

Summer 7-5-2020

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Recommended Citation

Liao, Miyan; Li, Liangqiang; Liu, Lu; Yang, Liang; Cao, Yunzhong; and Li, Xiaolin, "Exploring Factors Influencing Showrooming Behavior in Multi-Channel Shopping: A Cognitive Appraisal Theory Perspective" (2020). *WHICEB 2020 Proceedings*. 41.

<https://aisel.aisnet.org/whiceb2020/41>

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Exploring Factors Influencing Showrooming Behavior in Multi-Channel

Shopping: A Cognitive Appraisal Theory Perspective

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Abstract: Multi-channel shopping keeping consumers from changing retailers during the channel conversion process has become an important issue. Showrooming, one of the increasingly popular form of multi-channel behavior, brings different influences to retailers. This paper focuses on how to keep consumers loyal to retailer of showrooming behavior during the channel conversion process, and explore its influencing factors from the perspective of cognitive appraisal theory. Three hundred and ten questionnaires were collected to conduct empirical analysis by structural equation modeling (SEM). The empirical research results show that information availability, price comparison, and after sales service positively affect perceived fluency and perceived value, but interaction service has no significant effect on perceived fluency and perceived value, and that perceived value and perceived fluency further promote the appearance of showrooming behavior. The research results improve the existing showrooming research system, and provide suggestions for retailers on how to improve the channel characteristics to promote positive showrooming.

Keywords: showrooming, multi-channel, cognitive appraisal theory

1. INTRODUCTION

With the rapid development of information technology, enterprises have expanded their marketing channels from single-channel to multi-channel. Cross-channel consumer behavior becomes very common, consumers can use different channels to make purchases at different shopping decision-making stages to obtain the required information and shopping experience. Showrooming, one of the increasingly popular form of cross-channel behavior, brings different influences to enterprises in different forms^[1]. Some consumers may switch retailers from offline to online in a cross-channel, and online competitors benefit from it. On the other side, consumers may choose the same retailer both online and offline. How to keep consumers loyal to retailer during the channel conversion process is a question worth pondering.

Prior researches on showrooming have focused on its behavioral outcomes and influencing factors. Some studies regard showrooming as a competitive behavior, and the behavior of consumers switching the retailer's during the purchase process is unethical, which negatively impact on the self-efficacy and business performance of the physical store sales staff^[2]. Some researches view showrooming as a positive behavior. If the retailers fully consider the experiential aspects of their decision-making activities and emotions, they will better understand the potential opportunities^[3]. For the influencing factors of showrooming behavior, scholars also explore the antecedents of showrooming from the perspective of channel attributes^[4] and consumer personal characteristics^{[5][6]}.

Most of the existing studies viewed showrooming as the behavior of consumers changing retailers from offline to online during the shopping process, and less consider the behavior of consumers using the same retailer from offline to online channels. In the exploration of the antecedents of behavioral, most studies only analyzed the direct effects of antecedent variables on showrooming behavior, and ignore the psychological

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process of consumers from cognition to behavior. This paper will focus on the showrooming behavior of consumers changing different channels of same retailer, introduce psychological characteristics as variables to explore the formation mechanism of showrooming. The research results will improve the existing showrooming research system, and provide suggestions for retailers on how to improve the channel characteristics to promote positive showrooming.

2. LITERATURE REVIEW

2.1 Showrooming

showrooming refers to that consumers view in physical stores, collect product information, and then purchase products through retailers in online channels. Unfortunately, some consumers may change brands during the channel conversion process, which not only reduces the self-efficacy and motivation of sales staff, but also damages business performance^[7]. Therefore, for the initial research on cross-channel buying behavior of showrooming, scholars mostly viewed the adverse effects caused by this phenomenon from the perspective of enterprises. With the continuous development of the O2O business, online and offline collaboration has become a way of competition for retailers. Some e-commerce retailers have opened physical stores offline, and pay more attention to their service and consumer experience. Compared with the behavior of changing brands during the process of consumer channel conversion, the proportion of customers retaining across channels is close to 70%^[8].

In recent years, scholars have started research on the mechanism of consumer showrooming behavior both from perspective of channels and the individual level. From the perspective of channels, Kim and Park measured the antecedents variables of showrooming that are consistent with the push, pull and mooring effects in the O2O business environment^[9], Chiu et al. discussed the causes of showrooming behavior from the advantages and disadvantages of online and offline shopping channels^[4]. From the individual consumer level. Burns et al. tested their tendency of participating in showrooming behavior from the perspective of consumer shopping^[10], Dahana et al. explained whether and to what extent consumers are participating in showrooming behavior from the perspective of personal characteristics^[6]. In addition to the above direct influence factors, some moderators also affect consumer behavior, such as differences in product type, gender, age, and income^{[5][11]}.

Most of researches on the influence mechanism of showrooming only test the direct factors and lack the consideration of the psychological perception response of consumers to the evaluation of channel attributes. Therefore, based on the cognitive appraisal theory, this paper will conduct research from different decision-making stages.

2.2 Cognitive appraisal theory

Cognitive appraisal theory was originally proposed by Deci and Ryan in 1975 to evaluate the motivational response of employees in an organization. Later it developed into a cognitive theory of emotion-led consumer behavior. The process of cognitive appraisal is like the cognitive information processing mechanism discussed in the marketing literature. The whole process is mainly divided into three stages, first is the evaluation of the external environment, second is the impact on psychological emotion after the evaluation, and finally the generation of behavior.

Cognitive appraisal theory has been applied to consumer behavior research^[12]. Combined with the research scenario of this paper, the layout of retailer physical stores and online stores brings consumers different effects in the search and purchase process. Consumers evaluate different channel characteristics, and these environmental factors further affect consumers' psychological perception and attitude towards choosing multi-channel shopping. Although channel conversion requires a certain amount of time and energy from

consumers, consumers' positive emotional attitude towards the channel services provided by retailer is an important reason for showrooming.

2.3 Perceived fluency and perceived value

Perceived fluency (PF) refers to the degree of difficulty an individual feeling when perceiving and recognizing the physical characteristics of an object^[13]. It is commonly used to study aesthetics and advertising to explore how the design of things affects the perceived fluency of individuals. In consumer behavior, prior studies on perceived fluency have mostly focused on single-channel backgrounds. Im et al. proposed that fluency measured with a visual interface affects consumers' sense of pleasure on the Internet, thereby helping consumers to buy products^[14]. In a multi-channel context, people are more willing to do relatively easy things, and have a greater preference for external stimuli that don't require much effort. So perceived fluency is an important factor in measuring cross-channel shopping behavior.

Consumers' evaluation of channel characteristics is also an evaluation of the value brought by channels. Perceived value (PV) will be transformed into consumer ideas and perspectives, which will have a significant impact on consumer behavior, and it will also be a key factor affecting their purchasing behavior and satisfaction. Some studies have divided the value into utility value and hedonic value^[15]. Utility value emphasizes the physical or functional value of the product, and the hedonic value emphasizes the sense of pleasure and fun that consumers perceive during the purchase process. Both have a differential impact on consumers' information search and purchase frequency^[16].

3. CONCEPTUAL FRAMEWORK AND HYPOTHESES

We divide the consumer's multi-channel shopping process into three stages. The first is that the different channels characteristics stimulate consumers, forming an evaluation of showrooming. Secondly, consumers' perception of the channel will form a psychological perception. Finally, psychological perception will form showrooming. This paper proposes a hypothetical model, as shown in Figure 1.

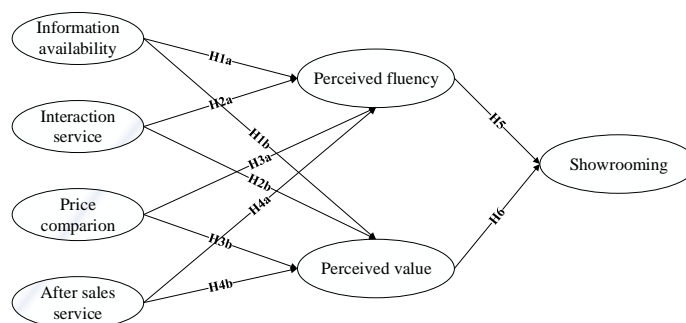


Figure 1. Conceptual model

3.1 Information availability

Information availability (IA) refers to the ability of consumers to perceive product quality, quantity, and availability of information to compare attributes between products. The source of product information provided by online channels is mostly website introductions and user reviews, which are mostly presented to consumers in the form of text, pictures and videos. After the beautification and processing of this information, it will inevitably be different from the actual situation. Consumers need to spend a certain amount of energy and effort when processing this information. Overly detailed images increase complexity and reduce consumer fluency^[17], offline brick-and-mortar stores are better at measuring the quality of the products, services and brands they actually come into contact with. Therefore, the perceived fluency of offline channels is higher.

The phenomenon of slipping orders on the Internet makes consumers distrustful of the content of some buyer reviews. Compared with information provided by traditional channels, online channel information is more

asymmetric and imperfect^[18], this directly leads to consumers' perception of greater uncertainty in the purchasing behavior of online channels. Offline channels make up for the intuitive experience that online stores cannot bring, and it is easier to obtain information that online channels cannot bring. Consumers don't have to worry about errors in the information provided online, such as the color of pictures and the authenticity of reviews. This can greatly reduce the risk of shopping and thus increase the perceived value of consumers. Therefore, we propose the following hypothesis:

H1a: Compared with online stores, information availability in offline physical stores has a positive impact on perceived fluency.

H1b: Compared with online stores, information availability in offline physical stores has a positive impact on perceived value.

3.2 Interaction service

The significant difference between online channels and offline channels is interaction service (IS). Most of the interactions provided by online channels for customers are online dialogues, and the customer service staff's dialogue responses are not timely. The cumbersome consultation process makes the quality of online interactive services low. The services of offline physical stores make up for this shortcoming. The staff in the physical stores use their expertise to explain product information to consumers, and provide them with shopping suggestions and other services in accordance with consumer needs in a timely manner, thereby improving consumers' handling of products speed and accuracy, increasing their fluency.

The service-led logic shows that the interaction between the company and the customer has always been the key to creating value together, and the salesperson is the first and only interaction between the company and its customer^[19]. Brick-and-mortar stores are more prominent in emphasizing consumers' experience. The services in the physical stores not only provide consumers with task-oriented interaction, but also meet consumers' spiritual and emotional interaction needs. Through different forms of interaction, it creates sensations and perceptions for customers, thereby forming subjective evaluations, helping customers to more accurately judge value and purchase decisions, and enhancing customer perceived value. Therefore, we propose the following hypothesis:

H2a: Compared with online stores, interaction service in offline physical stores has a positive impact on perceived fluency.

H2b: Compared with online stores, interaction service in offline physical stores has a positive impact on perceived value.

3.3 Price comparison

Previous studies have repeatedly suggested that the price factor is the most important factor that causes consumers to showrooming^[1]. Price comparison (PC) is the motivation to compare the price of a product or service in a retail environment^[16]. When choosing a purchase channel, consumers tend to prefer online channels, as online store prices are generally lower than experience store prices. Therefore, the information about the price promotion of these products and the presentation of price information clues will affect the smoothness of purchase^[20]. Most online store platforms can directly display the price savings when the consumer purchases an order, and it is easier for consumers to calculate the normal price and discount differences, and improve the fluency of price information processing.

Although the price difference between offline and online has gradually narrowed in recent years, due to the high rents of physical stores and high operating costs, consumers are more inclined to buy online to obtain lower prices. More importantly, online stores provide more price clues, and online store prices on different platforms also vary greatly^[21]. In this case, it is easier for consumers to compare product prices and make purchasing decisions^[22]. This gives consumers more decision-making opportunities to monetize and increases perceived

value. Therefore, we propose the following hypothesis:

H3a: Compared with online stores, price comparison in offline physical stores has a positive impact on perceived fluency.

H3b: Compared with online stores, price comparison in offline physical stores has a positive impact on perceived value.

3.4 After sales service

After sales service (ASS) refers to activities that occur after the initial sales transaction. After sales activities play a key role for businesses, mainly including delivery after product purchase, problem resolution, return and refund policies, etc. In the past, not being able to get products in time has been one of the criticisms of online shopping and a driving factor for consumers' tendency to buy offline, but with the continuous improvement of the logistics system, the time urgency of online shopping has been greatly solved. Online purchases can be delivered home, eliminating the inconvenience of buying heavy products offline.

In addition, online purchase products can provide home delivery service, high convenience and efficiency of online return and exchange, short refund response time^[23]. And if there is a problem with the use of the purchased product, consumers can timely communicate with customer service personnel across the time and space boundaries online. Therefore, the quality of after sales service determines the perceived fluency and value of consumers. Therefore, we propose the following hypothesis:

H4a: Compared with online stores, after sales service in offline physical stores has a positive impact on perceived fluency.

H4b: Compared with online stores, after sales service in offline physical stores has a positive impact on perceived value.

Finally, as we mentioned in 2.3 above, both perceived fluency and perceived value have an impact on multi-channel shopping behavior. Therefore, we propose the following hypothesis:

H5: perceived fluency has a positive impact on perceived fluency.

H6: perceived value has a positive impact on perceived value.

4. EMPIRICAL STUDY

4.1 Sample

We adopted a questionnaire survey to obtain data. The questionnaire is divided into two parts: the first part is the demographic information of the interviewees, and the second part measures all latent variables in the research model. We borrowed from existing mature items and used the seven-point Likert scale as a measure of latent variables in the text. In order to ensure the accuracy of the measurement items, we conducted a pre-survey before issuing the formal questionnaire to improve the quality of the questionnaire items.

384 questionnaires were recovered in the end, and invalid questionnaires with incomplete answers or obvious random filling were excluded. The final valid questionnaires were 310. Among the valid samples, men accounted for 45%, the age group was mainly concentrated in the age of 18-25, accounting for 77% of the total, the academic background is mainly undergraduate students (68%), the monthly income is mostly 4000-6000 yuan.

4.2 Data analysis

4.2.1 Reliability and validity testing

We combine SPSS 25.0 and AMOS 22.0 for reliability and validity tests. The analysis results showed that the Cronbach's α and CR values of all variables exceed 0.7, and the AVE values exceed 0.5, indicating that the data have good reliability and convergence validity. The test of discriminant validity is obtained by comparing the square root of AVE with the correlation coefficient of each variable. The results show that the correlation

between perceived value and online shopping is high, but the discriminant validity of the overall variables is good, and the model can be used as valid sample data for structural equation modeling. The detailed reliability and validity test results are shown in Table 1.

Table 1. Reliability and validity analysis

variables	α	CR	AVE	IA	IS	PC	ASS	PF	PV	showrooming
IA	0.778	0.778	0.540	0.735						
IS	0.804	0.814	0.597	0.668	0.773					
PC	0.832	0.831	0.554	0.631	0.578	0.744				
ASS	0.865	0.870	0.691	0.130	0.137	0.266	0.831			
PF	0.796	0.792	0.561	0.497	0.528	0.547	0.371	0.749		
PV	0.854	0.848	0.584	0.566	0.580	0.615	0.264	0.707	0.764	
showrooming	0.808	0.804	0.578	0.653	0.591	0.682	0.255	0.666	0.775	0.760

Note: The diagonal values represent the square root of AVE.

4.2.2 Hypotheses testing

We use AMOS 22.0 for structural equation modeling. First, the overall model fitting degree is tested, and the following model fitting degree indicators are output: $\chi^2/d.f=2.239$; GFI=0.875; CFI=0.935; TLI=0.922; IFI=0.935; RMSEA=0.063. It shows that the model has good adaptability. The final hypothesis test results are shown in Table 2. All path coefficients are positive numbers showing the positive relationship between the variables, but interaction service as independent variable has no significant effect on perceived fluency and perceived value, and H2a and H2b are not valid. We think the current online interactive services are becoming more and more perfect, and the differences between online and offline are gradually narrowing. Perceived fluency and perceived value both positively affect showrooming, and P values are less than 0.001, showing that the psychological variables of perceived fluency and perceived value have a significant positive effect on showrooming. In the other path results, information availability, price comparison and after sales service are positively affecting perceived fluency and perceived value, which are consistent with our expectations.

Table 2. Data analysis result

Paths	Estimate	S.E.	C.R.	P
information availability ---> perceived fluency	0.250	0.124	2.014	0.044**
interaction service ---> perceived fluency	0.127	0.090	1.412	0.158
price comparison ---> perceived fluency	0.238	0.087	2.745	0.006**
after sales service ---> perceived fluency	0.174	0.033	5.233	***
information availability ---> perceived value	0.232	0.122	1.894	0.058*
interaction service ---> perceived value	0.116	0.089	1.310	0.190
price comparison ---> perceived value	0.443	0.090	4.942	***
after sales service ---> perceived value	0.069	0.032	2.123	0.034**
perceived fluency ---> showrooming	0.326	0.076	4.297	***
perceived value ---> showrooming	0.813	0.082	9.979	***

Note: *** significant at $p < 0.001$; ** significant at $p < 0.05$; *significant at $p < 0.1$.

5. CONCLUSION

This paper builds a model of influencing factors of showrooming based on cognition appraisal theory. Testing by structural equation modeling, the research results show that information availability, price comparison, and after sales service can affect consumers' perceived fluency and perceived value, while perceived fluency and perceived value significantly affect showrooming. Accordingly, the implications of this

study are as follows.

5.1 Theoretical implications

This paper focuses on consumer loyalty in the multi-channel shopping process, that is, using the same retailer's offline and online channels to purchase products.

First, in the existing researches on showrooming, most of them regard showrooming as a negative behavior, and define it as the behavior of consumers changing retailers at the same time as channel conversion. The research results complement the existing showrooming research and provide a way for retailers to enable consumers in the process of channel conversion.

Secondly, the cognitive appraisal theory is applied to the showrooming behavior, and the forming process of the showrooming behavior is divided into three stages. Different from the previous literature, which directly studies the influence of channel characteristics on showrooming, this paper introduces perceived fluency and perceived value as important psychological variables, revealing the influence mechanism of the formation process of showrooming.

5.2 Practical implications

In terms of how to improve the perceived fluency and value of consumers, according to the results of this article, retailers can improve the following measures.

An important reason why consumers choose offline channel search is the authenticity of the product's touch. When retailers provide consumer services in physical stores, they can better display product information to consumers and list product parameter information. Under the trend of combining online and offline channels, product barcodes can be scanned on the spot and product details can be viewed on mobile phones, so that consumers can not only understand product information, but also actually feel it at the touch; at the same time, it can be provided to consumers online price information and discount information, and provide online ordering services. This promotes consumers' shopping opportunities at the same retailer and effectively prevents consumers from searching for other retailers through their mobile phones. For after sales service, online delivery can be provided, but some return and exchange policies need to be improved, and retailers can provide humanized services for online shopping and offline return to reduce consumer's perceived risk.

In short, through the improvement of product information, prices, and after sales services, retailers can provide consumers with more perceived fluency and perceived value, in order to promote consumers to switch channels instead of switching retailers.

5.3 Limitations and future research directions

There are some limitations in this paper. First, most of the samples are from surveys of young people, and data from other ages are lacking. Second, product involvement may affect showrooming behavior. This article will explore the moderating role of product involvement in the future.

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