logistic dimension of restaurants.



**Figure 2. Example of a Restaurant's Details Page**

This website implements a five-star rating system, making it easier to assess the satisfaction of consumers, and the closer the score to 5, the more satisfied the consumer is. As a third-party website, the platform attempts to ensure genuine reviews by requiring users to register through a valid email address or phone number and to order food after logging in. Beyond that, only after the order is completed can consumer comment on the restaurant about taste, delivery service and so on. This article is based on the viewpoint that the better restaurants done, the more consumer is willing to review. Therefore the number of reviews and overall ratings could well represent the e-WOM of restaurants.

The platform has the function of recommending business districts which is used as the method for us to choose the target locations in Harbin. Information about restaurants in these area was collected from Waimai.meituan.com (<http://waimai.meituan.com/restaurant/144763540381195931>) in March, 2017. We obtained the information we need in each restaurant's page, including starting price, delivery fees, time of delivery, the rate of time delivery, the way to delivery, overall ratings, total number of reviews and monthly sales. We discarded restaurants that did not give an overall information and then truncated duplicate data. This restricted our analysis to 1,117 restaurants.

### **Measures**

We examined the relative importance of factors affecting sales of month at a restaurant level by stepwise regression analysis. The dependent variable (sales in month) in our model was obtained directly from each restaurant's page of details.

The explanatory variables are divided into three dimensions: price, logistics and WOM. The starting price means the lowest price for a delivery order and the delivery fees reflects the difference between traditional catering service and food delivery industry, which is pay for delivery service. We measured only one independent variable in percentage, the rate of time delivery and it is the number of deliveries within the stipulated time divided by the total number of deliveries. The rate shows whether the restaurant can normally delivery food within a specified period of time and can be seen at the restaurant's introduction page. As for the way to delivery, we set 0 to represent the merchants' own delivery, and 1 to represent the platform's professional delivery personnel. The time delivery is measured by averaging the historical delivery time records given by the website. Based on the review mechanism and the five star score system, we obtained the number of total reviews and the score of restaurants. The definitions of variables are shown in Table 1.

In order to examine the asymmetric effects of influencing factors in the different level of sales, we sorted the samples by sales volume and divided into three parts on average. Every sub-sample contains about 370 restaurants, therefore we set the top 370 restaurants as high-sales restaurants and the last 370 as low-sales restaurants. We examined the factors which may promote the performance of high-sales restaurants that is called motivation factor. Meanwhile, we studied the hygiene factors that may influence the sales of low-sales restaurants.

**Table 1. Definitions of Variables**

| Attributes | Variable                        | Definition                                                                                                |
|------------|---------------------------------|-----------------------------------------------------------------------------------------------------------|
| Price      | Start(starting price)           | The lowest price for a delivery order                                                                     |
|            | Fee(delivery fees)              | The fee pay for delivery service                                                                          |
| Delivery   | Time(time of delivery)          | The average time it takes to deliver a meal                                                               |
|            | Rate(rate of time delivery)     | The number of deliveries within the stipulated time divided by the total number of deliveries             |
|            | Prof(delivery personnel or not) | 0 to represent the merchants' own delivery, and 1 to represent platform's professional delivery personnel |
| WOM        | Review(the number of reviews)   | The total number of the reviews                                                                           |
|            | Score(overall ratings)          | The comprehensive score of the consumption                                                                |
| Perf       | Sales(sales in month)           | Within one month, the total number of meals sold by the merchants on the online food delivery platform    |

## Results

### *The Relative Importance of Factors Affecting Sales of Month*

In order to judge whether the correlation between independent variables and dependent variable is significant and whether multiple collinearity exists, we firstly perform the correlation analysis, and the results are shown in Table 2. The correlation coefficient between the dependent variable (Sales) and the total number of reviews (Review) is 0.603, meaning that there is a strong positive correlation. In addition, the correlation coefficients between Time and Fee, Time and Rate are all significantly negative. The prices will always adequate to the quality of service, so it's easy to understand that the shorter the delivery time, the higher the delivery cost. And the average delivery time is long also means the restaurant's inefficiency, no wonder the rate of time delivery is low. In following analysis, it is necessary to introduce variance inflation coefficient in subsequent regression analysis to further explore the exact relationship.

The first model contains all variables and then according to the principle of stepwise regression, the least significant variables are successively eliminated. At last, there are four independent variables left, Time, Start, Fee and Review. As shown in Table 3, variance inflation factor is a little more than 1 and less than 10, meaning that there is no multiple collinearity. The model indicates a reasonably good fit, with the adjusted R<sup>2</sup> of 0.394, meaning that 39.4 percent of the total variation between the explanatory variables and sales in month is explained by the regression equation. The F-ratio of 182.383 for the overall significance of the regression model is significant at the 0.01 level. The coefficients of Time, Start and Review are positive and significant, suggesting that time of delivery, the starting price and the

total number of reviews are good predictors of sales in month. And the number of reviews contributes most to the sales, followed by starting price and time of delivery. The delivery fees is significant and exhibit the anticipated negative effects on sales.

**Table 2. Correlation Analysis**

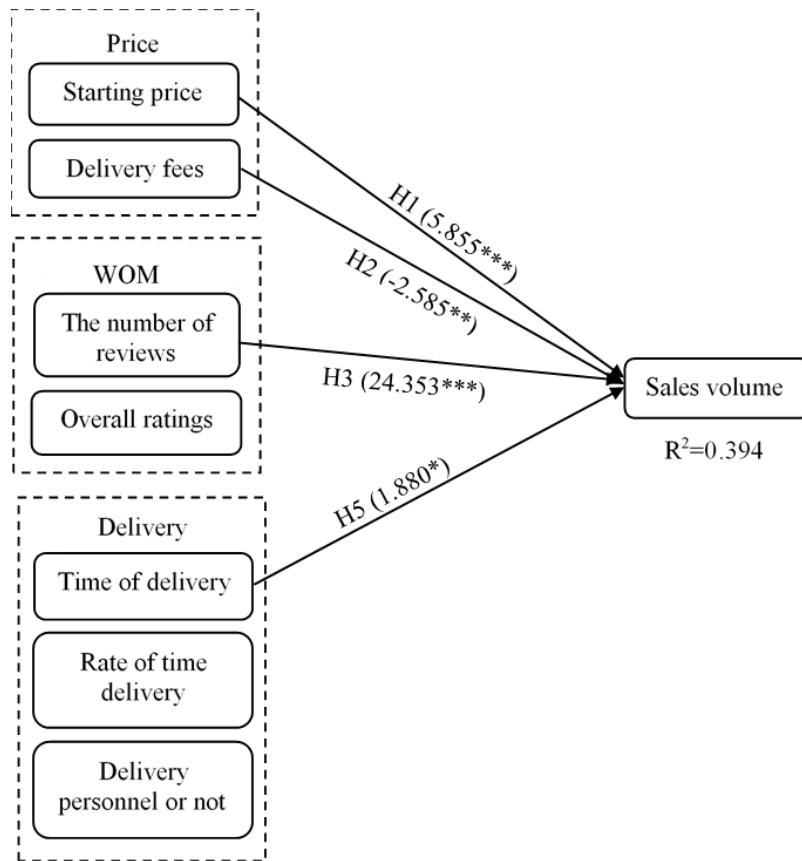
|        | Sales  | Prof   | Time   | Rate  | Start  | Fee    | Review | Score |
|--------|--------|--------|--------|-------|--------|--------|--------|-------|
| Sales  | 1.000  |        |        |       |        |        |        |       |
| Prof   | -0.040 | 1.000  |        |       |        |        |        |       |
| Time   | 0.148  | -0.240 | 1.000  |       |        |        |        |       |
| Rate   | -0.039 | 0.147  | -0.794 | 1.000 |        |        |        |       |
| Start  | 0.173  | -0.006 | 0.031  | 0.025 | 1.000  |        |        |       |
| Fee    | -0.224 | 0.297  | -0.462 | 0.256 | -0.139 | 1.000  |        |       |
| Review | 0.603  | -0.055 | 0.108  | 0.009 | 0.042  | -0.195 | 1.000  |       |
| Score  | -0.158 | 0.019  | -0.234 | 0.138 | 0.005  | 0.278  | -0.165 | 1.000 |

**Table 3. Regression Output for Sales in Total Restaurants**

| Variable                | Coefficient | T-value | VIF   |
|-------------------------|-------------|---------|-------|
| Time                    | 1.880*      | 0.049   | 1.274 |
| Start                   | 5.855***    | 0.138   | 1.021 |
| Fee                     | -2.585**    | -0.070  | 1.332 |
| Review                  | 24.353***   | 0.579   | 1.04  |
| Adjusted R <sup>2</sup> | 0.394       |         |       |
| F                       | 182.383***  |         |       |

Notes: \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1

The results just supported H2 and H3. It's easily to explain that the more reviews and the lower delivery fees, the higher sales. Because of conformity, restaurants with a lot of reviews are more attractive to consumers and reviews represent prior consumers' approval of the restaurant. As for delivery fees, consumers are generally willing to pay less money for extra service comparing with traditional restaurant industry. However, contrary to conventional wisdom, the starting price and time of delivery has positive influence on sales, which is contrary to H1 and H5. We interviewed some users of the platform with a random manner about what may affect their choices and how dose these factors affect them. According to the coefficient, the impact of Review on Sales is significantly greater than the impact of Start and Fee. The interview also confirm the regression result. When consumers compare the restaurants on the platform, the number of reviews is the dominating factor they consider. While the quantity of reviews is large, consumers may not care about the starting price and time of delivery and show understanding that restaurants with plenty of orders are willing to accept big orders and are inefficiency in logistics. While, H4, H6 and H7 are not supported, which means that for restaurants on the food delivery platform, compared with other factors, the overall rating, the rate of time delivery and professional delivery personnel are not key influencing factors. The visualization results are shown in figure 3.



Notes: \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1, N=1117

Figure 3. Results for Sales in Restaurants (Full Samples)

**The Asymmetric Effects of Influencing Factors in Different Levels of Sales**

The regression results for high-sales restaurants are given in Table 4. Review and Score are good predictors of high sales and Fee has a negative effect on sales. Time and Start, however, do not have a significant relationship with sales. For the whole sample, the effect of Score on sales is not obvious, which is country to high-sales restaurants. This meaning that WOM, including the number of reviews and overall ratings, is a relatively important incentive to increase sales in high-sales restaurants.

Table 4. Regression Output for Sales in High-sales Restaurants

| Variable                | Coefficient | T-value | VIF   |
|-------------------------|-------------|---------|-------|
| Fee                     | -3.013***   | -0.130  | 1.051 |
| Review                  | 13.270***   | 0.562   | 1.006 |
| Score                   | 2.134**     | 0.092   | 1.046 |
| Adjusted R <sup>2</sup> | 0.343       |         |       |
| F                       | 65.162***   |         |       |

Notes: \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1

The regression results for low-sales restaurants are given in Table 5. Same as the high-sales restaurants, Review has the biggest impact on sales. The coefficient of Start, Fee and Rate oppose to expectation, and the explanation about that is similar to Table 3. It is well to remind that Prof has a positive influence on sales, meaning that choosing the platform delivering personnel will cause higher sales. Compared



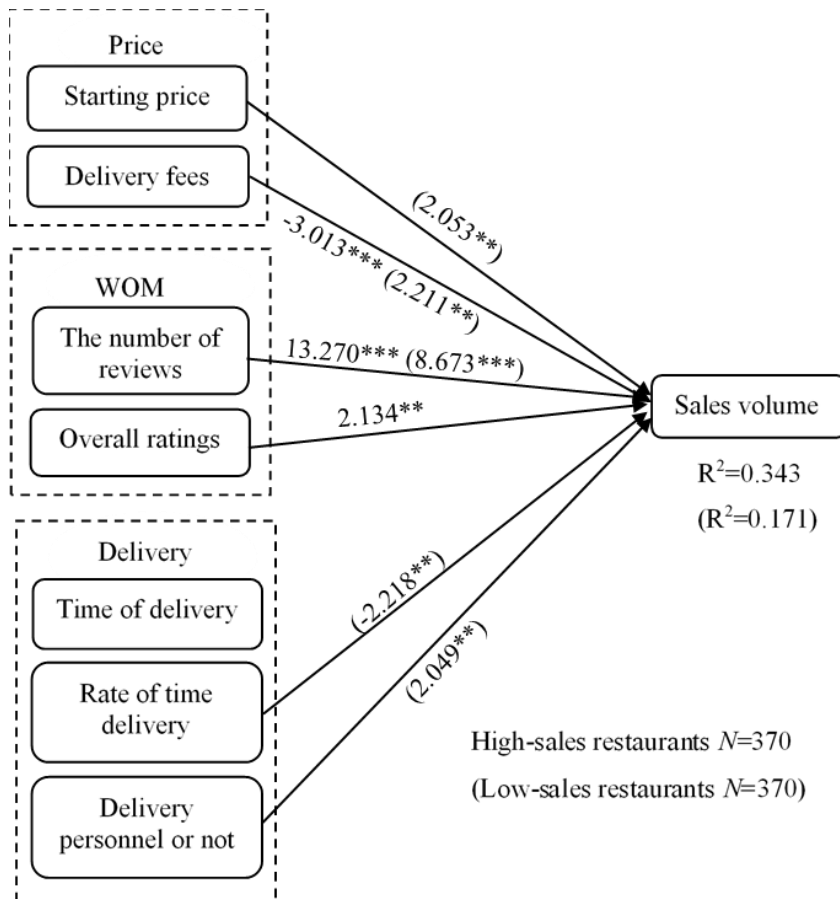
with Table 3 and Table 4, we can find that hygiene factors for low-sales restaurants contains price, logistics and WOM. All these factors have significant correlation with sales.

Figure 4 shows regression output for both subsamples, with the low-sales restaurants subsample reported in parentheses.

**Table 5. Regression Output for Sales in Low-sales Restaurants**

| Variable                | Coefficient | T-value | VIF   |
|-------------------------|-------------|---------|-------|
| Prof                    | 2.049**     | 0.098   | 1.143 |
| Start                   | 2.053**     | 0.096   | 1.068 |
| Fee                     | 2.211**     | 0.113   | 1.373 |
| Review                  | 8.673***    | 0.401   | 1.030 |
| Rate                    | -2.218**    | -0.113  | 3.220 |
| Adjusted R <sup>2</sup> | 0.171       |         |       |
| F                       | 17.478***   |         |       |

Notes: \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1



Notes: \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1

**Figure 4. Results for Sales in Restaurants (High-sales Restaurants vs. Low-sales Restaurants)**

## **Discussion**

### ***Theoretical Contributions***

The theoretical contributions have been made to the literature in three ways. Firstly, synthesize above results, there is a strong correlation between Review and Sales, which confirm the rationality that some researchers (Ye et al. 2009; Ye et al. 2011) replace sales with the number of reviews. The number of reviews represent the quantity of restaurant's information consumers could require. With more comprehensive view of restaurants, consumers' perceived risk decreases and they tend to choose this restaurant. Meanwhile, because the platform users has to review after the order done and people tend to repeatedly spend on the same restaurant, the number of reviews, on the other hand, represents a potential consumer market for repeat purchases.

However, as one of the factors in the WOM dimension, the overall rating has no significant effect on restaurants, especially for low-sales restaurants. Duan et al. (2008) studied the effect of online user reviews on movies' daily box office performance and the result indicates that the rating of online user reviews has no significant impact on movies' box office revenues and the box office sales are significantly influenced by the volume of online posting, which is similar with our results. Furthermore, the rating of restaurants on the online food delivery platform is generally higher. Consumers get used to give a high score, eventhough they are not satisfied with the food or service. As a result, the rating of reviews can't reflect the true WOM of restaurants.

Secondly, the delivery fee has a significant negative influence on sales, especially for high-sales restaurants and increasing the price of delivery service will decrease the sales in month. Price is an important factor affecting the purchase decision of consumers. The change of distribution cost is bound to affect the purchase decision of price-sensitive consumers. Li and Cui (2013) has similar found that delivery fees has significant negative influence on sales of good on C2C platform, confirming our results.

Thirdly, the results on a segment-level analysis show clear differences between the two restaurants groups. Zhang et al. (2014) also find that performance of attributes has an asymmetric impact on positive WOM and negative WOM for the restaurant industry as well as for low-end and mid-to-high-end restaurants. This shows that consumers hold different expectations according to different conditions.

In high-sales restaurants, the overall rating has a positive influence on sales, meaning that the score will affect consumers' attitude to the restaurants. However, the logistics factors do not have much influence on consumers. For Chinese consumers, when sales are high and WOM is good, they will not mind bad delivery service. Therefore, in restaurant industry, especially in food delivery platforms, e-WOM is the most important factor and is the cornerstone of long-term sound development of restaurants.

For low-sales restaurants, choosing professional personnel to deliver is beneficial to increase sales. Because most low-sales restaurants just open for a few time or operate at a loss, many factors do not have the advantage of attracting consumers. The professional service provided by platform increases the possibility of being chosen for low-sales restaurants. Goh et al. (2017) also show that increase of revenue, wider customer reach and expand customer base are main driving factors to the business owners' behavioral intention to outsource food delivery service to third-party online food delivery platform. This is the advantage of O2O platform, which is usually not obvious in high-sales restaurants.

### ***Managerial Implications***

Restaurant managers can derive useful managerial implications from the results of this study. For online food delivery platforms, there is always a time of day when orders surge, it would be better for restaurants to adhere to the line of small profits but quick and to hire temporary workers in the busy time rather than reacting negatively to increased delivery times due to increased orders. It is critical for restaurant managers to identify which factors yield higher returns under certain conditions. As there is a clear difference between the drivers of high-sales and low-sales restaurants, if the restaurant has a few orders in month, for instance, it would be helpful to take advantage of the platform and decrease the price factors, including the starting price and delivery fees. For all food delivery restaurants, e-WOM

is the most important factor than others. High-sales restaurants should extract its shortcomings from numerous comments and improve what dissatisfy consumers. While low-sales restaurants should try their best to do a good job in every aspects at first, and at the same time, encourage consumers to give positive comments on the platform.

The analysis results are also helpful for the online food delivery platform to design the search engine and design the website according to how much consumers care about attributes. Furthermore, now that the number of reviews has a strong positive impact on sales, the platform should design some reward mechanisms to encourage users to leave comments after order done.

## **Conclusions**

This study has explored the factors influencing restaurants sales volume in O2O food delivery platforms and the differences between high-sales restaurants and low-sales restaurants. Our findings show that the number of reviews is the main influencing factor and has a significantly positive impact on sales volume, whereas the delivery fee has a negative impact on sales volume. Furthermore, the number of reviews and overall ratings are put in the first place by consumers in search of a high-sales restaurant in food delivery platforms, followed by the delivery fee. As for low-sales restaurants, the platform effect brought by platform professional delivery services has a positive impact on sales volume. The results would be very helpful for restaurants on the food delivery platform to make targeted improvements in attributes and would be beneficial for the platform in improving website to attract more users.

The findings and implications of this study should be viewed in the light of several potential limitations that might reveal directions for future research. First, the empirical conclusions are based on data collected from a single Chinese food delivery website in a certain part of the country. The findings may be not generalizable since the data may not represent the population of other countries. Future research could extend the data to a larger sample of web users to examine the differences across heterogeneous social and cultural segments. Another limitation of this study is that we just studied the relative importance of factors affecting sales, and didn't examine the combined effect among them. As the result that WOM has great influence on sales, future research could select more factors that represent WOM and study the combined effect among different factors.

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