

Print ISSN: 1738-3110 / Online ISSN 2093-7717  
<http://dx.doi.org/10.15722/jds.16.2.201802.35>

## Store's Visual Sensory Cues, Emotion, and Reusage Intention\*

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Received: January 5, 2018. Revised: January 30, 2018. Accepted: February 15, 2018.

### Abstract

**Purpose** – This research aimed at exploring the mediation roles of the arousal and pleasure in the effects of the congruity between visual sensory cues of a retail store and consumers' self-image on the intent to reuse the store.

**Research design, data, and methodology** - The data from 278 Chinese consumers who answered the questionnaire online were analyzed by using structural equation model of Amos 21.0 program to verify the hypotheses.

**Results** - Store's visual sensory cues congruent with consumers' self-image directly affected the intention to reuse the store, and had positive impacts on both their arousal and pleasure states. The consumers' pleasure positively influenced on their intention, but their arousal did not influence on the intention. Consumers' pleasure played mediation roles in the effect of the congruity on the intention to reuse the store.

**Conclusions** - Retail store marketers should pay attention to visual sensory cues to match the cues to consumers' self-image, when designing their store settings. When developing the cues, to help consumers feel pleasure which in turn, induces loyalty to their store, the marketers should develop the atmosphere setting in the respects of the congruity between the visual sensory cues and the self image.

**Key Words:** Arousal, Intent to Reuse Store, Pleasure, Self-Image, Visual Sensory Cue.

**JEL Classifications:** C83, L81, M31, P46.

### 1. Introduction

Different sensory cues of a store could lead to different affective or cognitive responses, which in turn, could have impact on consumer behavior (Bitner, 1992; Turley & Milliman, 2000). Sensory cue-based atmosphere setting of a retail store could help consumers feel positive emotions (Chang, Eckmann, & Yan, 2011). Previous researches suggest the ways of taking advantage of sensory cues (e.g., color, sound, taste, and flavor) to explore how external environment stimuli influence consumer behavior (Loureiro &

Roschk, 2014; Garaus & Wagner, 2016; Kim, Park, Lee, & Choi, 2016). Past research also has identified the effects of color image (Gordon, Finlay, & Watts, 1994), warm lighting (Park & Farr, 2007), and pleasant design (Norman, 2004) on consumer behavior to shed light on the view that different visual sensory cues can lead to different consumer behavior.

However, consumers would like to use products or brands congruent with their self images to show off their self to others (Wallendorf & Arnould, 1988), and to maintain and strengthen their self-concept (Zinkham & Hong, 1991). Self-concept denoting totality of the individual's thoughts and feelings having reference to himself or herself as an object (Rosenberg, 1979) has some effect on individual's behavior (Zinkham & Hong, 1991). And self-image is regarded as a cognitive system which is connected with consumers' feelings and behaviors. Actually, the importance of self is considered in the view that consumers' self-images usually have effects on their buying behaviors in many cases (Zinkham et al., 1991). Sirgy(1982) found that consumers were more likely to buy a brand when they recognized the congruity (or congruence) between the brand-image and their actual or ideal self-concept. Consumers usually tend to

\* This research was supported by "Research Base Construction Fund Support Program" funded by Chonbuk National University in 2017.

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associate a brand or product with their self-image. Self-image congruent to a brand has significant effects on consumers' brand preference and intent to purchase the brand (Ericksen, 1997; Mehta, 1999). They prefer to buy products or brands which are close to their self images.

Consumers can perceive external stimulus and process its informations primarily through recognizing sensory cues. Then, what will happen when visual sensory cues are associated with consumers' self-image? In other words, when consumers perceive a congruency between the visual sensory cues of a store and their self-images, how consumers will behave? Sirgy, Johar, Samli, and Claiborne (1991) argued that consumer's self-image congruity to a store's symbolic image can be the criteria in evaluating the store. And Morrin and Chebat (2005) explored that consumers' shopping style congruity to atmospheric cues such as music and scent could induce consumer's positive response. Helmeffalk(2016) demonstrates that sensory cues of a store affect the store-image. However, to the best of our knowledge, prior researchers have not paid much attention to exploring roles of the relationship between store's visual sensory cues and consumers' self-image. Furthermore they have given little attention to whether matching between the visual sensory cues and self-image can affect consumers' emotion state, which, in turn, could affect subsequent behavior.

Therefore, the current research mainly focuses on the congruity between consumers' self-image and store's visual sensory cues, and will explore how the congruity works on consumers' emotion state and their intent to reuse the store.

## 2. Literature Review and Hypotheses

### 2.1. Self-image Congruity

Self-image is a basic form of mental picture about oneself. That is, self-image refers to how people regard their strength and weakness which are used to describe themselves through various labels they or others give to themselves. More specifically, it can be regarded as a way of self-expression associated not only with one's appearance, but also with one's thoughts and feelings about oneself. Actually, self-image is built on one's view of reality, and it is influenced by the views about oneself from society and others (Usman, 2015). Additionally, the contents of self-image could be changed and enriched incessantly with the development of one's cognition, knowledge and experiences.

On the other side, in past research, congruence has been considered to describe how two or more variables match with each other, and how this matching works on a third variable (Hultén, 2015; Mattila & Wirtz, 2001; Morrin & Chebat, 2005). Previous studies related to self image

congruity or focus in environmental issues are summarized as followings which are shown in <Table 1>.

**<Table 1>** Past Studies about Weight Given to Self and Self Image Congruity

Contents	Sources
self, other people and biosphere as focus given to concern about environmental issues	Stern & Dietz (1994)
a set of items assessing each of the self, others and biosphere	Schultz (2001)
congruity between a store's symbolic image and consumer's self-image as evaluative criteria in forming attitude toward the store.	Sirgy, Johar, Samli, & laiborne (1991)
building model integrating retail environment, self-image congruity and retail patronage	Sirgy, Grewal, & Mangleburg (2000)
consumer response and congruity between consumers' shopping styles and atmospheric cues such as music and scent	Morrin & Chebat (2005)
interrelationships of self-congruity, functional image, and emotional attachment and loyalty	Govers & Schoormans (2005) Yusof & Ariffin (2016)

Based on individuals' general value set, Stern and Dietz (1994) suggested that attitudes of concern about environmental issues become different according to the relative weight that they places on themselves, other people, or biosphere such as plants and animals, and Schultz(2001) confirmed a set of items by which they would assess each of the three (self, others, biosphere) related to the environmental concern. Focused on consumers' self, there is self-serving bias in information processing by which they are more (less) motivated to enhance (debase) themselves (Snyder, 1979).

Sirgy, Johar, Samli, and Claiborne (1991) argued that congruity between a store's symbolic image and consumer's self-image could be used as evaluative criteria in forming attitude toward the store. And Sirgy, Grewal and Mangleburg (2000) developed the model in which the effects of the retail environment on self-image congruity and the effects of the self-congruity on retail patronage are integrated. Morrin and Chebat (2005) explored that the congruity between consumers' shopping styles and atmospheric cues such as music and scent effectively enhances consumer response. More impulsive (contemplative) shoppers were positively affected by the presence of background music (pleasant ambient scent). Yusof and Ariffin (2016) investigated the interrelationships of self-congruity, functional image, and emotional attachment and loyalty. They explored the significant effect of self-congruity on both functional image and emotional attachment where Functional image affected on emotional attachment. Loyalty was perceived to be

influenced by all of the self-congruity, functional image, and emotional image.

Consumers would like to show their self through using products or brands which are in congruence with their images (Sirgy, 1982; Wallendorf & Arnould, 1988), and tend to maintain and strengthen their self-concept by purchasing and using the products or brands (Zinkham et al., 1991). Govers and Schoormans(2005) explored that self-congruity directly influences on store choice, store loyalty and repeat intention.

Consumers usually buy products or brands which have symbolic meaning similar to their self-images to reveal their identities, and brand image identifying with consumers' self-image positively contributes to their evaluation of the brand. (Graeff, 1996). For example, if consumers considers their self as a friendly and modern person, they are more likely to be attracted to a brand with friendly and modern image. Also, many consumers attempt to improve or just show off their social status through buying luxury goods (Bagwell & Bernheim, 1996; O'Cass & Frost, 2002).

However, the roles of the relationship between store's visual sensory cues and consumers' self-image have not received much attention in the prior research.

## 2.2. Arousal and Pleasure as Emotional States

External environment stimuli can have subtle or significant influences on consumer behavior in both physiological and psychological view. Mehrabian and Russell(1974) as environmental psychologists developed Mehrabian-Russell Model to explain the effect of physical environment on individual human behavior. In this model, they demonstrated the Stimulus-Organism-Response framework (S-O-R). This model describes how people react to stimulus. According to the model, external environment stimuli(S) could activate a person to produce an emotional reaction(O). Then this emotional reaction will lead him or her to the responses to the environment(R) such as approach or avoidance responses. In this framework, emotional reaction is regarded as a medium between environmental stimuli and individual behavior.

According to this model, external stimuli generate emotional reactions (pleasure and arousal) which affect on the appraisal (cognitions) and behavior toward the perceived external stimuli environment. Mediating role of the emotional reactions in the effect of the perceived environment on the appraisal and behavior is suggested. However, this model did not give attention to the differences between external perspective and internal perspective. In view of external perspective, individuals only assess and respond to the information in their environment, whereas in view of the internal perspective, internal reaction of them to the environmental information can be assessed. Our framework has focus on the internal perspective in which congruity between visual sensory cues of a retail store and consumers' self-image is assessed.

When they are exposed to stimuli, pleasure refers to the extent to which they feel pleased, happy, joyful, or good, whereas arousal refers to the extent to which they feel stimulated, excited, alert, or active (Donovan & Rossiter, 1982). Consumers could prefer to use the store with atmospheric setting environment inducing pleasure and arousal (Mehrabian & Russell, 1974). Donovan et al. (1994) argued that pleasantness felt at in-store atmosphere could be an powerful factor to predict whether consumers would stay or just leave, how much money consumers would spend, and how long time they prefer to stay in the store.

The physical environment can be said to create an atmospheric comprehension based on its sensory cues to which the consumers could feel self image-congruent. However, past research has given little attention to the internal perspective that if external stimuli such as sensory cues of a store(S) are perceived to have the properties which are congruent with consumers' self-image, the stimuli could be inferred to activate their emotional states such like arousal and pleasure(O), which, in turn, stimulate the intent to reuse the store(R). Therefore, the current research will explore whether the congruence relationship between external sensory cues of a retail store and consumers' self-image positively affects consumers' emotional states (i.e., arousal and pleasure), and finally whether the emotional states play positive roles in forming the intent to reuse the store.

## 2.3. Visual Sensory Cues

Eye is an important part of our body. Only through eyes we can recognize color, lighting, position, shape, architecture, style, texture material or designs of an object. People usually believe in what they have seen, and thus tend to make decision on the basis of the visual sensory cues (Clement, 2007). Visual sensory cues are considered to be the most important parts in advertisements. Advertisements' shape and size, their color, the font of advertisement copy and light, all of these are crucial to their visual effect.

### 2.3.1. Color

Color itself has no emotional content, but it can cause psychological activity. Consumers may have different feelings through perceiving different color. Furthermore colors of products can make our memories and thoughts more activated (Bellizzi & Hite, 1992), which could increase purchase possibility.

In general, color are made of hue, saturation, and lightness. Hue is the pigment that we see in eyes. Different hue can give consumers different emotions. For example, the warm or red color makes them feel hot, excited, warm, which help them resulted in intense emotions; cool or blue color has cold deep characteristic, causing calm, cold

feeling. Bellizzi and Hite(1992) discovered that consumers were more responsive to blue environment in a retail store. Despite warm background seems more capable of attracting consumers' attention and attracting them to the store, blue environment can create a higher purchase rate. Hamid and Newport(1989) studied the effects of color on the emotional behavior of preschool children. They found that in the pink room, the children showed greater strength and positive feelings than in the blue room. Saturation is considered as the richness of a color leading to the place of the shades of colors being distinguished in same color scheme. And lightness refers to the depth of color tone.

Color is a very important visual sign in attracting consumers' attention because color is the first thing that consumers could take notice (Danger, 1987). Furthermore, color and its image preferred by consumers can affect brand choice (Gordon et al., 1994). Thus, knowing how to match color with a store can lead to the place of promoting the store more effectively.

### 2.3.2. Lighting and Design

Lighting that has an ability to arouse consumers contributes to their understanding the around environment overall (Custers et al., 2010). Summers and Hebert (2001) find that consumer behaviors can be influenced by lighting as an external stimuli. The lighting has an important effect on atmosphere in a retail setting (Schlosser, 1998). Cuttle and Brandston (1995) demonstrate that to a new lighting reset for a retail store, consumers will give more positive response than to the previous environment with old lighting. Park and Farr (2007) pointed that in the retail environment, consumers generally like warm lighting because it can make consumers more pleasant.

Overall design of retail store setting as a kind of visual element appeals to cognitive and non-cognitive responses about its aesthetics. The design congruent with products will make the products more attractive. In this regard, the design of retail store could yield an emotional response. Pleasant design in the visual has influence on consumers' emotion (Norman, 2004). Instead, unpleasant or non-attraction design may induce negative emotion from consumers.

### 2.4. Visual Sensory Cues Congruent with Self-image, and Emotion

Visual sensory cues such as color, lighting, and design are considered to have influences on consumers' arousal and pleasure states (Helmefalk & Hulten, 2017).

The effects of color hue or image (Gordon et al., 1994), warm lighting (Park & Farr, 2007), and pleasant design (Norman, 2004) as visual sensory cues on consumer emotion or choice have been explored in the existing research.

On the one hand, self-image congruence has been proved to have an important effect on consumers' behavior

(Kressmann et al., 2006) such as product or brand attitude (Bjerke & Polegato, 2006; Ekinci & Riley, 2003; Ibrahim & Najjar, 2008), its choice(Quester et al., 2000), brand preference(Jamal & Goode, 2001), brand loyalty (Kressmann et al., 2006) as well as post-purchasing satisfaction (He & Mukherjee, 2007).

Exposing to the color of a product can make consumers' certain memories and thoughts more activated (Bellizzi & Hite, 1992), and consumers' enthusiasm can be easily aroused by visual sensory cues (Helmefalk & Hulten, 2017). Different self concept or self-image pursued by individuals could lead to different preferences for colors, lighting setting or design style exposed to them, since the different cues can be associated with the different self concept or self-image in consumers' memory. And when store's visual sensory cues are consistent with consumers' self-image, they might be more likely to be awakened or aroused and pleased, since using the store with the cues could make it possible to show their self to themselves or others. Therefore, the current research assumes that visual sensory cues of a retail store will have positive impacts on both arousal and pleasure when they are in congruence with consumers' self-image. Formally,

- <H1> Visual sensory cues congruent with self-image have positive impact on arousal.
- <H2> Visual sensory cues congruent with self-image have positive impact on pleasure.

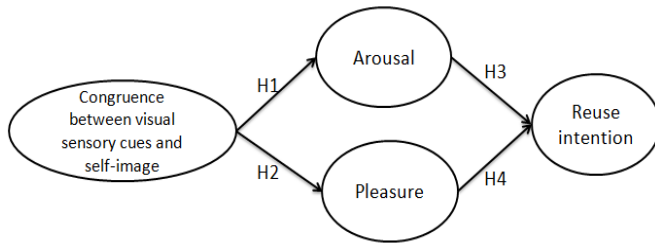
### 2.5. Consumers' Emotional States and Intent to Reuse

Consumers' behavioral responses (e.g., purchase intention, reuse intention, word of mouth) could be affected by their emotion states such as arousal and pleasure (Das & Varshneya, 2017). More specifically, consumers are more likely to focus on variety-seeking or impulse purchase (Prashar, Raja, Parasaran, & Venna, 2015) when they are of positive affective states (Kahn & Isen, 1993). And approach behaviors such as impulsive purchase will be more triggered at the state of higher arousal or pleasure, but it will be suppressed when consumers are less awakened or pleased (Menon & Kahn, 1995; Koo & Ju, 2010; Yi & Su, 2014). In line with these findings, consumers' purchase intention can be also positively influenced by their states of arousal and valence of pleasure.

The current research assumes that consumers' such emotional states as arousal and pleasure felt at a retail store will also play positive roles in forming their intention to reuse the store service. Formally,

- <H3> Consumers' state of arousal felt at a retail store will positively affect their intention to reuse the store.
- <H4> Consumers' pleasure felt at a retail store will positively affect their intention to reuse the store.

In sum, all the hypotheses in this research can be delineated by <figure 1>.



<Figure 1> Research Model

### 3. Measurement, Pretest and Data Collection

#### 3.1. Measurement

##### 3.1.1. Congruence between Visual Sensory Cues and Self-image

In order to measure the congruence between visual sensory cues and consumers' self-image, we developed four items based on the scale of self-image congruence created by Sirgy et al.(1997), which consist of: "I think the visual sensory cues of the store (e.g., color, lighting, overall design, etc.) are perceived to be consistent with how I see myself", "I think people similar to me also enjoy the visual sensory cues of the store (e.g., color, lighting, overall design, etc.)", "I think the visual sensory cues of the store (e.g., color, lighting, overall design, etc.) reflect who I am", "I think the visual images of the store are congruent with my self-image." And seven-point scale (1= not at all, 7= very much) was used to measure these items.

##### 3.1.2. Measurement of Arousal and Pleasure

By referring to Donovan and Rossiter(1982), four items(not aroused/sleepy/calm/sluggish(1)-aroused/wide awake/excited/frenzied(7)) were used to measure consumers' arousal, and to measure consumers' pleasure, five items(depressed/unhappy/unsatisfied/annoyed/restricted(1)-contented/happy/satisfied/ pleased/free(7)) were used.

##### 3.1.3. Measurement of Intent to Reuse

To measure consumers' intent to reuse the store, we used 5 items based on prior purchase intention scales (Nsairi, 2012). These five items are: "I will reuse the store rather than any other similar stores available", "I am willing to recommend others to use the store", "I intend to use the store in the future", "There is a possibility that I reuse the store in the future", "I prefer to reuse the store than any other similar stores in the future", all of which were answered on a seven-point scale (1= not at all, 7= very

much).

#### 3.2. Pretest and Data Collection

The current research mainly focuses on Chinese consumers. Therefore, all of the items in questionnaire were translated in Chinese. The Chinese questionnaire was back-translated in English to check any error at the Chinese translation, in which problems were not found. Before the formal investigation, we checked whether there were problems in our Chinese questionnaire. 70 Chinese students in Korea took part in our pretest and filled up the questionnaire online. According to the results of pretest, we made a few modifications to the questionnaire where we revised some expression in view of grammar and typo.

### 4. Basic Analysis and Testing Hypotheses

#### 4.1. Demographic Analysis Results

A total of 278 Chinese consumers participated in the formal survey to answer the questionnaire online where all of the participants chose food stores (restaurant, cafe shop, bakery, etc.) as object at the question asking store which they used recently. The demographic details of the participants are shown below in <Table 2>.

<Table 2> Demographics

Variable		Frequency	Percentage (%)
Gender	Male	97	34.9
	Female	181	65.1
Age	Under 20	15	5.4
	21-30	179	64.4
	31-40	60	21.6
	41-50	14	5
	Over 50	10	3.6
Income	Under 3000 RMB	26	9.4
	3000-6000 RMB	60	21.6
	6000-10000 RMB	83	29.9
	Over 10000 RMB	109	39.2
Total Response		278	100

#### 4.2. Reliability and Validity

To check convergent validity of items for each construct, principal component analysis based on Varimax in SPSS 22.0 program was conducted. The first item of arousal, and the second item of "visual" were removed to gain a good convergent validity. As shown in <Table 2>, there were four principal components which consist of reuse intention(5 items), pleasure(5 items), visual indicative of congruence between consumers' self image and store's visual sensory cues(3 items) and arousal(3 items).

And to check the internal consistency of each construct, reliability analysis was conducted by using Cronbach's  $\alpha$ . And the results in <Table 3> showing all  $\alpha$ s>.7 indicated that there was a good internal consistency for each construct.

<Table 3> Results of Analyzing Components

Construct	Item	Component				$\alpha$
		1	2	3	4	
Reuse intention	reuse3	.815	.361	.199	.086	.934
	reuse5	.802	.318	.159	.138	
	reuse4	.786	.383	.221	.064	
	reuse2	.783	.311	.165	.180	
	reuse1	.708	.444	.179	.182	
Pleasure	pleasure4	.291	.828	.175	.126	.924
	pleasure2	.391	.759	.145	.134	
	pleasure5	.333	.751	.132	.119	
	pleasure1	.394	.731	.270	.131	
	pleasure3	.467	.722	.220	.064	
Visual	visual4	.157	.170	.818	.274	.808
	visual3	.161	.112	.816	.254	
	visual1	.259	.308	.713	.007	
Arousal	arousal4	.067	.010	.225	.878	.793
	arousal3	.147	.183	.119	.856	
	arousal2	.325	.448	.296	.538	

4.3. Correlations among Constructs

To test the correlations among the four constructs, confirmatory factor analysis was conducted in AMOS 21.0. The results which include correlation coefficient, the squares of correlation coefficients and AVE there are in <Table 4>. And every AVE is above 0.5, and bigger than the square of correlation coefficient concerned with each pair of all constructs, which means the constructs are discriminant from each other.

<Table 4> Results of Analyzing Correlations

	Visual	Arousal	Pleasure	Reuse Intention
Visual	.601			
Arousal	.684 (.468)	.538		
Pleasure	.565 (.319)	.635 (.403)	.713	
Reuse Intention	.551 (.303)	.616 (.379)	.850 (.723)	.741

\*Note: The figures on diagonal line mean AVE, and the figures in ( ) are the squares of correlation coefficients.

4.4. Testing Hypotheses

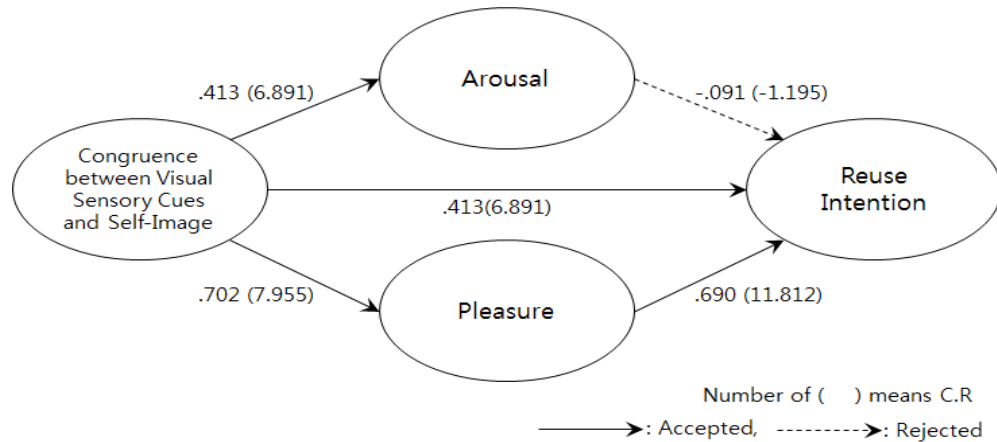
At the time of testing hypotheses, direct path of "visual  $\rightarrow$  reuse" was set referring to direct effect of self-congruity on store loyalty and repeat intention (Govers & Schoormans, 2005). In the results from structural equation model analysis of AMOS 21.0 program, there were good model fits such like  $\chi^2=358.193$  (df=159, P=.000), GFI=.872, AGFI=.825. The means of the sampling distributions of both GFI as measure of the relative amount of the variances and covariances in sample covariance matrix predicted by a model predicted covariance matrix and AGFI that adjusts for the degree of freedom of a model relative to the number of variables, tend to increase (decrease) as sample size increases (as the number of indicators per factor, or the number of factors increase) (Anderson & Gerbing, 1984). It could be inferred that in this empirical study sample size was relatively small compared with the number of indicators of each construct factor. However, there were RFI=.877, IFI=.924, TLI=.908 CFI=.924, RMSEA=.097 which mean good model fit.

<Table 5> Results of Testing Hypotheses

Hypotheses	Path	Estimate	S.E.	C.R.	P	Results
H1	visual $\rightarrow$ arousal	.413	.060	6.891	.000	Supported
H2	visual $\rightarrow$ pleasure	.702	.088	7.955	.000	Supported
H3	arousal $\rightarrow$ reuse	-.091	.076	-1.195	.232	Rejected
H4	pleasure $\rightarrow$ reuse	.690	.058	11.812	.000	Supported
Direct Path	visual $\rightarrow$ reuse	.413	.060	6.891	.000	Supported

$\chi^2=358.193$  (DF=100, P=.000), GFI=.872, AGFI=.825, RFI=.877, IFI=.924, TLI=.908 CFI=.924, RMSEA=.097.

As shown in <Figure 2> and <Table 5>, congruence between consumers' self-image and store's visual sensory cues has been proved to positively affect their arousal states(C.R=6.891, p<.05) and pleasure states(C.R=7.955, p<.05), which supported hypotheses 1, 2. In addition, consumers' emotion states(arousal, pleasure) showed a different influence on their intention to reuse the store. That is, even though consumers' pleasure state has been proved to positively affect their intention to reuse the store(C.R=11.812, p<.05), their arousal states did not have such positive effects(C.R=-1.195, p>.05), which indicated that hypothesis 4 was supported, but hypothesis 3 was rejected. Finally, in the direct path of "visual  $\rightarrow$  reuse" the congruence positively affect the subsequent reuse intention.



<Figure 2> Estimates of Each Path Coefficient

4.5. Mediation Effect Analysis

To explore whether each of arousal and pleasure plays a mediating role in the process of the congruence between consumers' self-image and store's visual sensory cues affecting the intent to reuse the store, mediation effect analysis was conducted by using phantom variables since our research model is a parallel multiple mediator model. As shown in <Table 6>, the direct path(B=.413 p<.05) was significant. And consumers' pleasure state played partial mediation role(B=.484 p<.05), whereas arousal state did not play any mediation role(B=-.038 p>.05).

<Table 6> Result of Mediation Analysis

Dependent variable	Path type	Paths	Estimate [Lower, Upper]	p
Reuse Intention	Direct	Visual → Reuse Intention	.413 (.237, 1.148)	.007
	Indirect	Visual → Arousal → Reuse Intention	-.038 (-.965, .037)	.452
		Visual → Pleasure → Reuse Intention	.484 (.328, .702)	.006

5. General Discussion

5.1. Research Summary

Previous researches have proved that self-image congruence influences on consumers' brand preference and purchase intention (Ericksen, 1997; Mehta, 1999). And Helmeffalk and his colleagues (2017) have found that sensory cues congruent with store atmosphere positively influence on consumers' emotional states such as pleasure and arousal, as well as their time spent at retail store and purchase intention. However, few researchers have paid

much attention to the mediation roles of the arousal and pleasure in the process of the congruence between visual sensory cues of a retail store and consumers' self-image affecting consumers' intent to reuse the store. Therefore, our study focused on the mediation roles to develop hypotheses by reviewing the previous studies.

In the process of verifying the hypotheses, 278 Chinese consumers answered the questionnaire online based on the food stores which they have experienced recently. And the data from them were analyzed by using structural equation model of Amos 21.0 program. The results are as follows.

First, the degree to which store's visual sensory cues was congruent with consumers' self-image had positive impacts on both their arousal and pleasure states, and also directly affected the intention to reuse the store which is consistent with the direct effect of self-congruity on store loyalty (Govers & Schoormans, 2005).

Second, consumers' pleasure level had positive effects on their intention to reuse the store, whereas their arousal level had not significant effects on the intention.

Third, consumers' pleasure level played partial mediation roles in the process of the congruence between visual sensory cues and self-image affecting their intention to reuse the store.

In the results of this study it was found that arousal level did not affect the intent to reuse the store. Optimal stimulation level theory mentions that consumers tend to pursue moderately arousal rather than too much arousal or not arousal at all (Berlyne, 1970). Many activities could stimulate consumers to be highly aroused, however, the high level of arousal can not always be favored by consumers. Certainly, individuals have different optimal stimulation level(OSL) because of their need or personality difference. Based on the difference in pursuing optimal stimulation, consumers can give different focus to environmental market stimuli. And the opposite direction of the initial approach or avoidance inclinations can override the initial (Elliot &

Church, 1997). Specifically, consumers who prefer low optimal stimulation level are more likely to engage in less arousing activities to serve their tolerance, whereas those who prefer high optimal stimulation level are likely to pursue exciting, adventurous, novel activities to serve their curiosity and creativity (Hirschman, 1980; Zuckerman, 2014). That is, those with high OSL preference tend to pay more attention to the visual cues congruent to their self which are exciting or novel rather than to self-incongruent or self-unrelated visual cues. However, those with low OSL preference or those who often experience self-related things tend to pay little attention to the visual cues congruent to their self. These points could be the reasons why in our study consumers' arousal level neither affected the reuse intention nor played the mediation roles. Therefore, it is necessary to explore the moderating role of stimulation need level (high vs. low) in the process of the arousal's affecting the reuse.

## 5.2. Theoretical and Managerial Implication

The current study explored the effects of retail store's visual sensory cues congruent with consumers' self-image on the arousal and pleasure, and found the mediation roles of consumers' pleasure in the effects of the congruence on the intent to reuse the store. Therefore this study contributes to theory development related to the factors which could influence store loyalty by showing how visual sensory cues congruent with self-image can positively affect the intent to reuse the store.

According to the outcomes of this study, we can offer some suggestions to marketers. In view of the effects of the visual sensory cues congruent with consumers' self-image on the arousal and pleasure, marketers of retail stores should pay more attention to visual sensory cues when designing store settings. They should make efforts to match their store's visual sensory cues to consumers' self-image. And marketers should focus on consumers' self image when developing their store's visual sensory cues to induce consumers' pleasure. In other words, marketers should adjust the atmosphere setting in view of the congruency between the sensory cues and the self image to help consumers feel pleasure. It also is very necessary for marketers to pay attention to consumers' visual sensory experience of feeling congruent with their self image and to emotional pleasure reactions when setting their store to keep loyalty to their store.

## 5.3. Limitations and Future Research

Even though the current research has some important findings, there are still several limitations.

First, there are many sensory cues experienced by consumers in their daily life, but the current study only focused on visual sensory cues of food retail store.

Therefore, future researches can focus on the diversity of sensory cues to extend the category of retail stores' sensory cues. For example, since nowadays music has become an indispensable element in consumers' daily life, it is necessary to explore whether auditory sensory cues of a retail store have effects on their emotional states and purchasing behaviors.

Second, arousal states did not show any direct or indirect effects on the reuse intention. Considering consumers' optimal stimulation level, consumers who prefer low optimal stimulation level are more likely to engage in less arousing activities while those who prefer high optimal stimulation level tend to pursue exciting, adventurous, novel activities (Hirschman, 1980; Zuckerman, 2014). Future research can take the moderating role of the optimal stimulation level into account by dividing stimulation into high level and low level.

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