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# The critical factors of shopping malls in urban complexes in China

Eddie C.M. Hui

*Department of Building and Real Estate,  
The Hong Kong Polytechnic University, Hong Kong*

Ning Ning

*Lianyungang YiLong Real Estate Co., Ltd., Lianyungang, China, and*

Ka Kwan Kevin Chan

*Department of Building and Real Estate,  
The Hong Kong Polytechnic University, Hong Kong*

## Abstract

**Purpose** – As the Chinese Government is planning to transform the economy from an export-oriented economy into a consumption-oriented economy, the impact of Chinese consumers to the economy will become more and more important. However, there is a lack of literature on Chinese consumers' behavior and the critical factors of shopping malls in China. Hence, this study aims to determine the critical factors of a shopping mall in an urban complex in China from customers' perspective, using Nanjing Wanda Plaza as an example for our case study.

**Design/methodology/approach** – This study carries out ranking analysis and factor analysis to determine the critical factors of the shopping mall. Then cluster analysis is applied to divide the customers into three segments, showing the importance of each factor to different customer segments. Furthermore, correspondence analysis is conducted to investigate the relationship between customer segments and customer characteristics (gender, occupation, age and income). This method can show how customer characteristics affect the critical factors of the shopping mall.

**Findings** – Sensual enjoyable shoppers consider the "soft factors" to be superior to the "hard factors", whereas the pragmatic shoppers are just the opposite.

**Originality/value** – This study can serve as a useful reference for developers in designing shopping malls in urban complexes to attract more customers.

**Keywords** Soft factors, Hard factors, Customer behavior, Customer satisfaction, Shopping mall, Urban complex

**Paper type** Research paper

## 1. Introduction

China's economy has been on a rising trend in recent years. As a result, the property prices have been surging fast, too. Therefore, the government has promulgated various regulations and policies to re-adjust the residential property market. This caused developers and investors to switch to the commercial property market. In particular, urban complex is a popular mode exhibited by developers. Urban complexes have large

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scales and are located in core areas in the major cities. More importantly, they combine different functional spaces through a group of buildings. Hence urban complexes have been developing rapidly recently.

Because the functions of urban complexes are converging to retail purposes, shopping mall is the most important part of an urban complex. Hence, it is important to determine the critical factors of shopping malls to help strengthen the competitiveness

of urban complexes. Furthermore, as China's economy is expected to keep a steady growth rate, people's income will also grow and hence their purchasing power will increase. They will visit shopping malls more often. Moreover, as the Chinese Government is planning to transform the economy from an export-oriented economy into a consumption-oriented economy, the impact of Chinese customers to the economy will become more and more important. Therefore, it is interesting to study how customer characteristics affect the critical factors of shopping malls in China.

Previous studies on related topics focused mainly on Western countries (Anselmsson, 2006 [Sweden]; Cardoso and Pinto, 2010 [Portugal]). Many of them adopted factor analysis to determine the critical factors of shopping malls and then applied cluster analysis to classify the whole sample of customers into different segments using these factors. Their results vary, but there is a trend that the "software aspects" (called "soft factors" in this study) of a shopping mall, such as decoration and layout, are becoming more important. Because China has a different historical, cultural and economic background from western countries, the characteristics and behavior of Chinese customers would be different from their western counterparts. Hence, the critical factors of shopping malls in China may also be different from that of shopping malls in western countries. This study aims to fill in this gap.

The objective of this study is to identify the critical factors of a shopping mall in an urban complex in China and to investigate the relationship between critical factors and customer characteristics. Nanjing Wanda Plaza is selected because Wanda Plaza, developed by Wanda Group, the largest mall developer in China, is the first brand of urban complexes in domestic commercial real estate (Wanda Plaza, 2016). The same format of shopping malls is repeated elsewhere in the Mainland. Hence, Nanjing Wanda Plaza is representative. Ranking analysis and factor analysis are carried out to determine the critical factors of the shopping mall. Then cluster analysis is conducted to divide the customers into three segments (or clusters), showing the importance of each factor to different customer segments. This is a kind of behavioral segmentation – the customers are divided into groups according to their knowledge of, attitude toward, usage rate or response to a product. Furthermore, demographic segmentation (or demographic characterization) is applied – the customers are characterized according to their gender, occupation, age and income. This method can investigate the relationship between customer segments and customer characteristics:

gender/occupation/ age/income. Then, correspondence analysis is conducted to further investigate the relationship between customer segments and gender/occupation/age/income. With the cluster analysis linking up the relationship between critical factors of the shopping mall and customer segments, and the correspondence analysis linking up the relationship between customer segments and customer characteristics, this study can show how customer characteristics affect the critical factors of the shopping mall. In particular, the whole sample of respondents is divided into six groups of occupations to find out the relationship between customers' occupation and the critical factors of the shopping mall.

Previous studies never analyzed the occupations of customers as fine as our study, so this literature gap can be filled in. This study can be applied to real-life situations that developers of shopping malls have to pay attention to customer characteristics and design the shopping malls accordingly to meet customers' needs. This will help them attract more customers to the shopping malls and hence increase their profits.

The paper proceeds as follows: Section 2 reviews previous studies on related topics. Section 3 presents the layout of the framework of our study. Section 4 describes our data source. Section 5 explains the tests, displays and analyzes the results. Finally, a conclusion is drawn in Section 6.

## **2. Literature review**

Customer satisfaction is a critical issue for both customers and shopping mall management (Anselmsson, 2006). The marketing concept says, "the key to achieving organizational goals consists in determining the needs and wants of target markets and delivering the desired satisfactions more effectively and efficiently than competitors" (Kotler, 1991, p. 10). Within this theoretical framework, one fundamental assumption is that if a customer is satisfied with a product, that customer is likely to remain loyal to the product in question (Anselmsson, 2006). According to Anselmsson (2006), customer satisfaction with a shopping center may be viewed as an individual's emotional reaction to personal evaluation of the total set of experiences encountered at the shopping center. That total set of experiences is rather diverse: shopping, catering, travelling to and from the center, etc. Customer satisfaction is important because a satisfied customer is likely to send more business back to the company, whereas an unsatisfied customer may be more apt to prevent the business from soaring. When a customer is satisfied with a product or service, he/she is likely to spread the word and help increase the company's profits (Ask.com, 2015). Mohsan *et al.* (2011) found that customer satisfaction had significant impact on customer loyalty and intentions to switch: the higher the customer satisfaction is, the higher the customer loyalty is and the lower the intentions to switch are.

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Because customer satisfaction is important, there are a number of studies on critical factors affecting behavior/satisfaction of customers visiting shopping malls or other shopping locations. A well-known and widely discussed framework for investigating retail store satisfaction is set up by Westbrook (1981), who designed a scale to measure eight dimensions of satisfaction with retail outlets: sales persons, environment, merchandising policies, service orientation, product/service, clientele, value and special sales. However, this scale is very store-specific and fails to capture the overall shopping center level and dimensions like everything-under-one-roof, retail mix, etc. Anselmsson (2006) investigated customer satisfaction with shopping malls in Sweden. He found eight underlying factors of varying character which were important to customer satisfaction. Kuruville *et al.* (2009) explored gender differences in mall shopping in India. They found significant differences in shopping behavior that could be ascribed to gender. Moreover, the discriminant analysis showed that shopping orientation and mall-shopping attitudes can discriminate between male and female shoppers. Cardoso and Pinto (2010) identified seven dimensions that explained the shopping motivations among Portuguese consumers. The findings confirmed the results obtained in previous studies carried out in the USA. Jackson *et al.* (2011) investigated the extent to which attitudes toward mall attributes and shopping value derived from a mall visit differ across gender and generational cohorts. Their results showed generational differences in attitude toward mall hygiene factors, locational convenience and entertainment features but no differences in hedonic and utilitarian shopping values by generational cohort. Hui *et al.* (2013) identified and analyzed crucial facilities management service dimensions that affect customer satisfaction with regards to the shopping mall sector. They found that management and maintenance of communal facilities is the most

crucial dimension with regard to the overall customer satisfaction.

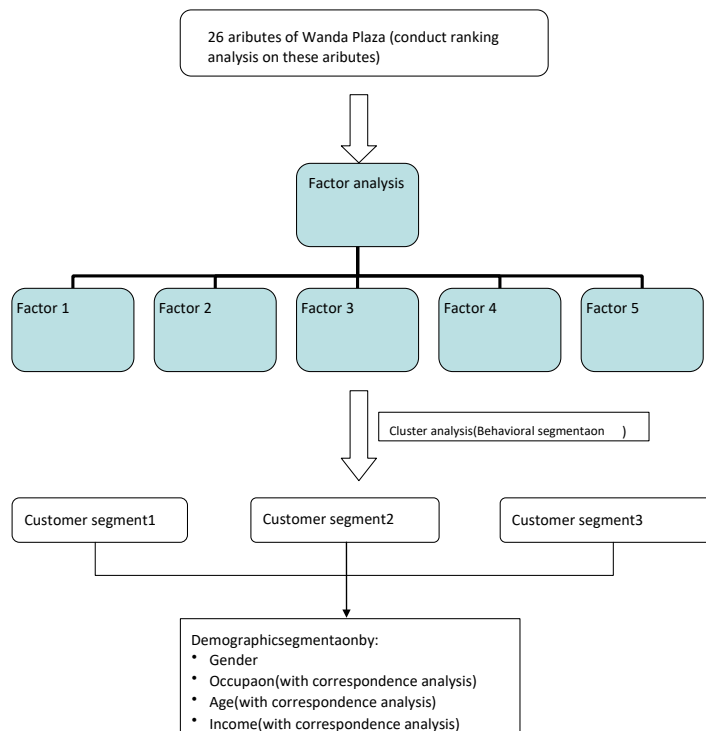
As customers of different characteristics may have different levels of satisfaction, many studies carry out customer segmentation (or market segmentation as stated in some literature), which is a marketing strategy that involves dividing a broad target market into subsets of consumers who have common needs and priorities and then designing and implementing strategies to target them (Wikipedia, 2014). The following is a list of previous studies on customer segmentation. Bloch *et al.* (1994) explored consumers' interrelationships with malls as consumption sites using the concept of a habitat drawn from the ecological sciences. They conducted cluster analysis to segment the whole sample of customers into four groups: mall enthusiasts, traditionalists, grazers and minimalists. Ruiz *et al.* (2004) conducted a segmentation analysis of a

shopping mall's customers according to the activities they performed during their visit. They extended Bloch *et al.* (1994)'s methodology with measures of perceptions, emotions and motivations. The resulting activity-based clusters were found to be significantly different along many psychographic dimensions and demographic variables. Gilboa (2009) presented

a segmentation of Israeli mall customers. He segmented the whole sample into four groups of customers: disloyal, family bonders, minimalists and mall enthusiasts (the groups minimalists and mall enthusiasts also appear in Bloch *et al.* (1994)). The segments were found to differ in socio-demographic characteristics (gender, age, marital status, religious affiliation and occupation). Theodoridis and Chatzipanagiotou (2009) investigated store image attributes and customer satisfaction across different customer profiles within the supermarket sector in Greece. They identified four specific segments of shoppers, namely, the typical, the unstable, the social and the occasional. They found that four of the six considered store attributes appeared to be significant determinants of customer satisfaction. However, when they examined the degree of invariance between the four groups, only pricing and products-related attributes were equally significant in all four groups. Based on the seven dimensions found, Cardoso and Pinto (2010) segmented five groups of consumers:

- (1) involved shopper;
- (2) pragmatic shopper;
- (3) moderate shopper; (4) dynamic shopper; and
- (5) social shopper.

Frasquet *et al.* (2001) constructed a multinomial logit model using perceived shopping center value dimensions as explanatory variables. They estimated the model for the sample as a whole and then by consumer segments. The results showed that estimation at the segment level produces better model fit. Furthermore, the preference structures and the sensitivity to changes in shopping center perceived value vary among segments.



**Figure 1.**  
Our framework

Anselmsson (2006) compared sources of customer satisfaction visit frequency at shopping malls among customer segments based on age and gender.

The above lists some of the previous literature on factors affecting customer satisfaction. Most of the previous studies worked on European or North American countries. One article investigated mall shopping in India, whereas one other worked on Israeli mall customers. However, none of them studied Chinese mall customers. As mentioned in introduction, China has become the second largest economy in the world. Moreover, as the Chinese Government is planning to transform the economy from an export-oriented economy into a consumption-oriented economy, the impact of Chinese consumers to the economy will become more and more important. More importantly, because China has a different historical, cultural and economic background from western countries, the characteristics and behavior of Chinese customers would be different from their western counterparts. Hence, the critical factors of shopping malls in China may also be different from that of shopping malls in western countries. Therefore, this study fills in this gap and tries to link the results to cultural and economic reasons. Furthermore, some of the previous studies mentioned above, like Frassetto *et al.* (2001), Ruiz *et al.* (2004) and Gilboa (2009), performed segmentation according to customers' occupation. However, none of them divided the group "workers" into smaller subgroups of occupations. As there are many different kinds of occupations in an urban complex, customers of different occupations may have different shopping behavior/satisfaction level toward the shopping mall. Hence, the whole sample of respondents is divided into

and

Order	Attribute	Total score	Mean	Table I. Result of ranking analysis
1	Public transport	620	4.11	
2	Location	614	4.07	
3	Scale	605	4.01	
4	Brand	602	3.99	
5	Name	601	3.98	
6	Signage	599	3.97	
7	Road	594	3.93	
8	Advertising	591	3.91	
9	Display	589	3.9	
10	Indoor decoration	586	3.88	
11	Catering	585	3.87	
12	Parking	581	3.85	
12	Entertainment	582	3.85	
14	Commodity quality	579	3.83	
14	Employee attitude	579	3.81	
16	Walking distance	576	3.77	
17	Humanized service	570	3.76	
18	Anchor store	568	3.71	
19	Employee posture	560	3.7	
20	Space layout	559	3.68	
21	Auxiliary store	555	3.68	
21	Promotion	555	3.66	
23	Specialization	552	3.66	
23	Architectural style	552	3.65	
25	Diversification	551	3.64	
26	Commodity price	549		

six groups of occupations to find out the relationship between customers' occupation and the critical factors of the shopping mall. Moreover, correspondence analysis, of which [Frasquet et al., \(2001\)](#); [Ruiz et al. \(2004\)](#) and [Gilboa \(2009\)](#) did not conduct, is carried out to further investigate the relationship between customer segments and customer characteristics. This will be further discussed in Section 3.

### 3. Our framework

This section introduces the framework of study as shown in the following [Figure 1](#).

First, ranking analysis is performed on 26 attributes (the 26 attributes are listed in [Table I](#)) to get a brief overview of the most important attributes of the shopping mall. However, because many attributes are interrelated, a factor analysis is further conducted so that similar attributes are grouped together into a single factor. Thus, the resulting factors can reflect the critical factors of the shopping mall more truly. In particular, the factors are divided into two categories: "hard factors" and "soft factors" (the definition of "hard factors" and "soft factors" will be described in Section 5). Thus, a more precise picture of critical factors of the shopping mall is obtained. Then, using the factors generated from the factor analysis, cluster analysis (i.e. behavioral segmentation) is applied to divide the whole sample of respondents into several customer segments to find the importance of each factor to different customer segments. Finally, the whole sample of customers is segmented according to their demographic characteristics: gender/occupation/age/income. Except gender, correspondence analysis is conducted on the other three characteristics. Thus, the



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relationship between customer characteristics (gender/occupation/age/income) and customer segment can be seen. Because the customer segments are generated from the factors by cluster analysis, combining the results of cluster analysis and demographic segmentation, this framework can show how customer characteristics affect the critical factors of the shopping mall (the details of ranking analysis, factor analysis, cluster analysis and correspondence analysis will be discussed in Section 5).

In particular, in demographic segmentation, the whole sample of respondents is divided into six groups of occupations. Some of the previous studies like [Frasquet \*et al.\* \(2001\)](#); [Ruiz \*et al.\* \(2004\)](#) and [Gilboa \(2009\)](#) also performed segmentation according to customers' occupation. However, [Frasquet \*et al.\* \(2001\)](#) just divided the whole sample of customers into three categories: housewife, students, worker outside the home. [Ruiz \*et al.\* \(2004\)](#) divided the whole sample into five groups: at work, student, retired, unemployed, at home, whereas [Gilboa \(2009\)](#) divided the whole sample into three categories only: workers, non-workers, adolescents and young people (students and soldiers aged 18-21). This may not be enough for our study because unlike rural areas, there are many business activities in an urban complex, so there are many different kinds of occupations. Behaviors of customers of different occupations may be different, so it is better to divide the group "workers" (or "worker outside the home" in [Frasquet \*et al.\* \(2001\)](#) or "at work" in [Ruiz \*et al.\* \(2004\)](#)) into smaller subgroups to analyze the characteristics of customers of different occupations. Therefore, the whole sample of respondents is divided into six groups of occupations: administrative personnel, technical personnel, service personnel, production personnel, students and others. This can reflect the difference in shopping behavior across groups of different occupations. Hence, this framework manifests the relationship between customers' occupation and the critical factors of the shopping mall. This will be useful for developers to design their shopping malls accordingly to target at customers of particular type(s) of occupations.

#### **4. Data source**

This section describes the data source. A questionnaire consisting of two parts is constructed:

- the first part collects respondents' personal information: gender, occupation, age and income (these four pieces of information are used for demographic segmentation in our study); and
- the second part consists of factor statements which concern about customer satisfaction on every issue of Nanjing Wanda Plaza.

The statements are measured by Likert five-point scale. The questionnaires are distributed via two different channels:



- (1) 50 questionnaire through the internet, with respondents restricted to Nanjing residents or ex-Nanjing residents only; and
- (2) 150 face-to-face interviews in *Xin Jie Kou* (Xin jie kou is the most flourishing commercial center in Nanjing, which consists of Wanda, Durkee, Eagle and other top-ranking malls).

A total of 151 valid questionnaires are received, with a response rate of 75.5 per cent. Prior to further analysis of the data, a reliability test has been conducted. The resulting Cronbach's alpha coefficient is 0.943, indicating that the data sample is internally consistent.

After that, ranking analysis, factor analysis, clustering and corresponding analysis are performed according to the framework set in Section 3. The results will be listed in the following Section.

## 5. Tests and results

### 5.1 Ranking analysis

To get a brief overview of the most important attributes of the shopping mall, ranking analysis is carried out by SPSS 18.0. A total of 26 attributes are selected (Table I). Most of the attributes are similar to those used in previous studies like Frasquet *et al.* (2001) and Anselmsson (2006). However, for simplicity, instead of listing the attributes as statements as in the previous studies, this study lists the attributes as items. The total score and mean of each attribute are generated. The 26 attributes are ranked according to their mean score values, which are shown in Table I.

From Table I, the top three attributes are "Public Transport", "Location" and "Scale". The top two attributes are practical issues, whereas "Scale" is an indirect factor. Looking at the result of the ranking analysis alone, one may conclude that practical attributes are more important for Wanda Plaza. However, because many attributes are interrelated, ranking analysis cannot show the real picture of the critical factors. Therefore, factor analysis is conducted to group interrelated attributes into a single factor, resulting in a smaller set of more reliable, uncorrelated factors. This resulting set of factors represents the critical factors of the shopping mall more truly.

### 5.2 Factor analysis

Here factor analysis is conducted to further explore the critical factors of Wanda Plaza. This technique was applied in a number of previous studies like Bloch *et al.* (1994); Frasquet *et al.* (2001); Ruiz *et al.* (2004); Anselmsson (2006); Gilboa (2009); Theodoridis and Chatzipanagiotou (2009); Cardoso and Pinto (2010) and Jackson *et al.* (2011). Exploratory factor analysis is conducted by SPSS 18.0 because there are no "a priori" assumptions about relationships among factors. From the 26 attributes listed in Table I, the

factor analysis generates a total of five factors, namely, “design-image”, “transport-marketing”, “commodity”, “service-tenant” and “relaxation”. The factors “transport-marketing”, “commodity” and “service-tenant” can be regarded as “hard factors” because they concern about practical issues, such as transportation, commodity and services, which are directly related to customers’ shopping activities. They are the “hardware aspects” of a shopping mall. The factors “design-image” and “relaxation” can be regarded as “soft factors” because they are either intangible factors such as decoration, layout and brand which affect the image of a shopping mall or indirect factors such as leisure and entertainment which enhance customers’ feeling. They are the “software aspects” of a shopping mall. The resulting five factors can truly and reliably reflect the critical factors of the shopping mall, and developers can know whether the “hard factors” or the “soft factors” are more important and hence design their shopping malls accordingly to attract more customers.

Table II shows the result of factor analysis. Each entry in the table indicates the loading of the attribute to the corresponding factor. The attribute is classified to the factor of which the loading of the attribute is the maximum. For example, the attribute “indoor decoration” belongs to the factor “design-image” because its loading to the factor “design-image” is the maximum (0.818).

From Table II, out of the five factors, the most important factor is “design-image”, which is a “soft factor”. The next three factors “transport-marketing”, “commodity” and “service-tenant” all belong to “hard factors”. The bottom factor is another “soft factor”: “relaxation”. The factor analysis generates a different result from the ranking analysis does: the ranking analysis shows that the “hard factors” are more important, but the top factor generated by the factor analysis is a “soft factor”. As explained before, ranking analysis fails show the real picture of the critical factors because many attributes are interrelated. The factor analysis can generate a more reliable result of critical factors of a shopping mall.

Result of factor analysis	Factors				
	Design-image factor	Transportmarketing factor	Commodity factor	Servicetenant factor	Relaxation factor

Indoor decoration	0.818	0.087	0.023	0.257	0.145	0.126	0.078
Signage	0.793	0.183		0.262	0.172		0.082
Space layout	0.751	0.194	0.240	0.251	0.275	0.180	0.021
Walking distance	0.727	0.171		0.270	0.279		0.015
Scale	0.642	0.192		0.157	0.284		0.367
Name	0.625	0.285		0.009	0.316	0.019	0.295
Brand	0.601	0.788	0.780	0.103	0.256	0.386	0.446
Architectural style	0.550	0.747	0.735	0.153	0.068	0.384	0.078
Road	0.221	0.723		0.119	0.035	0.031	0.006
Advertising	0.161	0.649		0.050	0.099	0.183	0.176
Promotion	0.071	0.621	0.127	0.108	0.182	0.214	0.103
Parking	0.148	0.183	0.213	0.174	0.723	0.692	0.098
Display	0.097	0.024	0.250	0.107	0.682		0.045
Location	0.129	0.250		0.097	0.539	0.495	0.528
Public	0.168	0.154		0.113	0.419		0.559
transport	0.254	0.240	0.165	0.814	0.353		0.042
Diversification	0.190	0.026	0.005	0.805			0.153
Commodity price	0.180			0.773			0.079
Specialization	0.247	al component analysi		0.686			0.163
Commodity quality	0.273	Kaise		0.240			0.065
Employee posture	0.365			0.243			0.127
Humanized service	0.486			0.156			0.101
Employee attitude	0.358			0.338			0.258
Anchor store	0.322			0.398			0.287
Auxiliary store	0.194			0.335			0.577
Entertainment	0.273			0.305			0.493
Catering							

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#### Notes:

normalization; rota  
iterations

There are both similarities and differences between our results and [Anselmsson \(2006\)](#)'s. Our results show that “design-image” is the most important factor. This is similar to [Anselmsson \(2006\)](#)'s result that the most important factor is “atmosphere” because the two factors are similar in nature. Both studies show that the atmosphere of a shopping mall is the top factor considered by customers. Our results show that “transport-marketing” is the second most important factor. However, [Anselmsson \(2006\)](#)'s result shows that “location” is the least important factor of all. A possible reason for this difference in results is that Chinese customers are more pragmatic than their western counterparts. This is supported by [The Robin Report \(2014\)](#) that Chinese consumers remain staunchly pragmatic and are known to have one of the highest rates of savings in the world. [Yao et al. \(2011\)](#) find that Chinese households have stronger saving motives than American households, causing higher saving rates in China, compared with the USA. The difference in saving motives is related to cultural and economic differences between China and the USA. In the USA, unemployment insurance and other welfare programs provide a relatively sound

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safety net, whereas in China there are no such social-welfare programs. Furthermore, the Chinese culture, which is influenced by Confucianism, values education very highly. Recent Chinese economic reforms have shifted education costs to households, which gives them additional motive for education saving. [The Robin Report \(2014\)](#) also mentions that according to the Chinese Consumer Survey, impulse buying behaviors in China have not risen in more than a decade. Therefore, Chinese customers consider factors such as transportation/ location more important than their western counterparts.

Note that in [Cardoso and Pinto's \(2010\)](#) factor analysis, the resulting seven factors are in terms of shopping motivations: "pleasure and gratification shopping", "idea shopping", "social shopping", "role shopping", "value shopping", "achievement" and "efficiency". The factors "achievement" and "efficiency" belong to "utilitarian motivations", which are similar to "hard factors" in our factor analysis, whereas the remaining five factors belong to "hedonic motivations", which are similar to "soft factors" in our factor analysis. The two "utilitarian motivations" rank fourth and the last in [Cardoso and Pinto's \(2010\)](#) factor analysis. In particular, the factor "efficiency" is the least important factor of all, contrary to our result that "transport-marketing" is the second most important factor. The previous paragraph explains the reason. Furthermore, [Cardoso and Pinto's \(2010\)](#) study targets at young adults who tend to emphasize on "soft factors" but play down the importance of "hard factors". This will be further discussed in subsection 5.4.

### *5.3 Cluster analysis*

Here, cluster analysis is conducted to divide the whole sample of respondents into homogeneous groups. This is a kind of behavioral segmentation – customers are divided into groups according to their knowledge of, attitude toward, usage rate or response to a product. This technique was applied in many previous studies like [Bloch \*et al.\* \(1994\)](#); [Frasquet \*et al.\* \(2001\)](#); [Ruiz \*et al.\* \(2004\)](#); [Gilboa \(2009\)](#); [Theodoridis and Chatzipanagiotou \(2009\)](#); [Cardoso and Pinto \(2010\)](#). This can show the importance of each factor to different customer segments (or clusters).

This study applies SPSS 18.0 to conduct cluster analysis, dividing the whole sample into three clusters – pragmatic shopper, wandering shopper and sensual enjoyable shopper – from the five factors generated in the factor analysis. The overall correct classification rate is 96 per cent, which is acceptable. The result of the cluster analysis is shown as follows.

Note that in [Table III](#), each entry in the table (except those in the rows "Number" and "Percentage") indicates the mean score of the corresponding factor in the corresponding cluster, reflecting the importance of that factor to customers of that cluster, whereas "Number" and "Percentage" indicate the number and percentage of customers belonging to the corresponding cluster respectively.

In comparison, [Gilboa \(2009\)](#) classified the customers into four clusters – disloyal, family bonders, minimalists and mall enthusiasts – whereas [Cardoso and Pinto](#)

(2010) classified the customers into five clusters – involved shopper, pragmatic shopper, moderate shopper, dynamic shopper and social shopper. Although the clusters generated in the three studies are different, the cluster sensual enjoyable shopper in our study is similar to Cardoso and Pinto (2010)’s social shopper and Gilboa (2009)’s mall enthusiasts, whereas the cluster pragmatic shopper in our study is highly comparable to Cardoso and Pinto (2010)’s pragmatic shopper and is also somewhat comparable to Gilboa (2009)’s minimalists.

The following describes the characteristics of the three clusters (or customer segments) generated by our cluster analysis:

- (1) Pragmatic shoppers account for 48 per cent of all respondents. According to Cardoso and Pinto (2010), pragmatic shoppers see shopping as a utilitarian activity and do not give much importance to its enjoyment aspects. They are rational customers, and their main purpose of going to shopping malls is to buy particular types of goods. They prefer merchandise of high performance–cost ratio rather than feeling of pleasure. This can be seen from Table III that pragmatic shoppers consider the “hard factors” – transport-marketing, commodity and service-tenant – as the more important factors, especially the transport-marketing factor, which is the most important factor with a coefficient of 0.638. They pay little attention on the “soft factors”: design-image and relaxation factors. This result is similar to Cardoso and Pinto (2010)’s result that the cluster pragmatic shopper has a highest mean score in the two utilitarian motivations – achievement and efficiency (comparable to the “hard factors” in our study) – but a lower mean score in all the five hedonic motivations (comparable to the “soft factors” in our study).

			Customer segment	
		Pragmatic shopper	Wandering shopper	Sensual enjoyable shopper
Factor				
Table III. Result of cluster analysis	Design-image factor	0.26726	1.78086	0.20365
	Transport-marketing factor	0.63800	0.89795	0.61989
	Commodity factor	0.39675	3.73423	0.27400
	Service-tenant factor	0.25599	2.49337	0.30413
	Relaxation factor	0.04432	0.03562	0.04052
	Number	72	2	77
	(%)	47.68	1.32	50.99

- (2) Only about 1 per cent of the respondents are wandering shoppers. They enjoy the process of hanging out with high requirements for all the aspects of mall, except commodity factor. Because wandering shoppers only makes up a small part of all respondents, their characteristics will not be described in details in this study. (3) Sensual enjoyable shoppers account for about 51 per cent of all

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respondents, which is slightly more than the proportion of pragmatic shoppers. They are

similar to [Cardoso and Pinto \(2010\)](#)'s social shoppers, who go shopping with their friends or family to socialize and enjoy shopping for them too ([Cardoso and Pinto, 2010](#)). They go to shopping malls mainly for entertainment and catering instead of shopping. Therefore, they consider the "soft factors" to be more important than the "hard factors". This is shown in [Table III](#) that sensual enjoyable shoppers concern mostly about the design-image factor, whereas the relaxation factor is the second most important factor for them. However, they are indifferent to the "hard factors": transport-marketing, commodity and service-tenant factors. [Table III](#) shows that the characteristic of sensual enjoyable shoppers is just the opposite of that of pragmatic shoppers. This result is similar to [Cardoso and Pinto \(2010\)](#)'s result that the cluster social shopper has a highest mean score in three hedonic motivations – social shopping, role shopping and value shopping – but a lower mean score in the two utilitarian motivations.

From [Table III](#), slightly more than half of the respondents are sensual enjoyable shoppers.

This contributes to the result in [Table II](#) that the factor "design-image" is the most important factor of all. This is because sensual enjoyable shoppers consider the design-image factor to be the prior factor of a shopping mall ([Table III](#)). Hence, the results in [Tables II](#) and [III](#) are interrelated: the ranking of the factors is determined by the customer segments. Similar result is also found in [Cardoso and Pinto's \(2010\)](#) study. In their cluster analysis, the cluster social shopper occupies the largest percentage of all respondents (25.6 per cent), whereas the cluster pragmatic shopper is the smallest (19.2 per cent). Because social shoppers have a higher mean score in hedonic motivations than in utilitarian motivations, whereas pragmatic shoppers are just the opposite, this contributes to the result that hedonic motivations have a higher ranking in the factor analysis.

#### *5.4 Demographic segmentation and correspondence analysis*

After clustering, demographic segmentation is performed to see the demographic characteristics of each customer segment. The responders are segmented according to their gender, occupation, age and income. Note that this method of presentation differs from the method adopted in previous studies ([Frasquet et al., 2001](#); [Ruiz et al., 2004](#); [Gilboa, 2009](#), etc.) in the way that previous studies present the figures vertically, but this study presents the figures horizontally. For each type of gender/occupation/age/income, the percentage of that type of customers who belong to each of the three customer segments is listed out:

- (1) pragmatic shoppers;
- (2) wandering shoppers; and
- (3) sensual enjoyable shoppers.

Furthermore, correspondence analysis, of which previous studies did not perform, is conducted to obtain a clearer picture of relationship between customer segments and customers' occupation/age/income. For gender, correspondence analysis is not conducted because there are only two types of gender: male and female. Note that [Figures 2-4](#) are graphical representations of relationship between consumer classification (i.e. customer segment) and occupation/age/income. If a dot representing a

type of occupation/age/income is close to a dot representing a type of consumer classification, this means that consumers which belong to that type of occupation/age/ income tend to be that type of consumer classification.

*5.4.1 Gender.* [Table IV](#) shows the result of customer segmentation by gender. From the table, male customers are more likely to be pragmatic shoppers because 52.9 per cent of them are of this category. However, the majority of female customers belong to sensual enjoyable shoppers (55.4 per cent). Generally, men would go to shopping malls only when they really need to buy something. On the other hand, women like to go to shopping malls for various activities such as catering, entertainment, etc. This result is similar to that presented by [Gilboa \(2009\)](#); [Cardoso and Pinto \(2010\)](#) and [Kuruvilla \*et al.\* \(2009\)](#). [Gilboa \(2009\)](#) finds that 73.7 per cent of mall enthusiasts are female. While for minimalists, the percentage of female is 66 per cent, [Cardoso and Pinto \(2010\)](#) find that about two-third (37 out of 56) of social shoppers are female but only 43 per cent (18 out of 42) of pragmatic shoppers are female. [Kuruvilla \*et al.\* \(2009\)](#) also find that female consumers tend to have a more positive mall-shopping attitude. The statement “men buy and women shop” ([Kuruvilla \*et al.\*, 2009](#)) seems to be true for many countries.

*5.4.2 Occupation.* [Table V](#) shows the result of customer segmentation by occupation. Unlike rural areas, there are many business activities in an urban complex, so there are many different kinds of occupations. Behaviors of customers of different occupations may be different, so it is important to analyze the characteristics of customers of different occupations. From [Table V](#), a large proportion of service and production personnel are pragmatic shoppers (75 per cent and 89 per cent respectively). A possible



Figure 2. Result of correspondence analysis by occupation

675

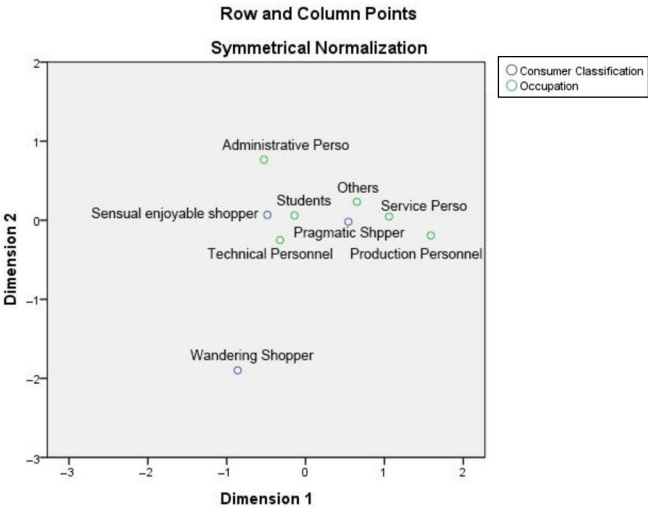
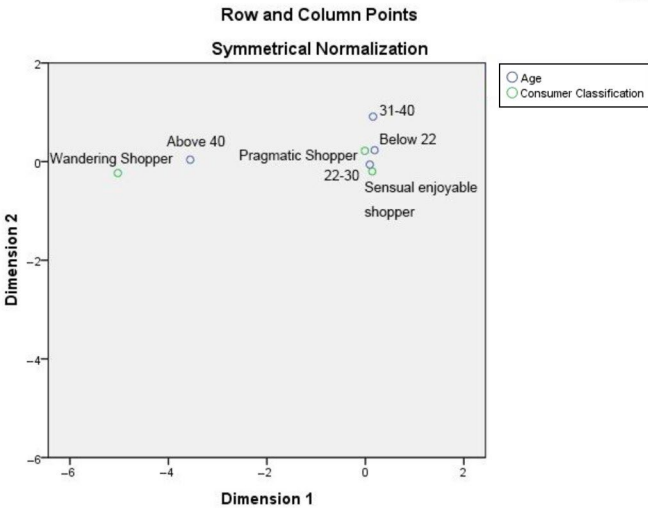
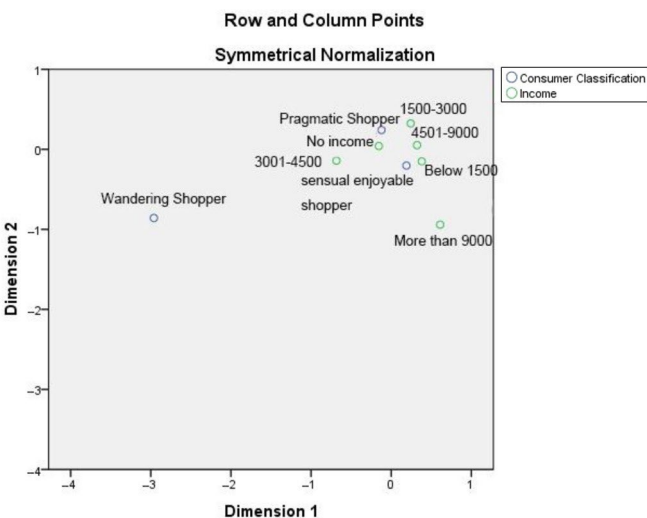


Figure 3.  
Result of correspondence  
by age

analysis





**Figure 4.**  
Result of correspondence analysis by income

usual	
enjoyable	
shopper	
(%)	<b>Table IV.</b>
	Customer
45.59	segmentation
55.42	by gender

reason is that people of these two types of occupations have heavy workload but receive only limited salaries, so they tend to be rational when they go shopping. On the other hand, over 50 per cent of administrative personnel, technical personnel and students are sensual enjoyable shoppers. This result may be explained as follows. Most students do not have full-time job. They have relatively more leisure time than others and are young and energetic, so they go shopping mainly for relaxation instead of targeting on

particular goods. Technical personnel have lighter workload than service and production personnel do, whereas administrative personnel earn the highest income of all, so people of these two kinds of occupations tend to be sensual enjoyable shoppers. The larger proportion of students and technical personnel contributes to a higher percentage of sensual enjoyable shoppers in the whole sample.

In comparison, [Gilboa \(2009\)](#) finds that 52.7 per cent of mall enthusiasts are adolescents and young people (students and soldiers aged 18-21), whereas only 31.3 per cent of them are workers. However, for minimalists, 64 per cent of them are workers, whereas only 20.5 per cent of them are adolescents and young people. This is similar to our result that over half of students are sensual enjoyable shoppers (41 out of 77). However, [Gilboa](#)

**Table V.**  
Customer  
segmentation  
by occupation

(2009) does not divide the group “workers” into different occupations as this study does. This study does a step forward than Gilboa (2009) in the way that the behavior of customers of different kinds of occupations is investigated. This is useful for developers to design their shopping malls according in order to target at customers of particular type(s) of occupations.

Figure 2 shows the result of correspondence analysis by occupation. From the figure, service personnel, production personnel and other occupation are more likely to be pragmatic shoppers. Students, technical personnel and administrative personnel tend to be sensual enjoyable shoppers.

5.4.3 Age. Table VI shows the result of customer segmentation by age. From the table, over half of the respondents of age above 30 are pragmatic shoppers. This is mainly because many of them have already formed their families and hence have a lot of burden on their families, so they mainly consider economic and practical aspects when they go shopping. Some of them may even be at their retirement stage. As they get older, they become less energetic and tend to be pragmatic shoppers. On the other hand, slightly over half of those ageing 30 or under are sensual enjoyable shoppers. Most of them are at the initial stage of career or they are still students. They have relatively little

Occupation		Customer segment					
		Pragmatic shopper		Wandering shopper		Sensual enjoyable shopper	
		No.	(%)	No.	(%)	No.	(%)
Administrative personnel		2	33.33	0	0.00	4	66.67
Technical personnel		17	39.53	1	2.33	25	58.14
Service personnel		3	75.00	0	0.00	1	25.00
Production personnel		8	88.89	0	0.00	1	11.11
Students		33	44.00	1	1.33	41	54.67
Others		9	64.29	0	0.00	5	35.71

financial burden on their families, so they go for leisure instead of buying particular goods.

Figure 3 shows the result of correspondence analysis by age. From the figure, respondents of age above 40 are likely to be wandering shoppers. Those ageing between 22 and 30 are more likely to be sensual enjoyable shoppers, whereas those of age below 22 or within the range 31-40 tend to be pragmatic shoppers. Note that the two dots representing pragmatic shoppers and sensual enjoyable shoppers are close together, showing that the effect of age in distinguishing these two types of customers is insignificant.

This result can explain why Cardoso and Pinto (2010)’s study targeting at young adults results in “hedonic motivations” dominating in the factor analysis. Compared with our classification of age groups, most young adults

belong to the age group 22-30. Most of them are at the initial stage of career or are still students with relatively little financial burden on their families, so our correspondence analysis shows that they tend to be social enjoyable shoppers, who treat “soft factors” to be more important than the “hard factors” (see the result of the cluster analysis in Table III). Therefore, “hedonic motivations”, which are comparable to “soft factors” in our study, dominate in the factor analysis.

5.4.4 Income. Table VII shows the result of customer segmentation by income. From the table, more than half of the respondents earning over ¥4,500 per month are sensual enjoyable shoppers. This is natural because they have more disposable income, so they can spend more on entertainment. They come to shopping malls mainly for leisure instead of shopping. However, quite surprisingly, the percentage of pragmatic shoppers of those earning ¥3,000 per month or below is slightly lower than the percentage of those

Age	Pragmatic shopper		Customer segment Wandering shopper		Sensual enjoyable shopper		
	No.	(%)	No.	(%)	No.	(%)	
Below 22	3	50.00	0	0.00	3	50.00	segmentation by age
22-30	63	47.01	1	0.75	70	52.24	
Above 40	2	50.00	1	25.00	1	25.00	

Income (Yuan/mon th)	No.	Pragmatic shopper		Customer segment Wandering shopper		Sensual enjoyable shopper		
		(%)				No.	(%)	
No Income	7	49.06				0	0.	06
Below 1500	1	43.75	50.00	50.00	46.43	0	00	56.
1500-3000	2	33.33				1	0.	25
3001-4500	12					0	00	11
4501-9000	1					0	4.	50.0
More than 9000	3						17	1
	2						0.	5
							00	4
							0.00	

Table VII.  
Customer  
segmentat  
ion by  
income

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within the income group ¥1,500-4,500 per month. This may be because of the fact that most of those low-incomers are at the initial stage of career or are still students. They have relatively little financial burden on their families, so they tend to be sensual enjoyable shoppers. On the other hand, those within the income group ¥1,501-4,500 per month can be regarded as the “middle class”. Their workload is heavier than those low-incomers and they have a heavier burden on their families. Hence, they tend to be

pragmatic shoppers.

Figure 4 shows the result of correspondence analysis by age. From the figure, people belonging to the following three income groups tend to be sensual enjoyable shoppers: below ¥1,500 per month, ¥4,501-9,000 per month and over ¥9,000 per month. Those belonging to the other three income groups are more likely to be pragmatic shoppers.

## 6. Conclusion and implications

This paper identifies the critical factors of a shopping mall in an urban complex in China from customers’ perspective, using Nanjing Wanda Plaza as a typical example. The main results are summarized as follows:

- The importance of the five factors generated from the factor analysis is in the following order: design-image (soft factor), transport-marketing (hard factor), commodity (hard factor), service-tenant (hard factor) and relaxation (soft factor).
- The cluster analysis shows that slightly more than half of the respondents are sensual enjoyable shoppers, who consider “soft factors” to be more important than “hard factors”. Pragmatic shoppers are just the opposite of sensual enjoyable shoppers.
- Administrative personnel, technical personnel and students tend to be sensual enjoyable shoppers. Those of other occupations are more likely to be pragmatic shoppers.

Our results have the following implications:

An important implication of our study is that the critical factors of a shopping mall are determined by customer characteristics (gender, occupation, age, income). This can be seen that the cluster analysis links up the relationship between critical factors and customer segments (Section 5.3) and the correspondence analysis links up the relationship between customer segments and customer characteristics (Section 5.4). Therefore, the critical factors of the shopping mall are affected by customer characteristics. Our study shows that “design-image” is the top factor (Table II). In fact, it is the occupations of customers which lead to this result. More than half of our respondents are students (Table V). From Table V, most students are sensual enjoyable shoppers. From the results of cluster

analysis in Table III, sensual enjoyable shoppers rank “design-image” as the top factor. Hence, high proportion of students contributes to the result that “design-image” is the most important factor. Therefore, developers should pay attention to the above characteristics of customers when designing shopping malls. For example, if the majority of the residents living around the shopping mall are administrative personnel, technical personnel and students, then they would tend to be sensual enjoyable shoppers (Table V), so developers should concentrate on the “soft factors” of the shopping mall, especially the attributes under the design-image factors, such as indoor decoration, signage and space layout, because sensual enjoyable shoppers consider the design-image factor to be the most important factor. On the other hand, if most of the residents are service and production personnel, then they would tend to be pragmatic shoppers (Table V), so developers should put more emphasis on the “hard factors”, i.e. transportation, commodity price and quality, service quality, etc. As customer characteristics affect the critical factors of a shopping mall, a thorough knowledge of the characteristics of the customers living nearby the shopping mall is important. Conducting a customer research would help developers know more about the

customer characteristics and design the mall accordingly to target at particular type(s) of customers.

In particular, sensual enjoyable shoppers in China, such as mall enthusiasts in Gilboa (2009)’s study, are the “best customers” of the mall. Similar to social shoppers in Cardoso and Pinto (2010)’s study, sensual enjoyable shoppers are more attractive to retailers. Because they like to shop for others, retailers in China should emphasize on gift shopping, in particular by exploiting various festive seasons (c.f. Cardoso and Pinto, 2010). Nowadays, many shopping malls offer special discounts during festive seasons. In Chinese societies, including Hong Kong, Lunar New Year is the most important festival of all and, hence, special sales will be held during the period. Meanwhile, Gilboa (2009) suggest creating specific zones inside the malls that concentrate brands and entertainment facilities appealing to adolescents and young women. This can give malls an advantage in an increasingly competitive industry. In addition, activities initiated by malls targeted at this group can lengthen their stay and so increase their spending. This kind of special activities is becoming increasingly common in shopping malls in China. Our study shows that slightly more than half of the respondents are sensual enjoyable shoppers. This is similar to Gilboa (2009)’s and Cardoso and Pinto (2010)’s result. Gilboa (2009) shows that mall enthusiast is the largest segment, whereas Cardoso and Pinto (2010) show that social shopper is the largest segment of all. This reveals that this group of customers is of growing importance, no matter in China or western countries. Hence, mall developers should target particularly at this group of customers to earn more profits.

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The high proportion of sensual enjoyable shoppers affects our result of factor analysis. According to the result of cluster analysis, sensual enjoyable shoppers consider “soft factors” to be superior to “hard factors”. In particular, they rank “design-image”, which is a “soft factor”, as the most important factor. This leads to the result of the factor analysis that “design-image” is the top factor. This is similar to the results of some previous studies. For example, Anselmsson (2006) found that the most important factor was “atmosphere”. In Cardoso and Pinto (2010)’s study, the result that social shopper is the largest segment contributes to the result in factor analysis that “hedonic motivations” dominates “utilitarian motivations” (however, Cardoso and Pinto (2010) does not analysis the demographic characteristics of each customer segment as this study does). In fact, nowadays both Chinese and western customers consider the atmosphere/design image of a shopping mall to be more important. These kinds of “soft factors” often overweigh “hard factors”, such as transportation, commodity and service quality. Developers should pay attention to the “soft factors” in designing shopping malls to attract customers. In particular, the design image factors – indoor decoration, signage, space layout, etc, give a first impression of the shopping mall to customers. Hence, they are important factors of shopping malls.

However, our results show that “transport-marketing”, a “hard factor”, still ranks second among the five factors, which is contrary to the results of some previous studies.

Anselmsson (2006) shows that “location” is the least important factor, whereas Cardoso and Pinto (2010) finds that the factor “efficiency” ranks the last in their factor analysis. This shows that Chinese customers are still relatively more pragmatic compared with their western counterparts. One possible reason is the higher saving motives of Chinese households caused by cultural and economic differences between China and the USA (or, generally, western countries) (subsection 5.2). Therefore, retailers have to pay attention to Chinese culture and the economic conditions when operating shopping malls in China. Some strategies which work in western countries may not work in China as well.

This study can act as a reference for developers, operators, marketers and a series of related personnel in planning and designing shopping malls to attract more customers. A possible scope of future research is to investigate critical factors affecting behavior/ satisfaction of customers visiting shopping malls in other emerging countries as there are only a limited number of such studies and those emerging countries are of growing importance in the world economy.

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**Further reading**

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