A Study of Consumer Purchase Intention in the Service Industry: from the Perspective of Flow Experience

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Abstract. The rapid development of the Internet has had a sustained impact on offline economic development, and the online economy has had a huge impact on the physical economy. However, with the arrival of the experience economy, the recovery of the offline economy has put forward higher requirements for offline physical stores. In the face of the impact of the Internet, how to maintain consumers and stabilize customer sources is an urgent problem for offline brick-and-mortar stores. Taking the offline catering industry as an example, this study takes SOR theory as the basis and combines flow experience to explore whether flow experience affects customer loyalty in offline environment and examine the moderating effects of novelty seeking. The results of the study show that service innovation, customer engagement and environmental quality all have a significant positive effect on consumer immersion, while flow experience positively affects customer loyalty. Therefore, the offline catering enterprises should pay more attention to the impact of customer experience and environmental quality on customers as a way to improve customer loyalty.

Keywords: Flow experience, Customer loyalty, Hotpot industry, Offline

1 Introduction

Experiences are born when a company uses its services as a stage, its products as props, and its engaging activities to attract customers. Although experiences are widely available in the tourism and entertainment industries and have been mains treamed for a long time, companies still want to make their customers feel a unique and memorable service as an experience. With the growth of e-commerce globally, there is a opportunity for businesses to move from "offline" to "online" based on the Internet, replacing traditional brick-and-mortar stores, the multi-sensory experience that customers are looking for is diminishing. As a result, few experiences touch all the senses as effectively as a well-planned gastronomic encounter [1], and using flow experience can be a way to stimulate and develop innovation and move customer behavior towards more sustainable food choices and behaviors [2].

With the rapid development of the mobile Internet and changes in customer demand and consumption patterns, traditional catering enterprises are still unable to abandon the traditional offline store catering model. For consumers, offline dinning is one of the important links to maintain emotions and flow experience. Currently, most companies focus on improving customer loyalty, and immersion has a significant positive impact on customer experience

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satisfaction and loyalty. Then how to improve customer loyalty? In the context of experience economy, flow experience has become an important concept.

2. Research Theory and Research Hypothesis

2.1 Research theory

Stimulus-Organism-Response theory refers to the stimulus from the external environment, after being stimulated to the organism to have an effect, the corresponding psychological response, in the organism through the external environment stimulation, a series of internal activities, and then make the corresponding behavioral decisions [3]. Flow experience is a psychological state in which consumers devote their attention completely to an activity and achieve a state of forgetfulness accompanied by a sense of excitement and pleasure [4], according to previous research this paper adopts the three dimensions of flow experience of entertainment, concentration, and time forgetfulness to be analyzed. Therefore, this study considers service innovation, customer engagement, and environmental quality as external environmental stimuli, and flow experience as a series of effects that occur when the organism is stimulated, and flow experience includes entertainment, concentration and time distortion, they all affect customer loyalty.

2.2 Relationship between service innovation and flow experience

Service innovation is the introduction of new services into a product, which can significantly change the characteristics of the service's expected use. There is a certain technological orientation of service innovation, emphasizing that service innovation based on the service itself is the real service innovation [5]. From service innovation to customer satisfaction is a continuous process in which customers evolve and thus act on their satisfaction. Customers' perceptions of service innovation in the catering industry are reflected in their customer engagement behaviors, and service innovation increases customer engagement in the subsequent process. For the brick-and-mortar hotpot industry studied in this paper, new service value system as well as new service processes and service programs enable customers to obtain flow experience , so this paper proposes the following hypothesis:

H1: Service innovation positively influences entertainment.

H2: Service innovation positively influences concentration.

H3: Service innovation positively influences time distortion.

2.3 Relationship between customer engagement and flow experience

The essence of value co-creation is the behavior of the firm and the customer working together in the same activity for the benefit of the target [6], and the firms hope to cultivate the loyalty of the customers through value co-creation. Co-creation can directly affect satisfaction and loyalty in addition to its indirect impact in creating a strong brand experience. And as customer satisfaction alone is not enough to sustain long-term customer relationships, customer engagement can positively influence customer loyalty. The sensory experience, emotional experience and behavioral experience brought by customer engagement confirms its influence on flow experience,so this paper proposes the following hypothesis:

H4: Customer engagement positively influences entertainment.

H5: Customer engagement positively influences concentration.

H6: Customer engagement positively influences time distortion.

2.4 Relationship between environmental quality and flow experience

In previous studies, many scholars have concluded that there is a correlation between environmental quality and customer loyalty. And the scope of the research mainly focuses on service-oriented businesses, such as restaurants, hotels, and shopping places. For full-service restaurants, it is critical to create an attractive environment, from interior décor to staff uniformity, in order to reinforce a positive brand image and thus increase customer loyalty [7]. Similarly, the impact of indoor environmental quality on overall service quality, customer satisfaction and customer loyalty is explored. Improvements in indoor air quality, indoor space, and furnishings can successfully increase customer satisfaction and thus customer loyalty. This paper argues that environmental quality affects customer loyalty through flow experiences, so the paper proposes the following hypothesis:

H7: Environmental quality positively influences entertainment.

H8: Environmental quality positively influences concentration.

H9: Environmental quality positively influences time distortion.

2.5 Relationship between flow experience and customer loyalty

A positive flow experience can engage customers, reduce price sensitivity, and positively influence subsequent attitudes and behaviors [8]. In restaurants, customer immersion and social and human interaction factors are significantly associated with customer satisfaction, rather than being judged by food taste and price, and the restaurant experience influences customer satisfaction. In this paper, it is argued that customer's entertainment, concentration, and time distortion through external stimuli affects customer loyalty, so this paper proposes the following hypothesis:

H10: Entertainment positively influences customer loyalty.

H11: Concentration positively influences customer loyalty.

H12: Time distortion positively influences customer loyalty.

2.6 Moderating assumptions of novelty seeking

Novelty seeking refers to the tendency of humans and animals to explore novel and unfamiliar stimuli and environments. The novelty sought by dopamine regulation is supported by the stimulation of dopamine neurons and activation of new stimuli in brain regions that receive, dopaminergic inputs [9]. Pursuit of novelty directly affects destination customer loyalty, and satisfaction has also been studied to mediate the relationship between pursuit of novelty and destination loyalty [10]. For service innovation, customer engagement and environmental quality, novelty seeking influence the degree of entertainment, concentration and time distortion and thus affect customer loyalty, so this paper makes the following hypothesis:

H13: Novelty seeking can enhance the influence of service innovation on entertainment.

H14: Novelty seeking can enhance the influence of service innovation on concentration.

H15: Novelty seeking can enhance the influence of service innovation on time distortion.

In summary, based on the theoretical model of SOR, this paper structures the conceptual model of this paper as shown in **Fig. 1**.

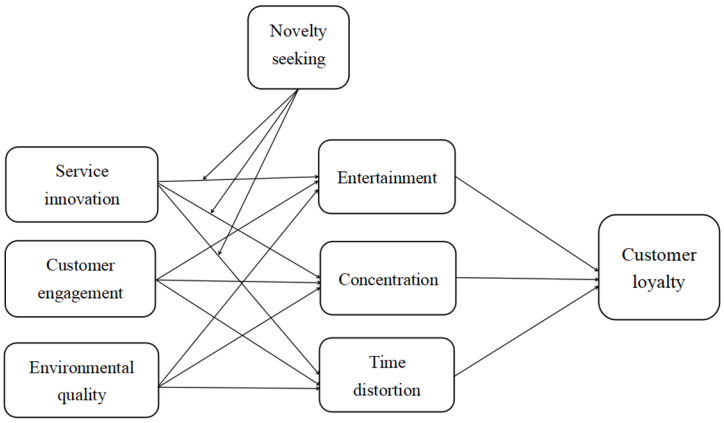

Fig. 1. Research Model

3. Research methodology

The measurement scales used in this study are from established scales by existing scholars and measure eight aspects: service innovation, customer engagement, environmental quality, entertainment, concentration, time distortion, novelty seeking and customer loyalty. Specifically, a combination of offline field-distributed questionnaires and online electronic questionnaires were used to collect data. The data were collected between July 2020 and January 2021, 624 questionnaires were distributed and 598 were recovered, of which 549 were valid questionnaires, with a 95.8% questionnaire recovery rate and 91.8% valid questionnaire recovery rate .

4. Data analysis and hypothesis testing

4.1 Analysis of reliability and validity

Reliability, with the help of SPSS22.0 software to analyze the data. The results are shown in Table 1 that Cronbach's alpha values are all greater than 0.7, indicating that the internal consistency of all variables is in good condition.

Table 1. Reliability test results

Variables	Cronbach's a	Number of items
Service innovation	0.928	4
Customer engagement	0.924	5

Environmental quality	0.893	5
Entertainment	0.915	4
Concentration	0.877	3
Time distortion	0.878	3
Novelty seeking	0.916	3
Customer loyalty	0.934	5

Validity, the data are analyzed with the help of AMOS 24.0 software. The results are shown in Table 2 that the chi-square degree of freedom ratio is 1.52 (< 3.0), the goodness-of-fit index (GFI) is 0.934 (> 0.9), the root mean square error of approximation (RMSEA) is 0.062 (< 0.08), the incremental fit index (IFI) is 0.986 (> 0.9), and the parsimonious normed fit index(PNFI) is 0.856 (> 0.5). All actual values satisfy the requirements of the reference values.

Table 2. Model confirmatory factor analysis results

Index	χ^2/df	GFI	RMSEA	IFI	PNFI
Reference value	<3	>0.9	<0.08	>0.9	>0.5
Actual value	1.52	0.934	0.062	0.986	0.856

Convergent validity analyses were subsequently conducted to calculate the combined reliability (CR) and average variance extracted (AVE) from the standardized regression coefficient estimates. In this study, the CR values of the variables were all greater than 0.600, the AVE values of the variables were greater than 0.500, which indicated that the measurement scale had a good convergent validity. A discriminant validity analysis was then performed, comparing the correlation coefficients to the square root of the AVE values. The square root of AVE values for service innovation, customer engagement, environmental quality, entertainment, concentration, time distortion and customer loyalty are 0.872,0.841,0.839,0.852,0.837,0.839 and 0.861 respectively. The results show that the square root of the AVE values are greater than the correlation coefficients of the vertical and horizontal columns. Therefore, the variables in the questionnaire of this study have good convergent validity and discriminant validity, which are suitable for hypothesis testing analysis of the model.

4.2 Hypothesis testing for structural equation modeling

The model fit test in this study is conducted using AMOS 24.0 software. The results are shown in Table 3 that the overall fit of the models are all standard and well-fitted, allowing for further modeling.

Table 3. Model fitting pointer list

Index	χ2/df	GFI	RMSEA	NFI	IFI	PGFI	PNFI
Recommended value	<3	>0.9	<0.08	>0.9	>0.9	>0.5	>0.5
Result	1.52	0.934	0.062	0.960	0.986	0.777	0.856

The results of structural equation modeling show that service innovation has a positive effect on entertainment (r=0.130,p<0.001), concentration (r=0.274,p<0.001), and time distortion (r=0.264,p<0.001); customer engagement has a positive effect on entertainment

(r=0.435,p<0.001), concentration (r=0.385,p <0.001), and time distortion (r=0.266,p<0.001) had a positive effect; environmental quality has a positive effect on entertainment (r=0.315,p<0.001), concentration (r=0.221,p<0.001), and time distortion (r=0.350,p<0.001); entertainment (r=0.281,p<0.001), concentration (r=0.257,p<0.001) and time distortion (r=0.332,p<0.001) have a positive effect on customer loyalty. Hypothesis 1- Hypothesis 12 are supported.

4.3 Moderating effect test

This study is analyzed using the linear regression-based moderated effects test plug-in PROCESS 3.0 and applying the moderated effects model. The results showed that novelty seeking is not significant in moderating the overall effect of service innovation on entertainment (p=0.0501>0.05); novelty seeking is not significant in moderating the overall effect of service innovation on concentration (p=0.0885>0.05); and novelty seeking is significant in moderating the overall effect of service innovation on time distortion (p=0.0498<0.05), with an interaction term coefficient of 0.0778. The results show that novelty seeking plays a significant role in positively moderating the effect of service innovation on time distortion. Hypothesis 13 and Hypothesis 14 are not supported. Hypothesis 15 are supported.

5. Discussion

5.1 Theoretical contributions

First, the offline stimulus-organism-response process was constructed based on the SOR model, which suggests that external factors stimulate consumers to produce the psychological process of flow experience, thus affecting customer loyalty. Second, this study further expands the influencing factors of customer loyalty. Currently, most studies focus on some more traditional variables such as satisfaction and trust. This study provides a new perspective on the theory of influencing factors of customer loyalty through offline catering.

5.2 Limitations and Future research outlook

This study has some limitations. First of all, this paper adopts the method of questionnaire survey, which may have some errors, and the experimental method can be introduced for future research. Further, customer flow experience and loyalty may also be influenced by factors such as food flavor and staff service attitude, and other possible influences need to be considered in the future.

6 Conclusion

In the study of mediating effects, service innovation, customer engagement and environmental quality positively affect consumer loyalty through entertainment, concentration and time distortion. In the study of moderating effects, novelty seeking plays a significant role in positively moderating the effect of service innovation on time distortion. The effect of service innovation on time distortion is stronger for consumers with high novelty seeking.

According to the research of this paper, offline catering enterprises can enhance the mobile experience of consumers through service innovation, customer engagement and environmental quality, thereby enhancing customer loyalty. In the face of the impact of online food and beverage categories, offline catering enterprises can pay attention to consumer experience and environmental quality as a way to improve customer loyalty.

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