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The mystery of consumer behaviour: market segmentation and shoppers' choices of shopping centres

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Abstract
Shopping centers represent a substantial slice of the UK economy and have rightly attracted considerable research. Despite interest from academics and practitioners, little research attention has been paid to the market segmentation of shoppers. Proactive marketing management is a feature of only a minority of UK shopping centers. The marketing communications of most would appear to be aimed mainly at a homogenised consumer population, rather than attempting to target specific groups.

This paper is based on an empirical investigation of six UK shopping centers, ranging in size from a small in-town sub-regional center to a large out-of-town regional center, the total number of respondents being 287. Earlier studies by the authors have described the 'attractiveness' and 'distance' aspects of shopping center choice. Here, they explore the differences in behaviour between shoppers and draw attention to differences between exemplar segments as to which attributes are critical in shopping center choice.

The authors' *post hoc* shopper classification based on a psychographic analysis is central to the findings. Two groups identified, 'service' *vs.* 'shops' importance motivation, were more effective than conventional *a priori* segmentation bases in modelling spending behaviour. Implications are drawn for center managements and researchers. The paper concludes with a suggestion for a greater degree of data sharing between shopping center owners and retail tenants.

Introduction
Despite attention given to shopping motivation, there has been little previous research into the differences in responses to shopping center marketing mixes from different segments of shoppers. This is surprising as 'pro-active marketing' has been demonstrated to be central to shopping center success (e.g. Capital Shopping Centers, 1996; Mintel, 1997). This paper explores the potential to apply market segmentation to shopping centers and to draw attention to the benefits sharing customer preferences data between shopping center owners and their tenant retailers. The empirical work concerns case studies of six UK shopping centers, listed in Table 1.

[Table 1]

Conceptual Framework
A priori segmentation
Retailers have long used *a priori* definitions of their target customers to aim their offering at segments defined by (for example), sex. In the UK, men are becoming more involved with shopping. In this paper we consider how shopping center managers might segment their offers in order to appeal more to males.

Post hoc segmentation: lifestyle and psychographics
Some retailers have successfully aimed their marketing mixes at different aspects of lifestyle. 'Lifestyle' refers to consumers' outward characteristics or traits often expressed in terms of the products bought. Profiles of customer groups can be identified, say from lifestyle questionnaires or

loyalty card data, and these profiles can be used as segmentation bases. Segments based on benefits ('importance motivation' below) tend to be stable and consistent (Calantone and Sawyer, 1978).

Segmentation for shopping centers

Studies of attributes likely to attract (or discourage) shoppers' patronage include, for example Jarratt (1996) who reported a grouping of attributes reflecting their importance to respondents when shopping. Boedeker and Marjanen (Finland, 1993) segmented shoppers into six types. Clusters that could be described as 'shopping', 'service' and 'apathetic' were common to both. We contend that segmented promotion, product, price and place offers could be targeted to appeal to specific, identifiable shopping center customer groups. Such a strategy should lead to more satisfied customers, higher sales and profits for retailers and, in the long run, higher rental incomes for the centers.

The design for this study

The design was based on a structured questionnaire survey at UK shopping centers. The intercept sample of shoppers in the mall area was, intended to be as representative as practicable of the centers' shoppers. Respondents' assessments of 'importance' of shopping center attributes and their ratings of the centers on those attributes (compared to their main competing center) have been examined for the degree of association with the individual shoppers' spend at each center, relative to the competing center. Various subset *a priori* segmentation pairs from the sample have been compared: male/female, higher/lower socio-economic groups, higher/lower household income, older/younger and auto/public transport. The final pair was based on *post hoc* benefit 'importance motivation': shoppers considering 'Shops' attributes more important *vs.* 'Service'.

For each segmentation pair, those attributes significantly associated with individual relative spend have been ranked in order of the degree of association. The results indicate those most critical for each of the segments. The work contrasts with other shopping center studies in two respects. Firstly, the segments considered are examined in terms of the shopping center attributes most correlated with shopper spending behaviour. Secondly, ideas for varying the marketing mixes for different segments are suggested. In particular, the marketing mixes most applicable to the two groups of the authors' benefit 'importance motivation' shopper classification are considered.

Procedure

The results have been based on a structured questionnaire survey. A convenience intercept sample of shoppers were interviewed during weekdays, 10.30 a.m. to 3.30 p.m. Respondents were asked for their comparative ratings of two shopping centers, one of them the center where the interview took place. The alternative center evaluated by each respondent was the one where they shopped most (or next most after the center where the respondent was interviewed) for non-food shopping. The questionnaire was based on the 'attributes of image' studied by McGoldrick and Thompson (1992) together with additional constructs derived from unstructured interviews. Respondents were asked for the 'importance' of each of 38 attributes (such as 'Quality of stores' and 'Availability of toilets', following Hackett and Foxall, 1994). They also 'rated' each attribute for both the center studied and the alternative center. Respondents were asked to estimate perceived travel distance and time to both centers and to state details such as age, location of residence, household income, occupation of the main earner in the household and type of transport to both centers. The main dependent variable was the 'individual relative spend'. A value of 100 indicates all expenditure at the center studied none at the alternative center. A value of 50 indicates half of the expenditure at each center. A similar scale has been used for the variables travel 'distance', 'time'; 'attractiveness'; and 'image' attributes. Regression analysis was used to investigate associations between shopping center attributes and shoppers' spend. For example, the attribute most associated with the spend of female shoppers was 'Cleanliness', $R^2 = 0.075$, i.e.cleanliness is associated with 7.5% of the variation in female shopper spend between centers. All the values reported are significant ($p = 0.05$).

Results

Table 2 lists the attributes most significantly associated with spend for segments of shoppers ranked in order of association. Female *vs.* male shoppers are considered below by way of example.

Why do females and males shop where they do?

Only one of the 'top six' significant attributes for females ('Nice place to spend time') appeared amongst those attributes significant for males. Conversely, three out of the 'top six'

attributes for males did not appear on the list for females ('Lighting', 'Sheltered access' and 'No undesirable characters'). The significant attributes for females were grouped around **shopping** (for example 'Selection of merchandise') and **experience** ('Friendly atmosphere'). For males the concerns were with the **center** ('Lighting' and 'Sheltered access'). Some differences between males and females arise because many males were in the center mainly to accompany females. For females, who were enjoying the trip, the most significant concerns were 'shopping' and 'experience'. Conversely, males who were simply 'there' were more evaluative of the 'center'.

Why do shoppers motivated by the 'importance' of 'shops' and 'service' shop where they do?

A cluster analysis (SPSS 'K-means') based on 'importance' scores has identified distinct segments of shoppers who can be classified by 'importance motivation'. The main attributes which distinguished the clusters are listed in Table 3. These segments were described as 'Shops importance motivation', Table 3(a); and 'Service importance motivation', Table 3(b). The clusters were different in attributes significantly related to relative spend (Table 2). For the 'Shops importance motivation' shoppers 'Quality of the stores' and 'Selection of merchandise' were both in the 'top six'. A number of 'service' attributes were also significant with 'Nice place to spend time', 'Other shoppers nice people', 'Friendly atmosphere' and 'Lively or exciting' all also in the 'top 6' for the 'Shops' segment.

[Tables 2 and 3]

Compared to the 'Shops importance motivation' cluster, the 'Service importance motivation' shoppers are on average slightly higher socio-economic group (63% ABC1s *vs.* 59%), income (60% £20000 per year + *vs.* 53%), and age (42% 45 + *vs.* 33%) than the 'Shops importance motivation' shoppers. They predominantly travel by auto (90% *vs.* 52%).

Modelling behaviour for shopper segments

Models of relative spend are summarised in Table 4. For example, for 'Shops motivation':

(11) Relative spend = 19.4 + 0.70 X Relative attractiveness - 0.21 X Relative distance.

The models are useful in estimating changes in spending that could result from improving aspects of a shopping center. For the high spending 'Service' shoppers (model 12 in Table III), a 25% improvement in the ratings for cleanliness and rest rooms could be associated with an increase in spend for those shoppers of 10%, equivalent to an increase in the total center sales turnover of over 3%. One measure of the validity of the subgroups is the improvement in 'fit' of the models. 'Service' vs. 'Shops' had the best fit, with R^2 increased to an average of 0.195 for the two subgroups. 'Service' vs. 'Shops' discriminated well between high and low customer spend, with the 'Service' segment's average stated monthly spend UK£82, compared with the overall average of UK£65.

[Table 4]

Discussion and implications

Given the small sample size and number of centers, caution must be exercised in interpreting the results. Interesting pointers have emerged, identifying which attributes were most associated with spend for various segments. A finding from the conventional *a priori* segmentation concerned the differences between females and males. Shopping centers could extend their appeal to males, who were responsible for 27% of the spend. The idea of the 'men's crèche' may be apt. A waiting and relaxation area could provide entertainments including, for example, computer games and sports videos. These would provide almost ideally targeted media for segmented marketing communications drawing attention to offerings of the center particularly targeted at the male customer. Some of the largest centers do have such a waiting area – for example, Meadowhall (UK out-of-town regional center) – often referred to as a 'lounge'. This idea could be further developed by the use of targeted advertising video (such as the Instrumental Media system already on trial with Tesco (in UK grocery superstores). Sales of suitable merchandise could even be made directly from the 'waiting' area: 'boys toys', computers, guns (in the US at least) and gifts for females, for example.

There are many other marketing implications. 'Availability of seats' was a significant attribute for shoppers travelling by public transport but not for those travelling by auto. 'Eating and drinking' was more closely associated with spend for auto-borne shoppers. 'Mode of transport' provides a useful indicator of spending power. When auto-borne shoppers wish to relax, they might combine this with expenditure on food and drink. Conversely, when those who travel by public transport want to sit down, they are more likely to look for a (free) public seating area. Centers could

place advertisements **on the backs of** buses (to target auto drivers and passengers) illustrating customers enjoying **eating and drinking** at the center. On the other hand, the **insides** of buses could carry pictures of the mall area including the comfortable seating areas.

Consideration should be given the higher spending 'Auto' shoppers, e.g. by featuring the 'Choice of major stores' in the advertising. Print media can be selected according to whether readership has a higher proportion of the higher-spending 'ABC1' readers (UK JICTAR scale: managerial, administrative, professional, supervisory or clerical). Advertisements in such publications could emphasise the 'Friendly atmosphere' of the center. On the other hand, 'C2DE' (manual workers and unwaged) readers could be targeted with messages featuring the children's facilities. This would include the crèche or playgroup but also mall entertainments such as characters from children's television.

Advertising can be targeted specifically towards the 'Female' or 'Male' reader. Although media availability is more limited on a local basis, opportunities might exist, for example, in the relevant sections of local papers. 'Availability of good toilets' might not be tasteful as a topic for a major advertising campaign, but with some creativity, a theme might be represented around the area of 'Friendly atmosphere' and 'Eating and drinking'.

The most significant implications concern the 'importance motivation' shopper classification. Implementation is not straightforward, in the absence of marketing communications media to target these segments directly. Nevertheless, the higher-spending 'Service importance' segment has a greater proportion of other segments indicating spending power: ABC1s, higher income, older and travel by auto. Media (such as the backs of buses again) is available for targeting. One attribute in particular could be selected as relevant to these 'up market' segments: 'Eating and drinking'.

The above ideas have illustrated how two of the '4Ps' of the marketing mix – 'Promotion' (marketing communications) and 'Product' (including 'service') can be varied to appeal to differing segments. The other two 'Ps', 'Place' (distribution or convenience aspects) and 'Price' can also be tailored – but these aspects are well-known and largely self explanatory The results draw attention to the need to provide good parking and easy access by road for up-market, higher spending auto-borne customers, whilst not neglecting aspects such as 'Value for money' and 'Availability of [free] seats' for those with less spending power. Managers cannot afford to ignore the interests of the less-affluent customers or those using public transport: shoppers travelling other than by auto represented 30% of stated expenditure at the sample shopping centers. Tenant mixes should be chosen to offer not just high quality and major stores, but also discount outlets and/or access to local shops.

Differentiated marketing can be applied to shopping centers, with at least some potential for adjusting each of the '4Ps' of the marketing mix to appeal to different customer segments, even within the same center. The essential implication for shopping centers is the potential for segmenting shoppers by the benefits that they seek, using the authors' 'importance motivation' classification.

Conclusions and implications

New ideas have been presented for ways in which shopping centers might use varied marketing mixes to attract and satisfy customer segments. *A priori* segmentation bases can be usefully used to better satisfy customers differentiated by sex, socio-economic group, income, age and type of transport. *Post hoc* 'importance motivation' segments are more effective: (1) '**Service**' or '**Experience**'; and (2) '**Shops**' or '**Shopping**'. There are fewer customers motivated primarily by 'Service' or 'Experience' but they tend to be higher-spending.

This study has demonstrated that a full data-mining system is not essential. Analysis can be carried out on a small sample. The SPSS program can be used – saving the costs of custom software. Accessing motivation cluster segments will involve building a database of individual customers as part of a (for example) a customer registration, loyalty or relationship management scheme. Some shopping centers (e.g. Lakeside UK out-of-town regional centre) have discontinued loyalty schemes, partly because, with heavy data handling, they were not cost-effective. Another problem is major retailer tenants objecting to shopping centers sharing their proprietary data. With improvements in technology and increased awareness of the benefits of *post hoc* marketing segmentation, the barriers may be overcome. For example, Meadowhall has a 'Go Shop' smart card with which shoppers can view offers and information from kiosks (and from home *via* the Internet). The system captures

extensive information on consumer profiles and preferences, which is already shared with some retailers. Bar codes are read from vouchers, but with increasing acceptance by retailers of the benefits of data sharing, there is the potential to add in transaction data. At Meadowhall and also at the newer Centre West (UK in-town sub-regional), an intranet has been installed connecting each retail outlet with the management office, specifically for sharing information. Retailers can view market reports comparing and contrasting local figures against national statistics. Of particular interest is the facility to share information on customer profiles. Retailers are learning the benefits of information sharing and it is possible that the approach might be developed further into tracking customer transaction data *via* the use of the smart card.

For future, larger-scale projects, the authors recommend the use of a multi-agent system such as 'MagentA'. Such systems can handle text alongside quantitative data and furnish individual shoppers with a 'personal agent'. This represents customized marketing segmentation – a software 'personal shopper' for every participating consumer. So far we have considered the knowledge **about** customers aspect of customer knowledge. The personal agent system could address the knowledge possessed **by** customers aspects. The customer might only be aware of the difference from a standard loyalty card when presenting the 'smart card' to obtain benefits or information. Customers having a personal agent could receive communications specifically targeted to their needs and wants. There are a number of ways that this could be achieved, but one of the simplest would be for customers to present their card for reading at the information kiosk in order to receive personalized information and vouchers.

It was pointed out above that an improvement of 25% in the ratings for 'cleanliness' and 'rest rooms' could be associated with an increase in spending by the service shoppers of 10%. The 10% increase for this group would add 3% to the total center sales turnover. A regional shopping center would gain tens of millions of dollars sales, with retailers seeing a seven-figure increase in gross profits. In the medium term, rental incomes follow sales: shopping center owners could expect US$2 million in increased rents.

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Table 1 Case study shopping centers and numbers of respondents

Center (nom-de-guerre)	*Size classification* [1]	*Number of respondents*	*Source* [2]
Blue Rose	**Large, out-of-town, regional**	**50**	**a**
White Water	**In-town, regional**	**73**	**a**
Jubilee	**In-town, sub-regional**	**56**	**a**
Metropolitan	**In-town, sub-regional**	**51**	**a**
Greenleys	**In-town, sub-regional**	**28**	**b**
The Woodlands	**In-town, regional**	**29**	**b**
Grand total		**287.**	

Notes:
1. A 'Regional' center is defined as 50000 m^2+, 'Sub-regional' 20000-50000 m^2 (based on Guy, 1994; Marjanen, 1993).
2. Data sources: (a) The authors. (b) Jackson, 1995, under supervision of one of the authors.

Table 2 The 'top six' significant attributes for each segment, ranked in order of the coefficient of determination, R^2, associated with individual relative spend.

	R^2		R^2
FEMALES **(199 respondents: £68 per month)**		***MALES*** **(88 respondents: £58 per month)**	
Cleanliness *	**0.075**	General layout	0.104
Nice place to spend time	0.063	Nice place to spend time	0.086
Availability of good toilets	0.056	**Lighting ***	**0.085**
Friendly atmosphere	0.053	**Sheltered access ***	**0.081**
Selection of merchandise	0.051	Helpfulness of staff	0.069
Eating and drinking	0.048	**No undesirable characters ***	**0.067**
ABC1 **(168: £73)**		***C2DE*** **(113: £53)**	
Nice place to spend time	0.156	Nice place to spend time	0.049
Lighting *	0.118	Cleanliness	0.044
Access by auto *	**0.113**	Good for children	0.043
Friendly atmosphere	0.101	Quality of stores	0.038
General layout	0.101	General layout	0.037
Cleanliness	0.092	Availability of good toilets	0.036
ANNUAL INCOME £20000 + **(101: £89)**		***INCOME UP TO £20000*** **(81: £59)**	
Nice place to spend time	0.077	**Lively or exciting ***	**0.110**
General layout	0.069	General layout	0.095
Cleanliness	0.062	**Covered shopping ***	**0.093**
Availability of good toilets	0.046	Cleanliness	0.088
Selection of merchandise	0.045	Selection of merchandise	0.084
Quality of the stores	0.043	Nice place to spend time	0.074
AGE UP TO 44 YEARS **(186: £65)**		***AGE 45 YEARS +*** **(100: £65)**	
General layout	0.070	Nice place to spend time	0.074
Availability of good toilets	0.069	Cleanliness	0.058
Selection of merchandise	0.039	General layout	0.053
Nice place to spend time	0.038	Availability of good toilets	0.046
Lighting	0.035	Friendly atmosphere	0.042
Value for money	0.034	Eating and drinking	0.042
TRAVEL BY AUTO **(149: £81)**		***PUBLIC TRANSPORT*** **(57: £60)**	
Nice place to spend time	0.079	Selection of merchandise	0.155
Covered shopping	0.072	Quality of the stores	0.131
General layout	0.069	**Shoppers nice people ***	**0.110**
Selection of merchandise	0.044	**Availability of seats ***	**0.080**
Choice of major stores	0.039	**Big shopping center ***	**0.080**
Eating and drinking	0.038	**Value for money ***	**0.076**
SERVICE IMPORTANCE **(74: £82)**		***SHOPS IMPORTANCE*** **(213: £59)**	
General layout	0.104	Nice place to spend time	0.080
Relative travel distance	0.099	**Shoppers nice people ***	**0.067**
Cleanliness	0.078	**Quality of the stores ***	**0.065**
Availability of good toilets	0.069	Friendly atmosphere	0.057
Nice place to spend time	0.059	**Lively or exciting ***	**0.056**
Good for children	0.057	Selection of merchandise	0.052

All listed attributes are significantly associated with individual relative spend at p = 0.05.
The number of respondents and the average monthly spend for each subgroup is indicated in parenthesis.
*** Segments significantly different at p = 0.05 with respect to the association with spend of these attributes (combination of Monte Carlo and t-test, Dennis *et al,* 1999a).**

Table 3(a) Shops importance motivation cluster

	Final cluster center 'Importance' scores
Variety of the stores	3.49
Quality of the stores *	**3.41**
Covered shopping	3.30
Access by public transport **	**3.14**

Table 3(b) Service importance motivation cluster

	Final cluster center 'Importance' scores
Parking facilities **	**4.47**
Access by auto **	**4.29**
Cleanliness **	**4.22**
Availability of good toilets **	**4.01**
Value for money **	**3.99**
Helpfulness of the staff **	**3.96**

Differences between clusters 'Importance' scores significant at: * p = 0.05 ** p = 0.001.
'Importance' scores are on the 1 to 5 scale, where 1 is 'no relevance' and 5 is 'extremely important'. Only attributes above the scale mid-point (3.00) are listed, and each attribute is listed once only, in the cluster where most dominant.

Table 4 Models for shopper segments

	Constant	*'Attractiveness' Coefficient*	*'Distance' Coefficient.*	*Coefficient of determination, R^2*	*Significance p*	*Model number*
Females	**28.3**	**0.63**	**-0.24**	**0.19**	**<0.0001**	**1**
Males	**21.1**	**0.49**	**0**	**0.09**	**<0.01**	**2**
ABC1	**19.0**	**0.72**	**-0.19**	**0.20**	**<0.01**	**3**
C2DE	**34.4**	**0.50**	**-0.24**	**0.13**	**<0.01**	**4**
Income £20000+	**28.6**	**0.62**	**-0.24**	**0.17**	**<0.01**	**5**
Up to £19000	**27.0**	**0.58**	**-0.19**	**0.18**	**<0.05**	**6**
Age up to 44	**29.3**	**0.58**	**-0.23**	**0.16**	**<0.0001**	**7**
Age 45 +	**18.0**	**0.61**	**0**	**0.14**	**0.0001**	**8**
Auto	**32.8**	**0.53**	**-0.20**	**0.15**	**<0.01**	**9**
Public transport	**31.8**	**0.58**	**-0.22**	**0.19**	**<0.05**	**10**
'Shops motivation'	**19.4**	**0.70**	**-0.21**	**0.17**	**0.0001**	**11**
'Service motivation'	**39.6**	**0.54**	**-0.28**	**0.22**	**<0.01**	**12**
All respondents	**26.0**	**0.62**	**-0.20**	**0.16**	**0.0001**	**13**