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Determinants of entertaining shopping experiences and their link to consumer behaviour: Case studies of shopping centres in Singapore

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Abstract

Previous research has focused on identifying the existence of entertaining shopping experiences, but few studies have investigated the factors that induce these experiences and link to patronage behaviour. Using a sequential mixed-method design involving a qualitative and quantitative sequence, this research has attempted to look at the determinants of the entertaining shopping experience and link it to shoppers' patronage behaviour. It found that entertaining shopping experiences related to the factors 'centre-feature oriented' and 'effort' involved in the shopping trip affect shoppers' patronage significantly.

INTRODUCTION

Within an environment of possible overbuilding and changing consumers' shopping activities, the level of competition between shopping malls has increased significantly. One contributing factor to the increase in competition is the improvement in the transportation network towards shopping centres. Another factor is that the attributes of most shopping malls are often similar, with too many stores offering too much of the same merchandise.¹

Given the apparent homogeneity, it would appear logical to expect that individuals faced with the existence of more than one shopping mall within 'reasonable' travelling distance will probably choose to shop primarily at the nearest shopping mall.

Interestingly, some individuals appear not to conform to such normative behaviour. Past research has revealed that many consumers are apt to make a decision regarding where to shop on the basis of their attitude towards a mix of stores, the shopping centre environment and the entertaining shopping experience.²

This study represents an extension of the exploratory research carried out by Jones.³ Jones adopts the critical incidence technique in identifying the factors contributing to the entertaining nature of

Retail development in Singapore

shopping. Two broad groups including nine unique factors were found to be characteristic of entertaining shopping experiences. The two broad groups were retailer factors and customer factors. Retailer factors include selection, prices, store environment and salespeople, while customer factors include social, task, time, involvement and financial resources. Previous mall research has mainly focused on identifying the existence of the entertaining shopping experience within the retail environment, but has not examined the role of travel in affecting the shopping experience.⁴ Mindful of the importance of travelling in the process of shopping,⁵ it is imperative that this study also examines the role of travel in affecting the entertaining shopping experience. In this study, the researchers have specifically tested the retailer factors and travel factors in investigating their effects on patronage level.

In Singapore, rapid development and modernisation of the retail scene began in the late 1960s. The development of retail centres continued into the 1970s and 1980s, with more centres built in the Orchard Road area. To avoid overcrowding of the central area, the 1991 Revised Concept Plan sets out the development of regional and sub-regional centres. This has brought about tremendous changes in the retail environment in the 1990s. The 'suburbia' experience in the 1990s is not peculiar to Singapore. Urban sprawl and the sprouting of regional shopping centres and suburban office parks are well documented in many other major cities. In the case of Singapore, this is accelerated and guided by the mass rapid transit (MRT) and expressway/arterial road network system.

Over the years, suburban shopping malls have grown larger and their one-stop convenience has expanded to include service outlets and entertainment providers. By using a mix of artistry and creative merchandising to take advantage of consumer trends, suburban malls are positioning themselves to attract recreational shoppers outside their retail trade area. The challenge to both the downtown and suburban shopping malls at present is to battle in this relatively saturated market to maintain their share of customers. The underlying determinations of retail patronage are important in helping retailers to provide a basis for building a successful strategy to generate sales and attract shoppers. Therefore, to stay competitive in the new millennium, it is important to find a niche to satisfy consumers and focus on their shopping experience to transform something ordinary into extraordinary.

LITERATURE REVIEW

Definition of shopping

The Collins *Cobuild English Language Dictionary*⁶ defines shopping as 'the activity of going to shops and buying things'. Granbois⁷ mentions that shopping includes two main activities, namely:

— obtaining information about available alternatives, their

Shopping

- characteristics and transaction details, such as services provided by the retailers;
- actually acquiring goods and services.

In doing the shopping activity, shoppers interact with the elements surrounding them which affect their degree of entertaining shopping experience. These elements are categorised broadly as 'retailer factors' by Jones,⁸ and include the selection of goods and services, prices, store/shopping centre environment and the salespeople. In addition, in view of the importance of travel factors in the shopping process,⁹ it would be interesting to explore the significance of the travel factors in affecting shoppers' entertaining shopping experience in their shopping trips.

Definition of shopping centre

Shopping centre

There are many types of retail outlet in the world that would result in different forms of entertaining shopping experience for shoppers. This study tested the shopping experience in shopping centres in Singapore. A shopping centre is defined as a group of establishments which is 'designed, planned, developed, owned, marketed and managed as a unit.'¹⁰ These are often referred to as shopping malls, regional or sub-regional centres in the USA and European cities such as Bordeaux, Marseilles, Lyons, Barcelona, Birmingham, Manchester, etc. In Singapore, examples of such developments include Centrepont, Far East Plaza, Paragon, Wisma Atria, etc, in the Orchard Road shopping district, as well as other similar shopping centres in the suburban regions, such as Century Square, Tampines Mall and Causeway Point. They provide a variety and depth of 'shopping goods' which include general merchandise, apparel and home furnishings, as well as a variety of services, and may include recreational and entertainment facilities.¹¹ Shoppers patronise these centres for 'window shopping' or indulge in 'comparison' shopping. In recent years, many shopping centre developers have incorporated leisure components, such as cinemas and entertainment arcades, in shopping centres. Examples of these include the Trafford Centre in Manchester, England, which houses a 12-screen cinema and Diagonal Mar in Barcelona, Spain, which is anchored by a major AMC 16-screen cinema.

Other forms of retail outlets

Some of the other forms of retail outlets include neighbourhood centres,¹² retail parks,¹³ hypermarkets,¹⁴ speciality 'theme' centres,¹⁵ 'power' centres,¹⁶ warehouse clubs and airport retailing.¹⁷ As shoppers patronise these different retail outlets for different purposes, it is likely that the shopping experience would differ for each of the retail outlets. This opens up greater opportunities for further research in the area of entertaining shopping experiences.

Particularly, more research should be carried out to investigate the shopping experience in factory outlets or discount centres. These retail outlets come in various forms; some are simply housed in a 'hangar-type' building while others are open to the elements of

Airport retailing

the weather, even in hot tropical locations, such as Florida. The factory outlets and discount centres seem to have changed the pattern of retailing in North America and many parts of Europe. Some prominent factory outlets can be found in Lille in northern France and Swindon, England.

Another area which is likely to create interest will be the shopping experience at transport mode interchanges, such as airports, railway stations and bus interchanges. Changi airport in Singapore will provide a good case study in airport retailing. The airport is a shopping destination not only for travellers but also for the locals, who want to get away from the hustle and bustle of the shopping environment in crowded shopping centres.

In addition, it would be interesting to investigate the shopping experience in shopping districts linked to the racial mix of a particular ethnic group. In Singapore, there are shopping districts in Arab Street, Geylang, Chinatown and Little India to cater to the needs of the Arab, Malay, Chinese and Indian communities, respectively. These shopping districts are also tourist destinations due to their rich cultural contents.

Retailing literature

The literature is replete with studies indicating that consumers may view either shopping in general or specific shopping experiences as entertainment or recreational.¹⁸ Generally, studies involving shopping and entertainment can be classified into two research streams: as an enduring tendency or trait, and as a motive for a particular shopping trip.

Enduring tendency or trait

Alternative uses and expenditure of time

One consideration in people's orientation toward shopping is their view of alternative uses and expenditure of time. Do they enjoy spending time shopping, or do other alternative uses of their time have higher priority? Previous research into shopper orientations has typically created a category reflecting an entertainment orientation, supporting the notion that some shoppers have an enduring tendency to shop for entertainment purposes.

Dating from the pioneering analysis of Stone,¹⁹ four types of shoppers have been identified in exploratory research, namely the economic shopper, the personalising shopper, the ethical shopper and the apathetic shopper. Stone's typology still has considerable merit, but changing consumers as well as the changing environment may have altered these basic orientations. Bellenger *et al.*²⁰ suggested that much could be learned about retail patronage behaviour from the study of consumers' general shopping orientations, and they introduced this dichotomy of recreational and economic shopping. Bellenger and Korgaonkar²¹ contributed additional insights into the characteristics of recreational shoppers. They defined recreational shoppers as those who enjoy shopping as a leisure-time activity, while economic shoppers dislike shopping or are neutral towards it.

Recreational shopping

Lesser and Hughes²² found, both in their multi-market study and in a review of shopper typology literature, that active and inactive shoppers were the two types of shoppers who appear most often. Recreational shopping and purchasing involvement²³ are two traits that distinguish active shoppers from inactive shoppers, and both traits have proven to be important predictors of consumer behaviour. This stream of research emphasises that shoppers possess general tendencies regarding the shopping process that are consistent across situations. This research tradition on shopper orientations has typically uncovered a host of weird and wonderful shopper types, ranging from those who 'like' to those who 'dislike' shopping (Table 1).²⁴

Motivation of shopping trips

Motive for a particular shopping trip

Apart from consumer orientations, another research stream focused on consumer motivations for specific shopping trips. In contrast with the shoppers' enduring tendencies to enjoy the shopping process, the typologies focusing on consumer shopping motivations are more situationally specific. The variety of shopping motives that have been suggested in the literature are summarised and framed by the motivational typology described by Westbrook and Black.²⁵ This typology posits that shopping motives fall into three categories: product oriented, experiential and a combination of

Table 1: Summary of shopper typologies

Author (date)	Population	Sample size	Research format	Shopper types (%)
Stone (1954)	Department store shoppers	124	Questionnaire Cluster analysis	Economic (33) Personalising (28) Ethical (18) Apathetic (17) Indeterminate (4)
Bellenger and Korgaonkar (1980)	Adult shoppers	324	Self-administered questionnaire Discriminant analysis	Economic (31) Recreational (69)
Westbrook and Black (1985)	Adult shoppers	203	Structured questionnaire Factor analysis	Shopping process involved (12) Choice optimising (18) Shopping process apathetic (20) Apathetic (10) Economic (31) Non-descript (9)
Lesser and Hughes (1986)	Heads of household	6,808	Telephone interview Q-factor analysis	Inactive (15) Active (13) Service (10) Traditional (14) Dedicated fringe (9) Price (10) Transitional (7) Convenience (5) Coupon saver (5) Innovator (4) Unclassified (8)
Kirk-Smith and Mak (1992)	Financial services users	2,630	Questionnaire Factor analysis	Uninvolved (9) Pleasureists (23) Conserving carers (22) Belongers (24) Confident modernists (22)

product and experiential. In the first case, a store visit is motivated by purchase needs or the desire to acquire product information. The second class of motives in the typology has a hedonic or recreational orientation. Here the attention is on store or mall visits made for the pleasure inherent in the visit itself. The last motive category occurs when the store visitor seeks to satisfy a purchase need, as well as enjoying a pleasurable recreational experience in the outlet.

Experimental motives

Likewise, Dawson *et al.*²⁶ posited that some consumers have experimental motives for shopping which result from hedonic or recreational motivations. Through a survey of visitors to a large outdoor crafts market, the results clearly show that consumers with strong product or experiential motives report the most pleasure and arousal in the market-place. Thus, those consumers who purposely come to the market to experience sights, sounds and people reported higher arousal and pleasure than consumers who did not have strong experiential motives. A positive emotional state that consists of high levels of pleasure and arousal is a key part of the shopping experience for consumers.

Hedonic shopping

Researchers have discovered that people typically shop for both hedonic, or recreational, outcomes and utilitarian outcomes, and that positive mood can result from consumers pursuing either type of shopping value.²⁷ Hedonic shopping motives are based on the quality of the shopping experience itself rather than information gathering or purchasing products.²⁸ Finally, Bloch *et al.*²⁹ found that consumers view malls as a place not only for shopping but also for other activities, such as entertainment, socialising with friends and browsing with no intentions of buying. These multiple motives inherent within a single shopping trip clearly indicate the entertaining capabilities of shopping.

Factors inducing an entertaining shopping experience

Several characteristics of entertaining shopping experiences have been previously investigated in isolation, for example, browsing,³⁰ the retail environment,³¹ social interactions³² and bargains.³³

However, a first attempt at organising a framework to help further understand the entertaining shopping experience was made by Jones.³⁴ He adopted the critical incident technique in his exploratory research in identifying the factors contributing to the entertaining nature of shopping. Seven hundred and twenty-four incidents were collected, and two broad groups including nine unique factors were found to be characteristic of entertaining shopping experiences. The two broad groups were retailer factors and customer factors. Retailer factors include selection, prices, store environment and salespeople, while customer factors include social, task, time, involvement and financial resources.

Shopping and travelling literature

Linkages between travelling and retailing have been a neglected

area of research in the investigation of the shopping experience. Generally, studies associated with shopping centre choice have related the concept of retailing and travelling.

Retail selection

Spiggle and Sewall³⁵ suggested that studies of retail selection have focused on three conceptually distinct, although not mutually exclusive, constructs. Drawing on the results from previous studies, these authors propose a model in which retail patronage, retail choice and retail preference are influenced by retail outlet features such as distance, assortment, travel time, consumer psychological states and consumer characteristics. It illustrated that most of the models and theories have used distance, travel cost and travel time as the deterrent factors. However, it must be acknowledged that travel attributes comprise many other factors, which may be more important than the conventional measures. These include the effort, tension, reliability, comfort, safety, etc of the available modes of transportation to each of the retail facilities in the choice set.

Specification biases

In another study, Gautschi³⁶ explored the probable specification biases of conventional patronage models resulting from the omission of two important constructs: descriptors of retail centres and descriptors of transportation conditions. Based on the responses of 350 individuals, the respondents were asked to evaluate ten shopping centres and transportation characteristics. Testing using a set of planned suburban shopping centres and traditional, unplanned shopping centres, he found strong evidence to conclude that, when the shoppers consider both transportation and centre attributes together, they engaged in a rather complex evaluation of the patronage alternatives.

Transport mode/ travel attributes

In addition to the shopping centre attributes, McCarthy³⁷ attempted to include transport mode/travel attributes in studying the role of qualitative characteristics in shopping destination choice behaviour. Using the factor analytical technique, five sets of qualitative generalised attributes have been generated. These generalised attributes include generalised trip convenience, generalised trip comfort, generalised trip safety, generalised shopping area attraction and generalised shopping area mobility. He found that these generalised attributes, which were obtained from attitudinal information, are significant in an individual's choice of shopping area.

Utilising a form of methodological triangulation, Ibrahim³⁸ attempted to evaluate the significance of transport mode/travel attributes in shopping centre choice in a suburban/decentralised environment with public transport options. Using the discrete choice (multinomial logit) modelling technique, the study found that a composite model which includes traditional measures of deterrence (ie travel time, travel cost, distance), as well as other transport mode/travel factors, recorded higher predictability and better fit than models which only adopt the traditional factors of deterrence. In addition, the study concluded that transport mode/travel attributes are significant in respondents' choices of shopping

centre in a suburban/decentralised region with public transport options.

Role of travelling

A review of the literature shows two significant conclusions. First, research on entertaining shopping experiences has generally been well covered. However, other than Jones,³⁹ few studies have been done on the detailed investigation of the factors affecting entertaining shopping experiences and linking those factors to patronage behaviour. Secondly, the majority of researchers have identified the existence of the entertaining shopping experience, but little attention has been paid to the role of travelling in affecting this experience. In view of the above, this study will examine the significance of entertaining shopping experiences arising from the retailer and travel factors in the shoppers' patronage behaviour.

Sequential mixed methods design

RESEARCH METHODOLOGY

In this study, the researchers have adopted the sequential mixed-method design consisting of a two-phase sequential design. The investigators started with qualitative data collection and analysis on a relatively unexplored topic, using the results to design a subsequent quantitative phase of the study. This is a form of methodological triangulation to enhance the internal validity of the research findings.⁴⁰

Depth interviews

Qualitative research phase

The exploratory nature of this investigation into shoppers' entertaining shopping experiences necessitated the researchers carrying out in-depth interviews with shoppers before undertaking the quantitative research. The findings of the qualitative research are important in refining the scope of the research, as well as the development of the questionnaire. In this research phase, convenience samples of 30 shoppers were asked to complete open-ended questions on a standard form. Walker⁴¹ states that a sample size of between 20 and 40 in-depth interviews is necessary for qualitative studies which are undertaken prior to quantitative studies. The researchers interviewed the shoppers segmented according to the respective classes of shopping centre. The alternative classes of shopping centre include shopping centres in the downtown area, the regional centre, sub-regional centre/town centre, neighbourhood centre and precinct shops in Singapore. The following issues were discussed:

- description of a recent shopping trip that respondents recall as being very entertaining
- what factors affect entertaining shopping experiences
- role of transport mode/travel attributes in entertaining shopping experiences.

In the initial stage of the data analysis, the researchers read the data thoroughly to prepare the ground for analysis. The next step

involves the identification and labelling of sets of data that represent some general concepts and themes pertaining to the research issues. The induction of categories from the basic data in the form of incidents is a task requiring insight, experience and judgment.⁴² No simple rules are available, and the quality and usability of the final product are largely dependent on the skill and sophistication of the formulator. However, one rule to gain objectivity is to submit the tentative categories to others for review. After these tentative categories have been established, brief definitions of them are made. During this process, the need for redefinition and for the development of new categories is noted.

Questionnaires

Quantitative research phase

The researchers adopted the use of the questionnaire in the quantitative phase of the research. Using cluster sampling, a total of 300 respondents were interviewed in Jurong East New Town in Singapore. The questionnaire sought to analyse the extent to which the shopping experience in suburban and downtown shopping centres is influenced by the retailer and transport mode/travel attributes, and their relationship with shoppers' patronage of these shopping centres. Thus, using semantic differential scaling, respondents were asked to rate the extent of shopping enjoyment perceived in suburban and downtown shopping centres with regards to the attributes developed from the literature review, qualitative research and pilot testing. The seven-point scale ranged from 1 = Not entertaining at all, 4 = Neutral, to 7 = Very entertaining. In addition, the shoppers were asked to rank their frequency of patronising the suburban and downtown shopping centres.

Principal component analysis

Principal component analysis and discrete choice modelling are used to analyse the data. Factor analysis is used to reduce a large number of variables to a smaller number of factors, to describe concisely (and perhaps understand) the relationships among observed variables. In this study, factor analysis is used to reduce the number of attributes to salient dimensions for further analysis purposes. Thus, it is important to determine the appropriateness of the dataset for factor analysis. As a rule of thumb, there should be at least four to five times as many observations as there are variables to be analysed. Comrey and Lee⁴³ regard a sample size of 300 to be good enough for factor analysis.

The multivariate techniques of factor analysis and principal component analysis provide a versatile set of statistical tools for investigating the underlying latent dimensions or constructs represented in a set of variables. These techniques are often adopted to reduce the number of items to a manageable size, either for ease of interpretation or for entry to subsequent analyses.⁴⁴ Essentially, the procedures of these techniques involve a series of iterations, where a set of composite factors is generated, each typically representing a grouping of correlated variables within the original set.

Discrete choice model

Following the principal component analysis, a discrete choice model will be adopted to determine the significance of the retailer and transport mode/travel attributes in affecting patronage of shopping centres. In this research, the respondents are assumed to be faced with a discrete set of choices of shopping centre; they have to make a choice among these alternatives, comprising the suburban and downtown shopping centres. The ratings of the shopping enjoyment perceived in the suburban and downtown shopping centres with regards to the retailer and transport mode/travel attributes, as well as their ranking, will be analysed using the discrete choice model.

FINDINGS OF QUALITATIVE RESEARCH

Retailer, customer and transport mode/travel attributes

The qualitative research specifically draws out the attributes that are reported to be important aspects of inducing shoppers' entertaining experiences. Three broad groups and a total of 34 attributes emerged from the classification procedure. It should be noted that all these attributes did not appear in each reported experience. However, most attributes that appeared with great frequency or seemed conceptually important despite lower frequency are adopted. The exploratory investigation found that the entertaining shopping experience is influenced by three broad factors, namely retailer attributes, customer attributes and the transport/travel attributes. The general model for an entertaining shopping experience is shown in Figure 1. The transport/travel attributes represent an addition to the model developed by Jones.⁴⁵

Retailer attributes refer to the shopping centres' attributes and those attributes which retailers may use in influencing enjoyment. The exploratory investigation found 13 retailer attributes that influenced the entertaining shopping experience. Customer attributes are those that are characteristics associated with the customers. The exploratory research found six customer attributes that influence the entertaining shopping experience. The exploratory investigation found 15 transport mode/travel attributes that influence the entertaining shopping experience. Table 2 lists the individual attributes in terms of the number of times they were mentioned in the exploratory research.

Figure 1: A model of the entertaining shopping experience

Table 2: List of attributes influencing the entertaining shopping experience

Retailer attributes	No.	%
Sales, promotions, discounts and bargains	21	18.3
Wide variety of stores	17	14.8
Entertainment facilities	15	13.0
Wide variety of products	14	12.2
Eating outlets/restaurants/cafes	11	9.6
Service quality	9	7.8
Ease of finding parking	8	7.0
Spaciousness of internal layout	6	5.2
Unique store design	5	4.3
Level of cleanliness	4	3.5
Level of lighting	2	1.7
Celebrations, activities and functions	2	1.7
Air quality	1	1.9
Total	115	100.0
Customer attributes		
Social interactions	16	34.0
Perform intended purpose	10	21.3
Accomplish the act of purchasing	8	17.0
Financial resources	7	14.9
Free time	4	8.5
Learn about trends and product features	2	4.3
Total	47	100.0
Transport mode/travel attributes		
Travelling time	11	14.7
Waiting time	10	13.3
Walking distance	9	12.0
Protection from weather	8	10.7
Temperature comfort	7	9.3
Cost	6	8.0
Transfer	5	6.7
Safety of travel	4	5.3
Enjoyment of travel	4	5.3
Traffic congestion	3	4.0
Smoothness of travel	2	2.7
Cleanliness of transport mode/travel surroundings	2	2.7
Crowd in transport mode	2	2.7
Stress	1	1.3
Reliability of transport	1	1.3
Total	75	100.0

FINDINGS OF QUANTITATIVE RESEARCH

The study aims to explore the determinants of the entertaining shopping experience which affect shoppers' patronage behaviour. Factor analysis will be used for data reduction purposes before carrying out the shopping centre patronage analysis in relation to factors affecting the entertaining shopping experience.

Respondents were asked to rate the entertainment perceived from each of the retailer and transport mode/travel attributes, given a choice set of suburban and downtown shopping centres. These ratings are utilised for the shopping centre patronage analysis. The data are factor analysed using principal component analysis to identify the relationship that exists between the rated attributes and the latent dimensions. In addition, the respondents were also asked to indicate their level of frequency in patronising the respective

Ratings of attributes

shopping centres. Subsequently, the discrete choice model is adopted to determine the effects of the retailer and transport mode/travel factors in respondents' patronage of shopping centres.

Factor analysis

Attributes are factor analysed using the ratings for shopping enjoyment perceived in suburban and downtown shopping centres with regards to the retailer and transport/travel attributes. However, it should be recognised that the factors obtained in this section served the purpose of reducing the numbers of attributes to a manageable size for entry to subsequent analysis.

Measures of sampling adequacy

Tables 3 and 4 summarise the solutions to the principal component analysis of the retailer and transport mode/travel attributes. Specifically, each table lists the variance accounted by the factors, the Bartlett's test of sphericity, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, the alpha coefficient (measure of reliability), the attributes relevant to each factor and their respective factor loadings.

The Bartlett's test of sphericity and KMO are adopted to determine the appropriateness of the dataset for factor analysis.⁴⁶ High values (between 0.5 and 1.0) indicate that factor analysis is appropriate, while values below 0.5 imply that factor analysis may not be appropriate. On the other hand, the alpha value measures the reliability of the attributes in contributing to each factor.⁴⁷ The latent root criterion (eigenvalues greater than 1.0) has been adopted as the main method in extracting the number of factors for the analysis. Hair *et al.*⁴⁸ regard the latent root criterion as the most appropriate and most reliable method when the number of variables involved in the factor analysis is in the range of 20 to 50.

Factor loadings

Relating to the issue of factor loadings, which would be regarded as important for consideration in the factor analysis, Hair *et al.*⁴⁹ state that factor loadings of 0.30 would be considered significant if the sample size is 350 or greater. Thus, as the sample size in this study is 300, the attributes listed in association with each factor are those loading at or above 0.30.

In analysing the factor solutions, there are attributes that load more than 0.30 on more than one factor. In these cases, the lower loading has been indicated by an asterisk next to the factor loading of the particular attributes. Finally, in most instances the labels given to the factors are chosen to reflect the properties shared by the set of attributes loading above 0.30 within each factor. In addition, reference has been made to the literature and the results of the qualitative research in labelling the factors. However, it should be recognised that these labels are the outcome of the subjective interpretation of the researchers.

Retailer factors

Table 3 summarises the solutions to the principal component analysis of the retailer attributes. The values of the Bartlett's test of sphericity

Table 3: Data reduction for retailer attributes

Factor/label	Attributes	Factor loadings
Factor 1		
Centre feature oriented	Good lighting in shopping centre	0.708
	Availability of unique store design	0.662
	Wide variety of products	0.653
	Availability of celebrations, activities and functions in shopping centre	0.652
Variance		
26.09%	Availability of sales, promotions, discounts and bargains	0.624
	Wide variety of stores	0.607
Coefficient alpha 0.86	Good air quality in shopping centre	0.561
	Availability of food court/restaurants	0.539
	High-quality sales service	0.466*
Factor 2		
Retail environment	Cleanliness of shopping centre	0.785
	Spaciousness of internal layout in shopping centre	0.691
Variance		
18.35%	Wide variety of products	0.559*
	Wide variety of stores	0.565*
	High-quality sales service	0.539
Coefficient alpha 0.85	Availability of sales, promotions, discounts and bargains	0.500*
Factor 3		
Ancillary facilities	Ease of finding car parking	0.755
	Availability of entertainment facilities	0.627
Variance		
10.64%		
Coefficient alpha 0.67		
Bartlett's test of sphericity		0.000
KMO measure of sampling adequacy		0.868
Total variance		55.08%

* Denotes an attribute with a higher loading within another factor

(0.000) and KMO (0.868) indicate that the data are appropriate for factor analysis. Factor analysis using varimax rotation yielded three retailer factors with eigenvalues greater than 1.0, which accounts for 55.08 per cent of the variance within the original variables. Coefficient alpha estimates for the three factors are 0.86, 0.85 and 0.67 respectively, which indicate acceptable reliability.

In the factor solution, Factor 1 could be labelled as shopping 'centre features oriented'. It incorporates 'good lighting in shopping centre', 'availability of unique store design', 'wide variety of products', 'availability of celebrations, activities and functions in shopping centre', 'availability of sales, promotions, discounts and bargains', 'wide variety of stores', 'availability of food court/restaurant', 'good air quality in shopping centre' and 'high-quality sales service'. However, 'high-quality sales service' loads higher in Factor 2 than Factor 1. This factor accounts for 26.09 per cent of the variance.

Factor 2 consists of variables that are related to the retail environment of the shopping centre, and this factor accounts for 18.35 per cent of the variance. The specific variables are 'cleanliness of shopping centre', 'spaciousness of internal layout', 'wide variety

Centre features oriented

Retail environment

Table 4: Data reduction for transport mode/travel attributes

Factor/label	Attributes	Factor loadings
Factor 1	Travelling time to shopping centre	0.846
Effort	Directness of travel to shopping centre	0.823
Variance	Absence of waiting time	0.793
28.43%	Shortness of walking distance	0.649
Coefficient alpha	Low-cost travelling	0.736
0.88	Absence of congestion	0.720
	Absence of crowd in transport mode	0.634
	Smoothness of travel	0.306*
Factor 2		
Protection	Safety of travel	0.680
Variance	Reliability of transport mode	0.676
12.85%	Transport mode/travel protection from weather	0.658
Coefficient alpha	Absence of stress	0.562
0.71		
Factor 3		
Enjoyment	Enjoyment of travel	0.829
Variance	Smoothness of travel	0.705
10.27%	Absence of crowd in transport mode	0.347*
Coefficient alpha	Absence of stress	0.308*
0.67		
Factor 4		
Comfort	Cleanliness of transport mode/travel surroundings	0.834
Variance	Temperature comfort of transport mode	0.778
10.03%		
Coefficient alpha		
0.64		
Bartlett's test of sphericity		0.000
KMO measure of sampling adequacy		0.865
Total variance		61.58%

* Denotes an attribute with a higher loading within another factor

of products and stores', 'high-quality sales service' and 'availability of sales promotions, discounts and bargains'.

Ancillary facilities

Factor 3 accounts for 10.64 per cent of the variables and could be labelled as 'ancillary facilities'. It comprises two variables, namely 'ease of finding car parking' and 'availability of entertainment facilities'.

Transport mode/travel factors

The latent root criterion suggested a four-factors solution, which accounts for 61.58 per cent of the variance. The values of the Bartlett's test of sphericity (0.000) and KMO (0.865) show that the data are appropriate for factor analysis. These factors accounted for 28.43 per cent, 12.85 per cent, 10.27 per cent and 10.03 per cent, respectively, of the variance within the original variables. Coefficient alpha estimates for the factors are 0.88, 0.71, 0.67 and 0.64, respectively, which indicate acceptable reliability.

Factor 1 consists of eight variables, namely 'travelling time to shopping centre', 'directness of travel to shopping centre', 'absence of waiting time', 'shortness of walking distance', 'low-cost travelling', 'absence of congestion', 'absence of crowd' and

Table 5: List of independent variables for the discrete choice model

Independent variables	
Retailer attributes	Transport mode/travel attributes
Centre feature oriented	Effort
Retail environment	Protection
Ancillary facilities	Enjoyment
	Comfort

Effort

‘smoothness of travel’. It could be labelled as ‘effort’ because it comprises variables relating to the physical and mental efforts which the shoppers need to make during the shopping trip. However, the last variable loads higher in Factor 3.

Protection

Factor 2 consists of variables that are related to the degree of protection of the shoppers from undesirable elements during the shopping trip. These specific variables are ‘safety of travel’, ‘reliability of transport’, ‘transport mode/travel protection from weather’ and ‘absence of stress’.

Enjoyment

Factor 3 consists solely of variables that influence shopper’s enjoyment level in the shopping trip. The variables that load in this factor are ‘enjoyment of travel’, ‘smoothness of travel’, ‘absence of crowd in transport mode’ and ‘absence of stress’. However, it has to be noted that the last two attributes load higher in other factors.

Comfort

Factor 4 comprises two variables, namely ‘cleanliness of transport mode/travel surroundings’ and ‘temperature comfort of transport mode’. This factor incorporates variables that affect the level of comfort of the shoppers in their shopping trip.

Discrete choice model

The discrete choice model is adopted to determine the significance of the retailer and transport mode/travel factors in affecting shopping centre patronage. In this research, the dependent variable in the model is the probability that a respondent will visit a shopping centre of a particular type in the choice set as his/her most frequent location due to receiving an entertaining shopping experience from the retailer and transport mode/travel factors. The factors obtained from the principal component analysis will serve as the independent variables (Table 5).

A respondent’s preference for a shopping centre is dependent on the utility s/he derives from that shopping centre. The respondent is modelled as choosing the alternative with the highest utility from among those available at the time the choice is made.⁵⁰

Multinomial logit

The individual’s choice of shopping centre can be described in a multinomial logit form as follows:⁵¹

$$P_j^i = \exp(\beta'v_j^i) / \sum_{k \in A^i} \exp(\beta'v_k^i) \quad j, k \in A^i \quad (1)$$

where

P_j^i = the probability that individual i with choice set A^i will choose alternative j ;

β = an unknown parameter vector to be estimated; and

v_j = a vector of empirical functions which depend upon no unknown parameters.

Maximum likelihood estimation

The discrete choice model is estimated by a method known as maximum likelihood estimation. The model produces the individual coefficient estimates which measure the relationship between the independent variables and the dependent variable. The estimated standard errors measure the likely variation in the estimated coefficients from sample to sample. The t -statistics are used for testing the null hypothesis that a coefficient of an attribute is zero, which implies that a variable has no effect on the dependent variable. In addition, two main statistics, namely the likelihood ratio test and goodness-of-fit index, are computed to test the entire estimation run of the model. The likelihood ratio (similar to the F test in least squares estimation) tests the null hypothesis that all the parameters in the model are zero and shows the predictability of the choice model.⁵² It is asymptotically distributed as χ^2 with K degrees of freedom. The next measure, p^2 (analogous to R^2 used in regression), is a goodness-of-fit index which measures the fraction of an initial log likelihood value explained by the model.⁵³ It is appropriate for comparing two specifications developed from the same dataset.

Analysis and results

The results of the discrete choice model are presented in Table 6. The p^2 index varies between 0 (no fit) and 1 (perfect fit). However, although its meaning is clear in the limits (0 to 1), it does not have an intuitive interpretation for intermediate values. In fact, Ortuzar

Table 6: Discrete choice model

Discrete choice modelling				
Factors	Coefficient	Standard error	t-value	Sig. value
Centre feature oriented	0.57276	0.19163	2.989	0.0028
Retail environment	0.133919	0.18714	0.744	n.s.
Ancillary facilities	-0.21512	0.14503	-1.484	n.s.
Effort	1.4794	0.20499	7.217	0.0000
Protection	-0.13864	0.16058	-0.863	n.s.
Enjoyment	-0.11129	0.14086	-0.790	n.s.
Comfort	-0.2375	0.18253	-1.301	n.s.
Summary statistics				
Number of variables				300
Iterations completed				5
Goodness-of-fit index (p^2)				0.328
(χ^2)				53.52
Critical chi square value				12.59
(degree of freedom = 6, significant level = 0.05)				
Significance level				0.000

Likelihood ratio test

and Willumen⁵⁴ state that values around 0.4 may be excellent fits. Therefore, the goodness of fit for this choice model was satisfactory. The likelihood ratio test implies the rejection of the null hypothesis that all the parameters are zero, and it shows the ability of the independent variables in the model to predict the choice of shopping centre.

Coefficient estimate

At the 0.05 level of significance, 'centre feature oriented' and 'effort' are statistically different from zero, thus implying that these factors have an effect on the dependent variable. The coefficient estimate for the factor 'effort' tops the list, implying a strong relationship between the independent variables and the dependent variable. Referring to Table 4, the factor 'effort' is found to incorporate physical and mental effort-related attributes. These include attributes relating to travel time, directness of travel, waiting time, walking distance, cost of travel, level of congestion and crowd level. On the other hand, the 'centre feature oriented' factor comprises attributes relating to the shopping centre features and the atmosphere in the shopping centres. It includes the attributes 'good lighting in shopping centre', 'availability of unique store design', 'wide variety of products', 'availability of celebrations, activities and functions in shopping centre', 'availability of sales, promotions, discounts and bargains', 'wide variety of stores', 'good air quality in shopping centre', 'availability of food court/restaurants' and 'high-quality sales service'. Other factors, namely 'retail environment', 'ancillary facilities', 'protection', 'enjoyment' and 'comfort', do not significantly affect the patronage behaviour of shoppers.

**Modelling
entertaining
shopping experience****CONCLUSION AND IMPLICATIONS**

This research addresses the nature of the entertaining shopping experience by modelling the relationships among a number of factors that have been found in the qualitative research and literature review. This research has attempted to extend Jones's⁵⁵ exploratory investigation in the Singapore context. Specifically, it aims to identify and analyse the factors that are significant in affecting the entertaining shopping experience in Singapore. It has extended the scope of entertaining shopping experience research by seeking to explore the significance of travel attributes in affecting the entertaining shopping experience.

The study has found that two factors, namely 'effort' and 'centre feature oriented', are significant in affecting the respondents' patronage given a choice set of suburban and downtown shopping centres. This is particularly so for the transport mode/travel factor 'effort', which recorded relatively high estimates. The result implies that enjoyment gain through these factors will ultimately result in higher frequency of visits to the shopping centre.

From a theoretical perspective, this study broadens the literature by demonstrating that transport mode/travel factors are significant in affecting the entertaining shopping experience. Other than

Competitive marketing strategies

customer factors that are unique to each individual, retailer and shopping centre management could focus on the retailer and transport mode/travel factors in inducing an entertaining shopping experience. One implication is for retailer and shopping centre managers to examine the underlying attributes in their entertaining capabilities so as to develop competitive marketing strategies in attracting shoppers. For instance, it is imperative that there is the availability of sales promotions, discounts and a wide variety of products and stores to induce an entertaining shopping experience in Singapore. The research has also indicated the importance of 'effort' in enhancing shoppers' entertaining shopping experience. Therefore, shopping centre management should also look into store location, as well as the design of the transportation facilities, such that it induces enjoyment into the shopping trip.

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