

IDENTIFYING THE DIMENSIONS OF SUBURBAN SHOPPING CENTRES AND "PASAR MALAM" (NIGHT MARKETS) IN SINGAPORE FROM A SHOPPER'S PERSPECTIVE

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ABSTRACT

Over the last decade, there have been drastic developments of "pasar malam" or night markets and suburban shopping centres within the suburban public housing estates in Singapore. The "pasar malam" belongs to the bazaar sector, while the suburban shopping centre belongs to the firm-centered sector within the retail marketing system. In view of their differences, using a sequential mixed method approach involving a qualitative/quantitative sequence, this paper aims to examine how shoppers perceive both retailing entities. Principal component analysis and weighted factor ratings show that "pasar malam" and suburban shopping centre have different niches and, image structures notwithstanding, that there are some common images between them. These findings have significant implications on retail planning and management of the retail marketing system within the suburban public housing estates in Singapore.

Keywords: Suburban shopping centre, "pasar malam", perception, Singapore.

INTRODUCTION

The economies operating in the world have been broadly classified as either firm-centred economies or bazaar economies by Geertz (1963). The firm-centred economy is "where trade and industry occur through a set of impersonally defined social institutions which organise a variety of specialised occupations with respect to some particular production or distributive end". On the other hand, in the bazaar economy, the total flow of commerce is fragmented into a very great number of unrelated person-to-person transactions. This type of economy is based on the independent activities of a set of highly competitive commodity traders who relate to one another by means of an incredible volume of ad hoc acts of exchange (Geertz, 1963).

The main difference between the two sectors is that the bazaar sector is labour intensive while the firm-centred sector is capital intensive. Another significant

distinction is that the former, by organization and character, is mobile while the latter is sedentary (Yueng, 1973).

Depending on the stage of economic development, a country can have both these components of an economy existing in equilibrium or with one in decline and the other thriving (McGee, 1970). According to McGee's three-stage model, the third stage of the model will see the firm-type sector overriding the bazaar sector in an economy. Singapore has arrived at this "third stage" as its bazaar sector is almost completely subordinated by the firm-type sector saved for periodic staging of bazaar sector retailing entities during festive holidays and/or for the purpose of attracting tourists.

The dichotomisation of the marketing system in Singapore into a firm-centred economy and a bazaar economy began when commerce first took place (Yueng, 1973). The bazaar sector on the island is manifested in the form of travelling night markets or "pasar malam" as they are locally called. The first travelling night market was set up in the early 1950s. In 1978, a ban was imposed on the travelling night markets, but in 1991 they made a comeback to the local marketing scene within public housing estates and have since been a common feature in public housing estates in Singapore.

Over the last decade, an element from the firm-centred sector has also become a common sight within the public housing estates. These are the many modern suburban shopping centres which have sprung up over the years beside Mass Rapid Transit (MRT) stations. Northpoint shopping centre in Yishun New Town, located in the northeastern part of Singapore, was the first of such modern shopping centres to make inroads into the public housing estate.

Thus, within the last decade, features from both the firm-centered sector (suburban shopping centre) and the bazaar sector ("pasar malam") are being introduced into public housing estates in Singapore. Given the two diametrically different retail sectors that suburban shopping centres and "pasar malam" belong to, this research aims to investigate whether shoppers perceive them differently or otherwise. To date, not much research has been done on the bazaar sector of the retail marketing system. Most of the retail studies have concentrated on firm-centered retail stores/centres/areas in central and suburban locations (for example, Ibrahim and McGoldrick, 2003). Therefore, this study aims to fill the research gap by identifying the dimensions of suburban shopping centres and "pasar malam" within the retail marketing system in Singapore. As shoppers' patronage is the key success factor in any retail forms, the findings of the study have significant implications on retail planning and the management of both the suburban shopping centre and "pasar malam" within the suburban retail hierarchy in Singapore.

LITERATURE REVIEW

Shopping destination choice

The review of the vast literature on shopping destination choice shows an apparent gap in the understanding of the bazaar sector of the retail marketing system. The majority of the studies have looked at the firm-centered sector, particularly shopping centres and retail stores in the central and suburban areas.

In one of the more recent studies, Ibrahim and McGoldrick (2003) summarized the factors affecting the choice of shopping centres. These include the shopping centre characteristics (for example, variety of goods and services, number of stores, atmosphere, etc.), travel factors (for example, ease of travel, comfort of travel, cost of travel, etc.), buying situation (for example, grocery shopping, clothing shopping, time of the day, etc.) and socio-economic characteristics of the shoppers (for example, age, gender, marital status, etc.).

In addition, Ibrahim and McGoldrick (2003) categorized shopping destination choice studies into three main groups; namely, conceptual models, image studies and spatial models. The conceptual models attempt to explain the decision process of an individual shopper in the retail store/centre/area choice process (for example, Huff, 1960; Monroe and Guiltinan, 1975; Timmermans, 1982; Laaksonen, 1993). These models take on a deductive approach, based on consumer spatial behavior and cognition.

Image studies look at the way in which the shopping destination is defined in the shoppers' mind (Martineau, 1958). Image studies reject the notion that retail store/centre/area choice is determined by traditional factors, such as size and distance. Over the years, many variables have been found to be significant in determining the choices of retail store/centre/area. These include the retail store/centre/area characteristics, such as quality of goods and services, atmosphere, tenant mix, size of retail centres, etc., and travel factors, such as ease of travel, comfort of travel, etc. Some of these image studies include Martineau (1958), Bucklin (1967), Nevin and Houston (1980), McGoldrick and Thompson (1992), Bell (1999) and Ibrahim and McGoldrick (2003).

Finally, spatial models developed from the simple Central Place Theory (Christaller, 1933) to the General Attraction Models, allow the inclusion of many factors in modeling shopping destination choice. In addition to the Central Place Theory, spatial models include the Reilly' Law of Retail Gravitation or Spatial Interaction Model (1931), Huff model (1962) and various post-Huff models which have attempted to improve the explanatory power of the models including additional variables, as well as developing new methodologies (for example, Kotler, 1971; Gautschi, 1981; Timmermans et al, 1991; Timmermans, 1996; Rajas, 1999).

Although there have been many studies on retail preference, most of them concern the firm-centered sector. Therefore, this study is appropriate in defining the dimensions of the night market as a form of the bazaar sector in comparison to the firm-centered sector, i.e. suburban shopping centre.

The development of “Pasar Malam” and suburban shopping centre in Singapore

“Pasar malam” or a night market is a form of retailing activity common to the Asian region, particularly in South East Asia. “Pasar malam” is prevalent in Asian cities, such as Petaling Street (Kuala Lumpur, Malaysia), Chatucha (Bangkok, Thailand), Shilin Night Market (Taipei, Taiwan) and Pasar Baru (Jakarta, Indonesia). It is characterized by the mobile nature of the market/stalls, the linear alignment of stalls along streets and the occupation of private and public land for hawking which, ordinarily, is used for other purposes such as the setting up of market/stalls in public car parks.

The first travelling night markets or “pasar malam” in Singapore were initiated in 1953 by a group of hawkers whose mode of operation had hitherto been associated with opera troupes and followed their itinerant performing schedules (Yeung, 1973). However, Chao (1962) noted that night markets were first started in areas where British servicemen and their families were present in large numbers. As its name implies, the peak trading period for the night market stretched from about 6.30 p.m. to 10.30 p.m.

The early stage of growth of the night markets was slow. However, in 1960, there was a surge in the number of night markets. 1960 also marked the start of the era whereby night markets began to assume importance and popularity in the nightlife of Singapore City. However, a ban was imposed in 1978 due to growing public complaints of traffic congestion, noise, inconvenience and the potential problems posed by such activity.

In the 1980s, two attempts were made to revive the night market scene as a form of tourist attraction by the Sentosa Development Corporation and the Singapore Tourist Promotion Board. However, these attempts failed. The turning point for “pasar malam” came in 1991 when they began to appear in suburban public housing estates and set up shops at void decks, walkways and other enclosed spaces selling items, such as clothes, fruits, toys, food snacks, shoes, watches, compact discs, potted plants, handphone accessories and other sundries. Although “pasar malam” has been revived in the 1990s, its comeback was not without changes. Today’s “pasar malam” is heavily regulated by the authorities whereas in the past, the authorities adopted almost a “hands off” policy towards the night markets especially with regard to the occupation of sites and the type of goods and services being sold.

The 1990s also saw the drastic development of suburban shopping centres in Singapore. In fact, twelve suburban shopping centres were built in the heart of suburban public housing estates within a span of eight years from 1992 to 1999. The impetus for such a surge in suburban shopping centres developments was attributed to the 1991 Revised Concept Plan which aimed to decentralize commercial activities to the suburbs. All these suburban shopping centres were developed by the private sector. However, they were built on State land offered through the Housing and Development Board (HDB) Sales of Site programme. Dale (1999) noted that the success of Northpoint Shopping centre, which was the first modern suburban shopping centre, has created a formula for developing suburban shopping centres as part of HDB's new town centres and in close proximity to MRT stations. Hence, suburban shopping centres that came up after Northpoint shopping centre were developed along this formula. These suburban shopping centres are usually four to five storeys high and their tenant mix usually includes a major department store, supermarket, food court, multiplex cinema and specialty shops. Their aim is to provide a one-stop shopping experience, bringing central area shopping virtually to the doorsteps of residents in the suburban housing estates.

METHODOLOGY

In this study, the methodology adopted is a sequential mixed method involving first, qualitative research followed by separate quantitative research. Coupled with the variables identified from the literature review, data from the qualitative research was used as the basis for the quantitative phase of the study which aimed to investigate the perceptual dimensions of the "pasar malam" and suburban shopping centres.

Qualitative research

In marketing research, qualitative research may take the form of unstructured research, exploratory research, in-depth interviewing, motivation research or opinion and attitude research. Malhotra (1996) noted that unlike quantitative research, which attempts to quantify data, qualitative research provides insights and understanding of the research problem. It uses a variety of techniques to collect data and depends mostly on interpretation of the findings. Gordon and Langmaid (1988) stated that qualitative analysis allows access to the various ways in which consumers can express their hidden feelings, attitudes, beliefs and motivations regarding specific topics.

In- depth interviews

In this study, the qualitative research was carried out by way of in-depth interviews. Burgess (1982) states that in-depth interviews provide the opportunities for the researcher to probe deeply, to uncover new clues, to open up new dimensions of a

problem and to secure vivid, accurate, inclusive accounts that are based on personal experience.

Based on the conceptual framework developed by Ibrahim and McGoldrick (2003), as well as the attributes of retail store/centre/area developed in conceptual models, image studies and spatial models, the researchers have asked the respondents open-ended questions about their perceptions of “pasar malam” and suburban shopping centres. In addition, the respondents’ socio-demographic details, such as age, gender, marital status were also solicited. The following issues were discussed during the in-depth interviews:

- 1) Description of a recent trip to suburban shopping centres and “pasar malam”
- 2) Reasons for visiting suburban shopping centres and “pasar malam”
- 3) Perceptions of suburban shopping centres and “pasar malam”
- 4) Socio-demographic characteristics of the respondents.

The in-depth interviews were conducted outside a suburban shopping centre (Jurong Point shopping centre) and at the site of an ongoing “pasar malam” in Jurong West. Qualitative studies that are undertaken as a preliminary to quantitative studies should consist of between 20 to 40 in-depth interviews (Walker, 1985). Hence, the researchers carried out a total of 40 interviews with half of the interviews being done on shoppers at the suburban shopping centre and the other half on shoppers at “pasar malam”.

From the qualitative research, the researchers were able to obtain descriptive data pertaining to the respondents’ perceptions of “pasar malam” and suburban shopping centres. The data was transcribed and processed using the Excel spreadsheet. The analysis and interpretation of the data was guided by the procedures proposed by Spiggle (1994) and Ibrahim and McGoldrick (2003). These procedures include a nine-stage process of qualitative data analysis; namely, read and re-read data, categorization, abstraction, comparison, dimensionalisation, integration, iteration, refutation and relate to the literature (Ibrahim and McGoldrick, 2003).

Quantitative research

Malhotra (1996) states that quantitative research aims to quantify the data and generalise the results from the sample to the population of interest. Quantitative research is usually administered in a structured and formal manner, such as the use of a structured and closed-end questionnaire and normally, some form of statistical analysis is applied to the data that is collected.

As factor analysis will be used in analysing the data, it is critical to have an adequate sample size. A conservative sample size for factor analysis starts at 100, others recommended a minimum of 300, while it will be regarded as excellent if the

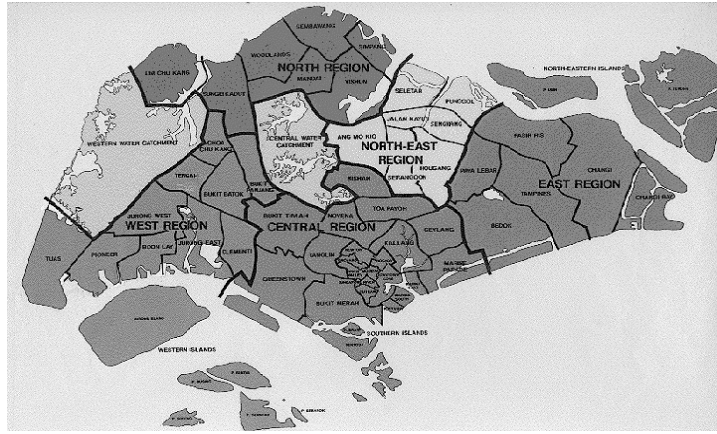
sample sizes are 1000 or over (Tull and Hawkins, 1990; Hair et al, 1998; Comrey and Lee, 1992). In addition, it is important to maximize the case number over the number of variables ratio. As a rule of thumb, there should be at least four or five times as many observations as there are variables to be analysed (Malhotra, 1996). In this research, we have adopted a sample size of 500. With 27 variables adopted in this study, a sample size of 500 meets the requirements of the rule of thumb comfortably.

A door-to-door interviewing method was adopted by the researchers as the method of administering the questionnaires for the quantitative research. One of the advantages of this method is that it is suitable for lengthy questionnaires. Initially, the research questionnaire in this study was long as revealed by a handful of respondents during the pre-testing stage. However, following the pilot testing, the questionnaire was shortened to a manageable length. Other advantages of this method include setting respondents at ease, high response rate and the opportunity to seek clarifications (Ibrahim and McGoldrick, 2003). All in all, the researchers took six weeks in the months of November and December 2001 to complete the interviews with the aid of four helpers.

The respondents were asked to evaluate suburban shopping centres and “pasar malam” based on the 27 attributes as shown in Table 2. The evaluation of the attributes of both retailing systems were measured based on a semantic differential scale ranging from 1 to 5 (1 stands for “very poor” and 5 stands for “very good”). In addition, the respondents were also asked to indicate their socio-demographic data, such as age group, gender, etc.

The researchers adopted a multi-stage sampling procedure in the selection of sample for this study. Singapore was divided into five clusters, similar to the demarcation by the Urban Redevelopment Authority of Singapore (URA) (refer to Map 1). These five clusters represent the western, northern, north eastern, eastern and central regions in Singapore. Firstly, one housing estate was randomly selected from each region. Following this, a few blocks of flats within each estate were selected. From this, the unit numbers within each of the selected blocks in each estate were listed. Subsequently, 100 households from the list of each estate were randomly selected, making the total sample size of 500.

Map 1: Map of Singapore.



Source: URA (2002)

The study area: Singapore

Singapore is a small, relatively densely-populated city-state with a population of 4.16 million (refer to Map 1). It has a land area of 682 square kilometres consisting of the main island of Singapore and some 63 offshore islands. It is an equatorial country with relatively uniform temperature, abundant rainfall and high humidity throughout the year.

Like many countries, Singapore has experienced profound retail decentralisation over the last thirty years. This has been caused by the interaction of socio-cultural, economic, political and environmental factors (Sim, 1984). However, a major factor that resulted in an orchestrated suburbanisation of population and retail facilities has been the role of the planning agencies, particularly, the Urban Redevelopment Authority (URA) and the Housing and Development Board (HDB). In the early 1960s, while the URA was responsible for moving people away from the then crowded city centre, the HDB built public housing to house them in numerous satellite towns. Currently, HDB still plays the role of building public housing in satellite new towns and the URA plays the role of drawing plans for short-term and long-term development of Singapore.

In the 1960s, retailing was characterised by unplanned, spatially dispersed shophouses operated by small-scale retailers in the central area. In the 1970s and 1980s, due to rising population and congestion in the central area, the government took on a decentralisation and redistribution of population policy, following the concept of the British New Town Programme. The decentralisation of retail facilities was based on well-established principles of intra-urban retail hierarchy,

where local town centres, neighbourhood centres and precinct shops provided convenience goods and the city centre provided most of the shopping and comparison goods. In the 1990s, by virtue of the 1991 Concept Plan, which is a long-term planning tool in Singapore, the concept of regional centres that divides Singapore into five regions was mooted. This comprises the central area, together with four regional centres; namely, Woodlands, Seletar, Jurong and Tampines (URA, 1991). This marked a significant decentralisation of commercial activities, including retail space from the central area to the suburban areas. This resulted in the drastic development of suburban shopping centres in public housing estates.

The increasing significance of suburban retail centres and the mushrooming of “pasar malam” within the suburban public housing estates necessitate greater understanding of both retail forms to better capitalize their co-existence for the survival of both retailing entities, as well as to benefit the shoppers in the suburban regions.

FINDINGS OF QUALITATIVE RESEARCH

Generally, the qualitative research confirms the general framework proposed by Ibrahim and McGoldrick (2003) in that shoppers’ retail location choices are affected by the retail store/centre characteristics, travel factors, shoppers’ socio-demographic characteristics and the buying situations. The broad perceptual attributes of suburban shopping centres and “pasar malam” are shown in Table 1. In addition, Table 1 lists these attributes in descending order according to the number of times they were mentioned by respondents during the in-depth interviews. Generally, attributes relating to product-related factors such as “price level” and “variety of goods” were mentioned frequently for “pasar malam”. Similarly, product-related attributes in the form of “quality of goods” and “variety of goods” were also mentioned frequently for suburban shopping centres.

The perception attributes solicited from the shoppers with regard to their perceptions of “pasar malam” and suburban shopping centres were adopted as a framework in the design of the questionnaire used in the quantitative research. These attributes, together with those identified through the literature review, were adopted in the development of the questionnaire. Following this, pilot surveys were carried out to refine the questionnaire for the quantitative phase of the study. The attributes adopted in the final questionnaire are shown in Table 2.

Table 1: List of mentions of suburban shopping centre and “pasar malam” attributes

Suburban shopping centre			“Pasar malam”		
Attributes	No.	%	Attributes	No.	%
1) Quality of Goods	20	12.9	1) Price Level	19	18.6
2) Variety of Goods	19	14.3	2) Variety of Goods	17	16.7
3) Entertainment Facilities	19	14.3	3) Crowd Level	12	11.8
4) Eating outlets/ Restaurants	14	10.0	4) Shopping Temperature	11	10.8
5) Latest Fashion/Model	14	10.0	5) Eating outlets/ Restaurants	10	9.8
6) Number of Stores	14	10.0	6) Ambience	10	9.8
7) Service Quality	14	10.0	7) Number of Stalls	7	6.9
8) Shopping Temperature	12	8.6	8) Entertainment Facilities	4	3.9
9) Level of Cleanliness	9	6.4	9) Service Quality	3	2.9
10) Price Level	5	3.6	10) Noise Level	3	2.9
11) Ambience	0	0	11) Protection from Weather	3	2.9
12) Crowd Level	0	0	12) Level of Cleanliness	3	2.9
13) Noise Level	0	0	13) Latest Fashion/Model	0	0
14) Protection from Weather	0	0	14) Quality of Goods	0	0
Total	140	100	Total	102	100

Table 2: List of attributes adopted in this study

Attributes
1. Availability of festive/carnival atmosphere
2. Reasonable crowd level
3. Reasonable noise level
4. Comfortable shopping temperature
5. Acceptable level of cleanliness
6. Convenient and tidy layout of stores/stalls
7. Easy to find ways/directions to shops/stalls
8. Adequate number of stalls/stores
9. Design of stores/stalls are appealing
10. A wide variety of goods/services being sold
11. Adequate protection from weather
12. Comfort of travel to shopping destination
13. Ease of travel to shopping destination
14. Availability of adequate parking spaces
15. High service standards of sales staff
16. Good after sale service
17. Affordable prices of goods/services
18. Ability to bargain
19. Availability of high quality goods/services
20. Availability of latest fashion/model
21. Ability to meet shopping needs all the time
22. A substitute for downtown shopping
23. A place for family outing
24. Availability of local snacks/desserts/food
25. Availability of entertainment facilities
26. Availability of eating outlets/restaurants
27. An ideal place to spend the day

FINDINGS OF QUANTITATIVE RESEARCH: IMAGE DIMENSIONS OF SUBURBAN SHOPPING CENTRE AND “PASAR MALAM”

Profile of respondents

A total of 500 respondents participated in the survey. All of them have visited the suburban shopping centre and “pasar malam”. 285 (57%) of the respondents are male, while 215 (43%) are female. Table 3 shows the composition of the sample by age group. The majority of the respondents belong to the “20-29” age group. In descending order, this is followed by those in the “40-49”, “>50”, “12-19” and “30-39” age groups.

Table 3: Composition of population sample by age group

Age	Frequency	Percentage
12-19	78	15.6%
20-29	161	32.2%
30-39	74	14.8%
40-49	97	19.4%
>50	90	18.0%
Total	500	100%

Factor analysis

Factor analysis was adopted to identify the dimensions underlying shoppers' perceptions of "pasar malam" and suburban shopping centres. Factor analysis refers to statistical techniques that are "applied to a single set of variables where the researcher is interested in discovering which variables in the set form coherent subsets that are relatively independent of one another" (Tabachnick and Fidell, 1996).

Factor analysis is a generic heading used to cover a number of procedures for factor extraction and rotation. The procedures include common factor analysis (FA), principal component analysis (PCA), maximum likelihood factor extraction (MLFE), unweighted least squares factoring (ULSF) and image factor extraction (IFE) (Kline, 1996; Tabachnick and Fidell, 1996). In this study, the respondents' ratings will be factor analysed using PCA.

Basically, PCA will linearly transform an original set of variables into a substantially smaller set of uncorrelated variables, which represent most of the information in the original set of variables (Hunteman, 1994). Hence, the many variables will be reduced to a few factors, with each factor representing a linear combination of a number of variables. Grouping the variables into a few factors will ensure that the factors would be more highly correlated with variables in that factor than with variables in other factors. Hence, PCA can "identify the underlying dimensions (factors) that explain responses to the questionnaire" (Bryant and Yarnold, 1995).

In this study, the latent root criterion has been selected as the technique to decide the number of factors to extract. Hair et al (1998) regard the latent root criterion as the most suitable and most reliable method when the number of variables involved in the factor analysis is in the range of 20 to 50. As shown in Table 2, there are 27 variables in this study. The rationale behind this technique is that any individual factor should account for the variance of at least a single variable if it is to be retained for interpretation. Therefore, only factors having eigenvalues greater than 1 are considered significant, while those less than 1 will be considered insignificant

and disregarded. In order to achieve a simpler and more meaningful factor pattern, the researchers adopted the varimax rotation technique, which is one of the most popular orthogonal rotation methods (Hair et al, 1998).

Factor loading represents the “correlations of the variables with the factor and the weighted combination of variables which best explain the variance” (Kline, 1996). Hair et al (1998) noted that factor loadings of 0.30 would be considered significant for consideration in the factor analysis if the sample size is 350 or greater. Therefore, given a sample size of 500 in this study, the researchers have adopted ± 0.30 as a minimum significant factor loading.

The labels given to the factors are selected to reflect the properties shared by the set of attributes loading above 0.30 within each factor. However, it should be noted that these labels are the outcome of subjective interpretation of the researchers.

Solutions to the principal component analysis of “pasar malam” and the suburban shopping centres are shown in Tables 4 and 5 respectively. Included in the tables are also the individual and total variance accounted by the factors; the values of the Bartlett’s test of sphericity and KMO; the individual reliability alpha value for each factor and the overall reliability alpha value; the attributes relevant to each factor and their respective factor loadings. The Bartlett’s test of sphericity and KMO determine the appropriateness of the data set for factor analysis (Malhotra, 1996). High values of KMO (between 0.5 and 1.0) indicate that factor analysis is appropriate while below 0.5 imply that factor analysis may not be appropriate. On the other hand, the alpha value indicates the reliability of the attributes to each factor (Cronbach, 1951).

“Pasar malam”

The data are appropriate for factor analysis as indicated by the values of the Bartlett’s test of sphericity (.000) and KMO (.730). Overall, the data has a high reliability value of 0.8321 which satisfied the criteria that critical values greater than 0.70 are considered reliable (Nunnally, 1978).

The latent root criteria suggested a nine-factor solution that accounts for 65.94% of the variance within the original variables. All factors obtained an alpha value of more than 0.650. Hence, the factors are reliable as Dawson et al (1990) stated that alpha values greater than 0.650 are considered reliable. The attribute “availability of latest fashion/model” is the only attribute that does not load on at least one factor.

Table 4 shows that factor 1 (“comfort”) accounts for 21.3% of the variance. The factor includes variables that relate to the cleanliness and temperature of the shopping destination. Variables such as “acceptable level of cleanliness”, “comfortable shopping temperature”, “adequate protection from weather” and

“designs of stores/stalls are appealing” load highly in this factor. However, about half of the variables load higher in other factors.

Factors 2 and 3 are labelled as “ease of travel” and “entertainment”. They account for 8.9% and 7.3% of the variance respectively. Other factors produced by the PCA procedures include “bargaining and price”, “crowd and noise”, “festive shopping”, “quality” and “traditional shopping”.

Table 4: Image structure of shoppers’ perceptions of “pasar malam”

Factor/label	Attributes	Factor loadings
<u>Factor 1:</u> Comfort <u>Variance:</u> 21.3% <u>Alpha value:</u> 0.7517	Acceptable level of cleanliness	.784
	Comfortable shopping temperature	.727
	Adequate protection from weather	.682
	Designs of stores/stalls are appealing	.570
	A wide variety of goods/services being sold*	.469
	Good after sale service*	.405
<u>Factor 2:</u> Ease of travel <u>Variance:</u> 8.9% <u>Alpha value:</u> 0.7706	Availability of adequate parking spaces	.703
	Comfort of travel to shopping destination	.678
	Ease of travel to shopping destination	.666
	High service standards of sale staffs	.659
	Designs of stores/stalls are appealing	.429
	Availability of high quality goods/services*	.310
<u>Factor 3:</u> Entertainment <u>Variance:</u> 7.3% <u>Alpha value:</u> 0.6641	Availability of entertainment facilities	.818
	A substitute for downtown shopping	.721
	A place for family outing	.548
	Availability of eating outlets/restaurants*	.460
	Ability to meet shopping needs all the time*	.441
	An ideal place to spend the day*	.434
<u>Factor 4:</u> Bargaining and price <u>Variance:</u> 5.8% <u>Alpha value:</u> 0.6745	Ability to bargain	.722
	Affordable prices of goods/services	.690
	A wide variety of goods/services being sold	.636
	A place for family outing*	.460
<u>Factor 5:</u> Crowd and noise <u>Variance:</u> 5.5% <u>Alpha value:</u> 0.6956	Reasonable crowd level	.856
	Reasonable noise level	.611
	Easy to find ways/directions to shops/stalls	.378
	Availability of local snacks/desserts/food*	.336

<u>Factor 6:</u>	Adequate number of stalls/stores	.766
Variety	Ability to meet shopping needs all the time	.480
<u>Variance:</u>	Good after sale service	.458
4.8%	High service standards of sale staffs*	.403
<u>Alpha value:</u>	Availability of local snacks/desserts/food*	.331
0.6537	Comfort of travel to shopping destination*	.306
<u>Factor 7:</u>	Availability of festive/carnival atmosphere	.761
Festive shopping	An ideal place to spend the day	.513
<u>Variance:</u>	Availability of eating outlets/restaurants	.477
4.4%	Availability of local snacks/desserts/food*	-.369
<u>Alpha value:</u>		
0.7361		
<u>Factor 8:</u>	Availability of high quality goods/services	.398
Quality	Ability to meet shopping needs all the time*	.321
<u>Variance:</u>	Availability of eating outlets/restaurants*	-.338
4.1%		
<u>Alpha value:</u>		
0.6751		
<u>Factor 9:</u>	Convenient and tidy layout of stores/stalls	.630
Traditional shopping	Availability of local snacks/desserts/food	.369
<u>Variance:</u>		
3.8%		
<u>Alpha value:</u>		
0.6936		
Bartlett's Test of sphericity		.000
Kaiser-Meyer-Olkin Measure of Sampling adequacy		.730
Total Variance		65.94%
Overall reliability alpha value		0.8321

Suburban shopping centres

The values of the Bartlett's test of sphericity (.000) and KMO (.692) indicated that the data are appropriate for factor analysis. An overall reliability value of 0.7886 was also obtained for the data using Cronbach's alpha; hence, the data is considered reliable (Nunnally, 1978). The latent root criteria suggested a ten-factor solution that accounts for 75.28% of the variance within the original variables. Every one of the 27 attributes loads on at least one factor.

The factors "one stop shopping" and "atmosphere" account for more than 10% of the variance each. Other factors which account highly for the variance include "service and variety", "ease of travel", "centre and store-feature oriented" and "direction and layout". The rest of the factors account for less than 5% of the variance.

In addition, all factors except the factor "local appeal" have alpha values greater than 0.650; thus suggesting that they are reliable (Dawson et al, 1990). Hence, the factor "local appeal" has to be treated with caution.

Table 5: Image structure of shoppers' perceptions of suburban shopping centre

Factor/label	Attributes	Factor loadings
<u>Factor 1:</u> One stop shopping <u>Variance:</u> 15.67% <u>Alpha value:</u> 0.8036	An ideal place to spend the day Availability of eating outlets/restaurants A place for family outing Availability of entertainment facilities Ability to bargain*	.888 .876 .874 .814 .311
<u>Factor 2:</u> Atmosphere <u>Variance:</u> 10.90% <u>Alpha value:</u> 0.7564	Acceptable level of cleanliness Comfortable shopping temperature Reasonable crowd level Reasonable noise level	.902 .844 .840 .310
<u>Factor 3:</u> Service and variety <u>Variance:</u> 9.97% <u>Alpha value:</u> 0.7979	High service standards of sale staffs Good after sale service A wide variety of goods/services being sold Availability of latest fashion/model* Adequate protection from weather	.774 .728 .497 .322 -.676
<u>Factor 4:</u> Ease of Travel <u>Variance:</u> 9.24% <u>Alpha value:</u> 0.7731	Ease of travel to shopping destination Comfort of travel to shopping destination Reasonable noise level*	.860 .803 -.420
<u>Factor 5:</u> Centre and store feature orientated <u>Variance:</u> 7.41% <u>Alpha value:</u> 0.7888	Adequate number of stalls/stores Availability of latest fashion/model A wide variety of goods/services being sold* Designs of stores/stalls are appealing Availability of festive/carnival atmosphere*	.809 .569 .493 .486 -.405
<u>Factor 6:</u> Direction and layout <u>Variance:</u> 6.04% <u>Alpha value:</u> 0.8096	Easy to find ways/directions to shops/stalls Convenient and tidy layout of stores/stalls	.893 .876
<u>Factor 7:</u> Substitute for downtown shopping <u>Variance:</u> 4.51% <u>Alpha value:</u> 0.6821	A substitute for downtown shopping Ability to meet shopping needs all the time	.748 .727

Factor 8: Price and quality <u>Variance:</u> 4.39% <u>Alpha value:</u> 0.6588	Affordable prices of goods/services Availability of high quality goods/services Ability to bargain Availability of latest fashion/model*	.633 .575 .545 .324
Factor 9: Parking <u>Variance:</u> 3.82% <u>Alpha value:</u> 0.7442	Availability of adequate parking spaces Affordable prices of goods/services*	.814 .386
Factor 10: Local appeal <u>Variance:</u> 3.55% <u>Alpha value:</u> 0.6442	Availability of local snacks/desserts/food Designs of stores/stalls are appealing* Availability of festive/carnival atmosphere	.817 .352 .312
Bartlett's Test of sphericity Kaiser-Meyer-Olkin Measure of Sampling adequacy Total Variance Overall reliability alpha value		.000 .692 75.28% 0.7886

Tables 4 and 5 show that the “pasar malam” and suburban shopping centres possess different image dimensions from the shoppers’ perspective. While there are some elements of similarities, the PCA procedures also show aspects of uniqueness within each retail entity. The commonalities lie in the factors relating to the ease of travel, price, variety, and quality of goods and services, as well as the atmospheric characteristics. These are usually common in all retail forms. However, factors relating to “bargaining”, “traditional shopping” and “festive shopping” are unique to the “pasar malam”. On the other hand, attributes relating to “one stop shopping” and “substitute for downtown shopping” are distinctive features of the suburban shopping centre. The findings have significant implications on the planning and management of both retail entities in the pursuit to enhance shoppers’ patronage of retail centres.

Weighted factor rating

The weighted factor rating (WFR) shows the weighted mean scores of each of the factors produced by the principal component analysis. Its score ranges from 1 to 5. In essence, this is done by linking the summation of the mean scores of each of the variables which load in each factor with their respective factor loading. It is then easier to express the direction and the magnitude of differences between the factors.

While the principal component analysis produces the image structures of “pasar malam” and suburban shopping centre, it does not indicate the mean score ratings

of the factors produced. Weighted factor rating will thus transform the factor loadings of the variables (as shown in Tables 4 and 5) in each factor into a weighted mean rating of each factor (Ibrahim, 2002). The WFR can be computed as follows:

$$\text{Weighted Factor Rating of Factor } k = \frac{\sum_{j=1} \mu_{jk} f_{jk}}{\sum_{j=1} f_{jk}} \quad (1)$$

where: μ_{jk} = mean score rating of variable j in factor k.
 f_{jk} = factor loading of variable j in factor k.

Weighted factor rating of “pasar malam”

Table 6 shows the weighted ratings for the nine factors of “pasar malam”. Five of the factors fall in the “good” region of the scale, with the factor “bargaining and price” recording the highest score. In the “poor” region of the scale, there are four factors with the factor “entertainment” recording the lowest WFR at 2.29.

Table 6: Weighted factor ratings for “pasar malam”

Factor	Weighted Factor Rating
Bargaining and price	3.78
Variety	3.36
Ease of travel	3.17
Traditional shopping	3.15
Crowd and noise	3.04
Quality	2.93
Comfort	2.55
Festive shopping	2.43
Entertainment	2.29
Overall Weighted Factors Rating	2.97

Weighted factor rating of suburban shopping centres

For suburban shopping centres, the respondents have positive perceptions for all the factors, except the factor “local appeal” with a low WFR of 2.74. The factors “centre and store feature orientated” and “atmosphere” recorded relatively higher scores. Overall, the suburban shopping centre has a higher WFR than the “pasar malam”.

Table 7: Weighted factor ratings for suburban shopping centres

Factor	Weighted Factor Rating
Centre and store feature orientated	4.10
Atmosphere	4.07
Direction and layout	3.90
One stop shopping	3.75
Substitute for downtown shopping	3.69
Service and variety	3.67
Parking	3.61
Ease of travel	3.59
Price and quality	3.11
Local appeal	2.74
Overall Weighted Factors Rating	3.62

CONCLUSION

Using a mixed method approach, this study has attempted to provide insights into the perceptual dimensions of “pasar malam” and suburban shopping centres. The principal component analysis (PCA) has been carried out to examine the latent dimensions of shoppers’ perception of the two retailing entities investigated in this study. Following this, the weighted factor rating (WFR) for each factor was calculated to evaluate the relative significance of the factors produced by the PCA procedures.

As both the “pasar malam” and suburban shopping centre belong to different components of the retail marketing system, the study found that both retailing entities portray different image structures. While there are some common images between them, other images are unique to either “pasar malam” or suburban shopping centres.

The factor “ease of travel” is common to both “pasar malam” and the suburban shopping centre. Components of image relating to “variety”, “quality” and “price” are also common between the two. The factors “crowd and noise” and “comfort” in “pasar malam” can also be said to be, in essence, belonging to the same genre as the factor “atmosphere” in suburban shopping centres. The rest of the factors are unique to either “pasar malam” or suburban shopping centres.

For “pasar malam”, the factor “bargaining and price” has the highest WFR . This image component should come as no surprise as stalls in "pasar malam" are operated by operators who conduct their trade in a less formal manner. It is seen as a cheap and affordable source of goods and services. This would meet the needs of

the lower income households, particularly during the economic downturn. On the other hand, relating to the suburban shopping centre, the factors “centre and store feature orientated” and “atmosphere” have relatively higher ratings.

The findings of this study confirm the significance and applicability of many of the factors which have been adopted in past retail studies, such as those from the conceptual models, image studies and spatial models. Factors such as those relating to the variety of goods and services, quality of goods and services and prices of goods and services are the critical success factors of retail centres, be it shopping centres, retail outlets or “pasar malam” at all locations (Berry, 1969; Linquist, 1974-1975; Nevin and Houston, 1980; McGoldrick and Thompson, 1992; Ibrahim and McGoldrick, 2003).

However, the study also illustrates that both retail entities possess their own niches that may be significant in their co-existence together with the suburban public housing estates. This provides an opportunity for both the management of “pasar malam” and suburban shopping centres to work together and integrate both forms of retail marketing systems to capitalize on their respective niches. This will benefit both the retailers and shoppers. While the shoppers will benefit through the wider choices of goods and services, the retailers will gain from greater patronage. Over time, this may increase the value of the site; henceforth, the value of the suburban shopping centre.

In addition, with the findings of the study, planners can allocate “pasar malam” to be sited near to the suburban shopping centre to enhance the shopping experience of shoppers. However, caution needs to be taken so that the retail trade of the suburban shopping centre, which is permanent in nature, will not be eroded.

While this study forms an initial attempt to understand the bazaar sector, more research should be carried out to enhance the bazaar sector as a retail form, as well as to develop a niche for it to co-exist with the firm-centred sector.

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