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Chapter 3

Why do People Shop Where They do? The Attributes of Shopping Centres that Determine Where Consumers Choose to Shop

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Abstract
What determines where people shop? Why would people visit one shopping centre rather than another? These questions are important to developers, backers, planners and Government. In addition, there is a need to understand shopping as a fundamental feature of modern society. Attributes such as transport links, parking and choice of major stores are well known as determinants of shopping centre success - but some centres are only 50% let twelve months after opening. This paper is based on an empirical investigation, carried out over a three-year period, of four UK shopping centres, ranging in size from a large out-of town regional centre to a small in-town sub-regional centre. Further data are added from a related study, the total number of respondents at all six centres being 287. Other researchers have used questionnaire surveys based on the respondents' perceptions of the importance or ratings of attributes of shopping centres. Another approach is the attempt to measure the distinctiveness of attributes. This study combines importance, rating and distinctiveness. A further innovation is to weight attributes according to the degree of

association with shoppers' spending. A methodology is thus proposed for identifying the most critical attributes. Some differences have been observed between shopper groups such as male/female or type of transport, and these differences can be used in planning a shopping centre marketing strategy. Many of the critical attributes are not consistent between centres and the results indicate ways in which each centre might have scope for improvement.

Introduction

This paper explores the fundamental question: why people shop where they do? What attributes make one shopping centre more successful than another? What aspects have most scope for improvement? Predicting shopping levels is still an inexact science, despite considerable research, with many shopping centres performing below expectations. Kirkup and Rafiq (1994b) drew attention to the 'Catwalk Centre' (not its real name) where, three years after opening, 55% of tenants had been trading for less than 12 months. Twelve months after opening occupancy levels of UK shopping centres varied from below 50% to over 80%. Kirkup and Rafiq (1993 and 1994a) considered that the less successful ones 'may not have followed best practice in research, design and marketing'. For many of the shopping population of the UK, there are a number of centres within easy reach offering the same facilities. For example, the Catwalk Centre is the second shopping centre in the town. How do people decide which to use? Does 'image' influence attitudes to centres? This is what Marjanen (1993, page 10) calls the 'mystery of consumer behaviour' because 'we are not able to explain **why people shop where they do**'.

The authors have developed a methodology for investigating the relationship between the 'image' or 'attractiveness' of shopping centres and individual shopper behaviour. Benefits of improving 'image' can be illustrated by considering the financial value of brand equity. Capital Shopping Centres PLC (1996) claimed that the (UK) MetroCentre achieved a 17.5% increase in asset value from £354 million to £416 million 'reflecting the value of CSC's active management expertise in its first year of ownership'. The increase represents shoppers' and retailers' value of improvements to the 'attractiveness' of the centre. There is a huge financial potential for shopping centres becoming more 'actively managed' - and this is a substantial slice of the economy and jobs. Spending in UK shopping centres is around 7% of the Gross Domestic Product and employment is close to three-quarters of a million people. Shopping centres 'play a key role in the investments of pension funds' (Davies *et al*, 1993). Improvements in asset values are important not only to big investors but also to ordinary people as stakeholders.

The empirical part of the work primarily concerned case studies of four UK shopping centres. A 'shopping centre' is defined for our purposes as 'a planned retail development comprising at least three shops, under one freehold, managed and marketed as a unit' with a minimum gross retail area of 5000 m^2 and some covered pedestrian area. A 'regional' centre has a gross retail area of greater than 50000 m^2 and a sub-regional one 20000 to 50000 m^2 (based on Guy, 1994; Marjanen, 1993; Reynolds, 1993). The centres were necessarily chosen on a 'convenience' basis, representing a spread of types of centre from sub-regional upwards. The centre managements kindly gave permission for the interviewing to take place, but have

requested anonymity in reporting of the results. The (renamed) centres with numbers of respondents were:

White Water	In-town, regional	73
Blue Rose	Large, out-of-town, regional	50
Jubilee	In-town, sub-regional	56
Metropolitan	In-town, sub-regional	51
Total		230.

The total number of respondents was considered sufficient for this exploratory study. It was planned that the sample could be sub-divided into cells of minimum size 50 respondents in order to check for homogeneity in the overall sample. In the event, the differences between the centres have proved more interesting than the similarities. The conclusions relating to sub-cells of respondents have necessarily been restricted to those that can be demonstrated to be statistically significant, despite the small sample sizes.

Simkin (1996) points out that easy-to-use regression approaches are more popular with retail managers than other more complex models. The authors present a simple regression-based model linking shoppers' spending at a shopping centre with the attractiveness or image attributes of the centre and with travel time (or distance). Regression models often suffer from problems with multicollinearity. The methodology developed by the authors largely overcomes such problems by the use of a composite term for attractiveness or image, incorporating the relevant attributes, weighted according to their association with relative spending. The regressions therefore use at most two terms: travel time (or distance) and attractiveness.

Conceptual framework

Image

McGoldrick (1990) reviewed literature on image citing Berry (1969), Boulding (1956), Houston and Nevin (1980), Lindquist (1975) and Martineau (1958). Smith and Burns (1996) drawing on Markin *et al* (1976) sum up a reasonably consistent view:

> 'A bundle of cues, messages and suggestions which communicate to the consumer.'

As Howard (1995) states, the 'explanations of relative success of particular [shopping] centres can be analysed in terms of image'. The authors have studied such differences in relative success using image measurements summing a 'bundle' of image attributes. Shopping centres use 'rules of thumb' for decor and image design but Brown (1992) and Beddington (1991) point out that these 'appear to be the outcome of …. trial and error …. *not* extensive empirical research'.

Shopping centres face increasing competition not just from high streets but also factory outlets, warehouse clubs, retail parks and 'power centres' (Bodkin and Lord, 1997; Fernie, 1995; Guy, 1994; Marjanen, 1995; Reynolds, 1992 and 1993). There is a need for shopping centres not just to replicate the best of traditional town centres but to optimise benefits arising from centralised management.

A number of authors have drawn attention to the need for more studies on the influence of image on customers' choices of shopping centres (for example, Finn and Louviere, 1996; Hacket and Foxall, 1994; McGoldrick and Thompson, 1992b). Howell and Rogers (1980) state that:

> 'Not firmly established is whether the dimensionality of the image/attitude items employed is consistent across centres, or whether consumers' perceptual space differs for each centre studied.'

Dennis *et al* (1999; 2000) addressed the issue of perceptual space differences. This current work investigates differences in the 'dimensionality' of image attributes across different centres.

Rating of attributes

Attractiveness and image are difficult quantities to define and measure. A number of image components have been proposed which can be investigated using Likert or semantic differential scales (Hackett and Foxall, 1994; Kunkel and Berry, 1968; Lindquist, 1975; McGoldrick and Thompson, 1992a and b; Stanley and Sewall, 1976). McGoldrick and Thompson measured shoppers' **ratings** of shopping centres on a list of twenty-seven image attributes - taken as a starting point for this current work. As with the McGoldrick and Thompson questionnaire, our survey asked respondents to 'rate' the shopping centre they were at on each attribute. For comparison, our respondents were also asked to rate another shopping centre. The second centre was the one at which they said they shopped most (or next most) for non-food shopping (if the centre they were at were the centre where they shopped most, the second centre would be the one where they shopped next most). Respondents were asked to rate each of the attributes for both centres as 'very poor', 'poor', 'moderate', 'good' or 'very good'. The results were coded for analysis on a 1 to 5 scale, where 1 = very poor and 5 = very good. The five-point scale is the semantic differential approach of Osgood *et al* (1957), used in a number of studies of the image of shopping centres (Gentry and Burns, 1977; McGoldrick and Thompson, 1992a and b).

Importance of attributes

Hackett and Foxall (1994) measured the **importance** of a range of attributes to shoppers at two different shopping centres and found that the attributes considered most important were different at the two centres. We consider it necessary to measure respondents' perceptions of both **rating** and **importance** of the attributes involved. The questionnaire survey thus also asked respondents how **important** each attribute was in deciding where they shopped: 'no relevance', 'only slight importance', 'moderately important', 'very important' 'extremely important'. 'Importance' was also coded on a 1 to 5 scale, where 1 = no relevance and 5 = extremely important. The measurement of **importance** on a 1 to 5 scale implies the assumption that all respondents value importance on the same scale. In order to eliminate the need for this assumption, the authors have investigated an alternative scaling of importance, based on standardising the scale such that each respondents **importance** scale values were equal. All results have been calculated on this alternative basis in parallel with results using the 'raw' **importance** scores. In all cases, the results from both approaches were similar, but the 'fit' of models based on the 'raw' importance scores was slightly better than models based on the 'standardised' importance scores. In the

interests of simplicity, only the results based on 'raw' importance scores are reported here.

A further stage in the development of the authors' micro model is the multiplication of the numerical value for 'rating' by the numerical value for 'importance'. The technique is recommended by Aaker (1991) for comparing brands and has a basis in theory as analogous to the Fishbein (1963) 'compensating model'. It is the 'multi-attribute image model' of James *et al* (1976) as used by Gentry and Burns (1977) in assessing the attributes of shopping centre attractiveness in a Midwestern (USA) town. The authors' multi-attribute model is of the compensatory type, following Oppewal and Timmermans (1999) in the assumption that image evaluations 'are an additive function of the attributes'. Compensatory models have been found to be as good as or superior to non-compensatory models (Fotheringham, 1988; McGoldrck, 1992b; Timmermans, 1983).

With a different approach from ours where ratings on say a 1 to 5 scale were used in a straightforward comparison with patronage (as in Gentry and Burns, 1977), a discriminant analysis approach would have been appropriate. In the authors' model, though, attractiveness, distance and the dependent variable relative spending are measured on continuous scales. The authors have followed the Oppewal and Timmermans approach in considering image evaluations as interval rather than ordinal data, using 'ordinary least squares regression to estimate the parameters' of the image models. This use does not require the assumption the ratings 1 to 5 are spaced **evenly** apart - only that a scale exists, i.e. that 'Very good' can be rated numerically higher than 'good'. The authors have investigated a number of types of non-linear models. Non-linear versions of the models would have been used if necessary to accommodate uneven scales. In the event, the 'fit' of the linear versions was at least as good as the non-linear ones.

Distinctiveness

Well-known attributes affecting the success of shopping centres include choice of 'anchor' stores and parking facilities (Kirkup and Rafiq, 1993, 1994a and b). For the customer, there may be more than one shopping centre near-by that rates highly on these attributes. The differences between centres - **distinctiveness** - may play a greater part in patronage decisions. Swinyard's (1992) questionnaire survey asked respondents to rate retail banks on the 'distinctiveness' of various attributes. The results ranked 'the attributes revealing [the] greatest opportunity'. Swinyard concluded that the successful retailer must 'distinguish itself from its competitors in appealing ways.' In 'branding' terms this is making the offer 'distinctive relative to the competition' (Hankinson and Cowking 1993). A number of authors have commented (directly or indirectly) on the distinctiveness of shopping centres (Burns and Warren, 1995; Howell and Rogers, 1980; SERPLAN, 1987). USA shopping centres have been reported as in decline (Carlson 1991). The decline has been ascribed to a lack of distinctiveness (Cavanaugh, 1996; Wakefield and Baker, 1998). Wakefield and Baker found that shoppers are more loyal to shopping centres with a distinctive image, which excite and stimulate shoppers.

The questionnaire used in our study asked respondents to rate both the centre studied **and** an alternative centre, both coded on the 1 to 5 scale. The **difference** between

these values represents a composite of both the ‘rating’ of the centre studied and the ‘distinctiveness’. The numerical values were adjusted to be always positive (by the addition of 4 to each), for convenience in further processing. The resulting positive, composite measure of rating and distinctiveness is referred to as ‘rating/distinctiveness’. The usual use of 'Likert' type scales as numerical data would need an assumption that all respondents possess a common scale of measurement. In the case of the 'rating/distinctiveness' scales, this drawback is largely overcome by relying on a **comparison** with an alternative centre, rather than an absolute scale. As McGoldrick (1998) pointed out in a private communication, the use of the differences scale can be supported by analogy with the well-known 'SERVQUAL'. This instrument uses a similar comparison to arrive at a numerical rating value for rating, although in that case the difference is before and after, rather than two objects compared.

If the objective were specifically to compare two centres (as in McGoldrick, 1992 a and b, for example), the 'rating/distinctiveness' measure would have been more clear-cut. The objective of this study, though, was to determine which attributes were most critical (most scope for improvement) at each centre studied. For this reason, respondents were required to compare the centre with **their own** choice of competing centre. Thus, the comparison genuinely reflected ratings of attributes compared to those of competitors. Competing centres were thus represented (so far as practicable) in the sample in proportion to their use by the customers of the centres studied. It would not have been possible (or, for this application, desirable) to have the same sample evaluate all four centres. In one case where a sub-set of results could be analysed to compare a test centre with a specific competitor, the 'fit' of the model was improved. Nevertheless, as the main purpose of the overall modelling was to demonstrate the validity of the measures used, the results reported here are based on the 'spread' of actual competitors.

Association of perceptions with spending

Respondents were asked how much they spent at the centre, and at the alternative centre, in an ‘average’ month. Much of the variation in shoppers’ expenditures relates to factors such as respondents’ incomes, rather than attributes of the shopping centres (McGoldrick and Thompson, 1992a; Howell and Rogers, 1980). To counteract such influences, a composition variable ‘relative spending’, has been used. A value of 100 indicates all expenditures at (for example) the White Water Centre, none at the alternative centre; 50 represents half of expenditures at each centre. Travel time and distance have been scaled similarly. McGoldrick and Thompson (1992b, page 6) claimed that the relative measure ‘provided the sharpest focus upon the competitive interaction between .... centres’.

As McGoldrick and Thompson (1992b) point out, preference does not always lead to behaviour. The Chartered Institute of Marketing (1997) concluded from Nishikawa’s (1989) work that ‘**customers are only sincere when spending** .... far less sincere when talking’. The authors have attempted to include stated behaviour as well as preferences by weighting some attributes more heavily than others. Other researchers have investigated attribute weights and concluded that consumers are ‘less than rational’ (Dellaert *et al,* 1998) and that the weightings of individual attributes varied considerably from one shopping centre to another (Gautschi, 1981). The authors’ model weights attributes according to the degree of association with spending

behaviour as measured by correlations (R) or rather the coefficients of determination, R^2 and the regression coefficients. The regression coefficients are equivalent to Gautschi's 'elasticies of salient variables'.

The attractiveness model for each centre is based in part upon the degree of association between the attributes and relative spending. There is some auto correlation and an association would be expected. Accordingly, the authors have postulated an 'overall attractiveness' scale, based on a composite of all of the critical attributes at all of the centres. As significant variations were observed in which attributes were critical at each of the centres, the use of this more generalised 'attractiveness' scale has reduced the auto correlation effect. Ideally, the weightings of attributes in the model would be universal for all shopping centres. This has not been possible in our exploratory work, but the spread of centres studied was the nearest practicable alternative. Dellaert and associates (1998) confirmed that shoppers do not always weight attributes equally (or rationally). The authors contend that those attributes that are most critical for a centre can be determined by the degree of association with shoppers' spending. The overall models based on the weighted attributes should be valid to the degree of significance claimed, despite the element of recursiveness.

A key objective: disaggregation of critical components of image

A number of authors (Downs and Stea, 1973; Gentry and Burns, Howell and Rogers, 1977; 1980; McGoldrick and Thompson, 1992a and b; Nevin and Houston, 1980) have used factor analysis to demonstrate the association with buying behaviour. Retail image studies tend to indicate collinearity of attributes and therefore factor analysis is effective in reducing the redundancy of constructs. Rather than duplicate the work of previous studies, the authors have taken an alternative approach here. The methodology has in the main identified specific critical attributes rather than aggregated factors. McGoldrick and Andre (1997) illustrated the value of the approach in a study of supermarket shoppers' behaviour. From 15 store features evaluated for importance, only three (value for money, parking and opening hours) could be used to predict behaviour type.

East (1997) and Westbrook (1980) present evidence that supports the measurement of attractiveness by the addition of satisfactions. In our models the measured attribute 'satisfactions' (importance X rating/distinctiveness X weight) are added to calculate an overall measure of 'attractiveness' for use (along with distance or time where appropriate) in a simple regression model of individual relative spending at shopping centres. The part played by individual attributes in the overall model can readily be calculated. The main application is in identifying specific critical aspects of a shopping centre for improvement. The effectiveness is not easy to test. Even if shopping centre owners were persuaded to alter critical attributes, and to make available sales results, many other variables would intervene. Two 'attractiveness' hypotheses can however be tested:

H1 'Relative spending' at shopping centres is significantly related to 'attractiveness' and

H2 The critical attributes that affect shoppers' spending at shopping centres are significantly different for different shopping centres.

Method

The results are based on the responses from a sample of shoppers to a structured questionnaire. The questionnaire was based on the 'attributes of image' studied by McGoldrick and Thompson (1992a), with some small changes to take account of findings from 30 unstructured, open-ended interviews carried out at the centres - for example the inclusion of the attributes 'other shoppers nice people' and 'environment outside'. Further questions concerned socio-demographics such as occupation of the main earner, household income and where travelled from. The socio-demographic characteristics of the sample appear to be reasonably typical of UK shoppers although the proportion classified as 'high/intermediate managerial/administrative/professional' ('AB' on the UK JICTAR scale, Adcock *et al*, 1998, page 95) is a little higher at 29% (compared with an expected 22% - Bentley, 1995).

The respondents were a convenience sample of those shoppers in the mall area at the times of the survey. The sample was intended to be as representative of mall shoppers as practicable from the point of view of shopping centre management. An attempt at random sampling (more representative of the UK population as a whole) would have resulted in under-representing the users of the centres who shop there most often. In planning marketing strategies, centre managers will wish primarily to satisfy the wants of their most loyal customers.

Results

Table 1 lists the shopping centre attributes significantly ($p = 0.05$) associated with relative spending at the respective centres, ranked in order of the degree of association. The ranking of the Importance measures is included for comparison. The attributes that respondents considered most important are not the same as those most associated with spending. One observation from the Importance scores was that the results seemed to indicate that that respondents did not see travel distance or time as particularly important. On the other hand, the regression results below demonstrate that travel does indeed play a strong role in shoppers' choices of shopping centres. A similar pattern was observed by Gentry and Burns (1977) who concluded that where consumers shopped was determined by perceived proximity but the shoppers failed to express that explicitly.

[Insert Table 1]

Table 1 is an external item analysis that ranks attributes in order of weight. A conventional item analysis (Oppenheim, 1992) would use correlation as the basic measure, but Table 1 goes a stage further in taking into account both the correlation with relative spending and the regression coefficient (elasticity) of each attribute on relative spending. The measure is the regression coefficient, weighted according to the coefficient of determination, R^2. Only attributes having a regression coefficient of at least double the standard error of the regression coefficient have been included in the table - significant at $p = 0.05$. The procedure was to use the R^2 value as a correction factor, having the effect of scaling down the weight of attributes that have less correlation with spending. Multiplying the R^2 value by the attribute regression coefficient gave the attribute weight. This quantity represents a combination of both

the narrowness of spread of points on the scatter graphs and the steepness of the regression plots – an overall measure of 'association' between the attribute and spending.

Only attributes significantly associated with relative spending at p = 0.05 were included in Table 1. It is possible to take account of even 'minor' attributes in the model. The 'attractiveness' measure has been calculated for each shopper by the addition of the weighted 'importance X rating/distinctiveness' values for each relevant attribute. Attributes have been included in the model (rather than in the table) based on being at least marginally significantly associated with relative spending (p = 0.1), i.e. twice as likely to be associated as not. The confidence of any individual attribute may not be high, but the overall confidence of the model in (for example) Equation 3.1 is much higher.

[Insert Figure 1]

[Insert Figure 2]

Taking the example of the White Water Centre, a relationship can be demonstrated (by linear regression, SPSS) between relative spending, attractiveness (sum of attribute satisfactions) and travel distance (travel time could be used in place of travel distance but in case of the White Water Centre, distance gives the closer correlation). The greater the distance that respondents have to travel to the centre, compared with their main competing centre, the less they tend to spend. Conversely, an increase in attractiveness (for example arising from improvements to the 'Eating and drinking' facilities) would result in an increase in spend. Figure 1 indicates the relationship between relative spend and attractiveness for the White Water Centre with Figure 2 illustrating an improved correlation with a correction for respondents' travel distance. Time could be used in place of distance but in this case, distance gives the better correlation. Equation 3.1 (produced by linear regression analysis using SPSS) describes the relationship:

(1) **Relative spending = 37 + 0.62 X Relative attractiveness - 0.32 X Relative distance**

The Coefficient of determination, $R^2 = 0.48$, indicates that Relative attractiveness and Relative distance together were associated with 48 percent of the variation in Relative spending. The relationship was significant at p = 0.0001, indicating 99.999 percent confidence that a positive relationship between these variables exists.

The intercept, attractiveness coefficient and distance coefficients respectively for each of the four centres are reported in 2. The 'fit' of these models would normally be accepted as 'modest' (Bryman and Cramer, 1994). In the case of the Jubilee Centre (only), a slightly better fit would be obtained by substituting 'relative travel time' for 'relative travel distance' ($R^2 = 0.29$ rather than 0.26). Nevertheless, 'distance' is used in all of the results here in the interest of consistency.

[Insert Table 2]

There were too few results for Greenleys and The Woodlands to report as individual centres. Nevertheless, results from those centres were useful in providing a better spread of centres for calculating the overall attribute weightings.

Discussion and hypothesis testing

H1 'Relative spending' at shopping centres is significantly related to 'attractiveness'

Using the scales of 'attractiveness' for the models specific to each centre, the significance 'p' values of the association with relative spending were:

- White Water Centre <0.0001
- Blue Rose Centre 0.0032
- Jubilee Centre 0.0003
- Metropolitan Centre <0.0001
- Greenleys 0.0001
- The Woodlands 0.0082.

On this basis, therefore, H1 is supported. Nevertheless, as described in the 'association of perception with spending' section, the attractiveness measure for each centre is based in part upon the degree of association between the attributes and relative spending. The authors' overall attractiveness scale reduces this auto correlation effect. The revised p values incorporating the adjustment are:

- White Water Centre 0.0052
- Blue Rose Centre 0.091
- Jubilee Centre 0.040
- Metropolitan Centre 0.0006
- Greenleys 0.031
- The Woodlands 0.42.

The models based on the overall attractiveness scale have an aggregate coefficient of determination of 0.23. Although this degree of fit would be described only as 'modest' (Bryman and Cramer, 1994), it was achieved in only two stages of regression, meaning that the degree of confidence in the relationship was relatively high (significant at $p = 0.001$). Hypothesis H1 therefore receives qualified support.

H2 The critical attributes that affect shoppers' spending at shopping centres are significantly different for different shopping centres.

The results indicate that attributes which are critical at one centre are not necessarily so at other centres. The authors have examined the differences to demonstrate at least some of them to be large enough to support H2. The association of the attributes with relative spending has been tested to determine whether within reasonable limits of probability, the clustering of critical attributes could have arisen at random from a homogenous sample of shoppers. Ten samples of shoppers have been selected at random from the complete data bank. If these had indicated the association of critical attributes to be distributed as widely as are the actual distributions of the centres, H_0 would have been supported; i.e. there would have been insufficient evidence to justify

H2. The spread of associations for the attributes have been examined using the 'one sample t-test' (Kinnear and Gray, 1997). The t-test p values were:

• Eating and drinking	Greenleys	<0.0005
• Access by public transport	White Water	<0.0005
• General layout	Jubilee	<0.0005
• Helpfulness of the staff	Metropolitan	0.001
• Availability of good toilets	Metropolitan	<0.0005
• Availability of good toilets	Greenleys	<0.0005
• Seating areas	Greenleys	<0.0005
• Access by road	Woodlands	<0.0005.

A stricter than usual significance t-test has been applied here (to allow for skewness in the distributions of means). One further attribute difference could arguably be included if tested less strictly:

• Eating and drinking	Metropolitan	0.025.

Two further attributes receive partial support for 'difference', with a t-test significance value below 0.05 even though the attribute is not individually significant (at p = 0.05) at any one centre:

• Access to local cafes	Blue Rose	0.028
• 'In-place' to go	Jubilee	0.001.

The null hypothesis, H_0, that critical attributes are the same at each centre, can be rejected for at least one attribute at all but one of the centres. Five of the centres have at least one significant difference and the sixth – Blue Rose – cannot therefore within reasonable limits of probability be the same as each of the other five.

H2 is therefore supported: there are significant differences between all six shopping centres concerning the critical attributes of the centre that are associated with shoppers' spending.

Discussion of the results

This work has set out to investigate why customers choose to shop at one shopping centre rather than another? The answers are far from clear cut or simple as the most critical attributes varied markedly from centre to centre. For the total sample of shoppers, the 'top ten' attributes on average are:

Rank		Attribute weight
1	General layout	11.36
2	Access by car (roads)	7.83
3	Nice place to spend time	6.66
4	Cleanliness	6.04
5	Covered shopping	4.52
6	Quality of stores	3.93
7	Shoppers nice people	3.91
8	Availability of toilets	3.87
9	Friendly atmosphere	3.87
10	Helpfulness of staff	3.10.

These are the attributes which overall are most associated with relative spending at the six shopping centres (all significant overall at p = 0.05 - 'in-place' to go would be included on the basis of attribute weight, but does not satisfy the significance test).

Factors in shoppers' behaviour

Space limitations preclude more detailed reporting but some differences between females and males are discussed by way of example. Only one of the 'top six' significant attributes for females ('nice place to spend time') appears at all on the list for males. Three out of the 'top six' attributes for males do not appear at all on the list for females ('lighting', 'sheltered access' and 'no undesirable characters'. The significant attributes for males predominantly concern the **centre**. Those for females could be divided into two categories described as either '**shopping**' or '**experience**'. These two groupings have been confirmed by factor analysis. Space limitations preclude detailed reporting but 'Maximum likelihood' extraction and 'Varimax' rotation were found most effective and were performed using SPSS. The points of inflection of the scree plots were observed at Factor 2. Factor analysis models of relative spending fit nearly, but not quite as well as the multi-attribute models reported.

The 'top five' attributes in the factors for females were:

	R
Experience: Factor 1	
Friendly atmosphere	0.71
(Light and airy	0.68)
Helpfulness of staff	0.64
Cleanliness	0.63
Feeling of spaciousness	0.59
Shopping: Factor 2	
Variety of the stores	0.76
Selection of merchandise	0.73
Choice of major stores	0.72
Quality of the stores	0.60
Big shopping centre	0.43

Apart from two attributes ('light and airy' and 'lighting') all attributes down to an R value of 0.38 are all significantly associated with relative spending for females (but not ranked in the same order as those derived from the multi-attribute model). Similar 'experience' and 'shopping' factors can also be identified for the non-managerial/administrative/professional C2DE socio-economic group, for shoppers aged over 45, and for those travelling by car.

Do the differences in shoppers' behaviour arise from differences between the shoppers?

Table 3 illustrates which groups of respondents are most different from each other in association with relative spending. The table is ranked in order of these differences, with the higher R^2 differences at the top of the table. Thus, the biggest difference of all is between the Metropolitan Centre and The Woodlands on the attribute 'helpfulness of the staff'. The biggest differences at the top of the table tend to be between **centres** whereas the medium and lower differences tend to be between other

segments (such as socio-demographic). The differences between shoppers' behaviour at different shopping centres can be seen to be greater than the differences between the behaviour of the other shopper segments studied.

[Insert Table 3]

Could differences in the compositions of the samples at the different centres account for the differences in critical attributes observed at the centres? Of nine critical attributes identified as significantly different between centres, four are not appreciably different between the other shopper segments studied:

- Helpfulness of staff
- Access by public transport
- Access to local cafes and
- 'In-place' to go.

This means, for example, that the association with spending of 'helpfulness of staff' is very different between the Metropolitan Centre and The Woodlands, whilst **not** being appreciably different between females and males, nor the other socio-demographic segments. These four can thus be safely be included as critical attributes significantly different between shopping centres, free of influence from identified differences in the sample segments studied.

For those critical attributes that were significantly different between segments, there were no appreciable imbalances in the sample composition. The biggest sample bias arose in the case of 'general layout' which was critical at the Jubilee Centre, and appreciably different between the 'car' and 'public transport' segments. The 'car' segment represented 73% of the Jubilee Centre sample, compared with 65% in the overall total sample. This modest sampling difference was not sufficient to affect the conclusion that 'general layout' was an attribute significantly different between centres. All other sampling differences were less marked. Nine critical attributes were safely identified as significantly different between centres, the differences not arising from any simple segmentation measures. Differences between individual attributes associated with spending have been demonstrated to be larger between shopping centres than between other identified shopper segments such as socio-demographic differences.

Implications of 'Why people shop where they do'

There are self-explanatory implications for UK shopping centres following from the 'top ten' attributes. Of these, only one, ('quality of the stores') directly concerns shops - and arguably, even this attribute has a 'service experience' aspect? Three relate to structure or infrastructure and six are clearly 'service' or 'experience'. Shopping centre managers should focus at least as much on the 'nice time' and 'customer service' aspects as on more tangible 'shops' considerations.

There are specific marketing uses. For example, from Table 3, 'eating and drinking' can be identified as a significant attribute for shoppers travelling by car but not for those travelling by public transport. This presents an opportunity for market segmentation. Centre marketing managers could place advertisements aimed at the car-borne shoppers on the **backs** of buses - i.e. on the **outsides** of the buses where

they will be seen particularly by car **drivers and passengers** - illustrating customers enjoying eating and drinking at the centre.

Conclusions

This paper has set out to study 'Why people shop where they do?'. There are many differences between shoppers as to which attributes of a shopping centre most influence spending behaviour. Some differences are observed between identifiable shoppers' characteristics, such as male/female, age, type of transport, upper/lower income or socio-economic group. The 'convenience' sample cannot be truly representative of all shoppers, but even so, identified differences between shoppers do not account for the differences between behaviour at different shopping centres. As an exploratory study, the sample cell sizes (50 minimum for our own data) are smaller than ideal for such studies; but even so, the critical attribute differences between centres are statistically significant.

The conclusion is that people are attracted to different centres for different reasons. Of course, there are differences in clientele between the centres. For example, the Blue Rose Centre is the most 'up-market' with the owner's proprietary survey indicating 24% of shoppers in the most affluent 'AB' category. On the other hand, the Metropolitan Centre is the most 'down-market' with the owner's data indicating 20% AB. The attributes, though, which were significantly different between centres, did not appear to be significantly influenced by income or socio-economic group. Attributes such as 'helpfulness of staff' were significantly different between centres, but not significantly different between affluent and less affluent segments.

Preliminary work indicates that 'motivation' or 'personality' differences between shoppers may be more influential than the more obvious *'a priori'* segmentation differences. The indications are that even these differences do not account for the differences in critical attributes between centres. Future research could be directed towards clarifying these 'motivation' or 'personality' differences.

Based on the evidence available, differences between **shoppers** have not been demonstrated to account for the differences between centres. On the other hand, differences between centres and **competitors** do seem to be relevant. All nine of the significantly different critical attributes are understandable in terms of differences between the **centres** perceived by respondents. For all nine, the centre where the interview was held performed relatively poorly compared to the competition. Many other techniques, both quantitative and qualitative, are available to study the attractiveness of shopping centres. Space does not permit the reporting of the authors' studies here, but **only** the multi-attribute model combining 'importance', 'rating/distinctiveness' and 'association with spending' has been able to identify the specific significant critical attributes at the different centres. The results can be interpreted as indicating that shoppers have different **expectations** of different shopping centres - largely formed on the basis of evaluations of competing centres with overlapping catchment areas - and that these different expectations are reflected in their shopping behaviour. Specifically, shoppers spend more at centres which more closely match their requirements on specific named attributes, compared to competing centres.

For the future, confirmatory studies of more shopping centres and more respondents are recommended, along with a more detailed study of the 'shopper types', 'personality' and 'motivation' aspects of consumers' choices of shopping centres.

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References

Aaker D A (1991) *Managing Brand Equity,* New York, Free Press.

Adcock D, **Bradfield R**, **Halborg A** and **Ross C** (1998) *Marketing Principles and Practice,* 3rd edition, London, FT Pitman.

Beddington N (1991) *Shopping Centres: Retail Development, Design and Management,* Oxford, Butterworth.

Bentley R (1995) *British Politics in Focus,* Ormskirk, Causeway.

Berry L L (1969) 'The components of department store image: a theoretical and empirical analysis' *Journal of Retailing* 45 (1): 3-20.

Bodkin C D and **Lord J D** (1997) 'Attraction of power shopping centres', *The International Review of Retail, Distribution and Consumer Research,* 7 (2): 93-108.

Boulding K E (1956) *The Image,* Ann Arbor, University of Michigan Press.

Brown S (1992) *Retail Location: A Micro-Scale Perspective* Aldershot: Avebury.

Bryman A and **Cramer D** (1994) *Quantitative Data for Social Scientists,* London, Routledge.

Burns D J and **Warren H B** (1995) 'Need for uniqueness: shopping mall preference and choice activity', *International Journal of Retail and Distribution Management,* 23 (12).

Capital Shopping Centres PLC *1996 Annual Report and Accounts,* London, Capital Shopping Centres.

Carlson H J (1991) 'The role of the shopping centre in US retailing', *International Journal of Retail and Distribution Management,* 19 (6): 91.

Cavanaugh T (1996) 'Mall crawl palls' *American Demographics,* (Sept).

Chartered Institute of Marketing (1997) Examiner's report (by John E) *'Understanding Customers',* Certificate in Marketing, Cookham, Chartered Institute of Marketing.

Davies R, **Howard E** and **Reynolds J**, (1993) *The Shopping Centre Industry 1993: Thirty Years of Growth,* Oxford, Oxford Institute of Retail Management/British Council for Shopping Centres.

Dellaert G C, **Arentze T A**, **Bierlaire M**, **Borgers W J** and **Timmermans H J P** (1998) 'Investigating consumers' tendency to combine multiple shopping purposes and destinations', *Journal of Marketing Research,* 35 (2): 177-188.

Dennis C E, Marsland D and **Cockett W A** (1999), 'Objects of desire: attraction and distance in shopping centre choice', *10th International Conference on Research in the Distributive Trades,* Stirling, Institute for Retail Studies.

Dennis C E, Marsland D and **Cockett W A** (2000), 'Objects of desire: attraction and distance in shopping centre choice - quantitative case studies', *International Journal of New Product Development and Innovation Management,* 2 (3).

Downs R M and **Stea D** (1973) 'Cognitive maps and spatial behaviour: process and products', in Downs R M and Stea D (eds.), *Image and Environment: Cognitive Mapping and Spatial Behaviour,* Chicago, Aldine: 8-28.

East R (1997) *Consumer Behaviour,* Hemel Hempstead, Prentice Hall.

Fernie J (1995) 'The coming of the fourth wave: new forms of retail out-of-town development' *International Journal of Retail and Distribution Management* 23 (1): 4-7.

Finn A and Louviere J J (1996) 'Shopping centre image, consideration and choice: anchor store contribution, *Journal of Business Research*, 35: 241-251.

Fishbein M (1963) 'An investigation of the relationships between beliefs about an object and the attitude towards the object', *Human Relations* 16: 223-240.

Fotheringham A S (1988) 'Market share analysis techniques: a review and illustration of current US practice', in Wrigley (1988): 120-159.

Gautschi D A (1981) 'Specification of patronage models for retail center choice', *Journal of Marketing Research,* 18 (May): 162-174.

Gentry J W and **Burns A C** (1977) ' How "important" are evaluative criteria in shopping center patronage?', *Journal of Retailing,* 53 (4): 73-86.

Guy C M (1994) *The Retail Development Process: location, property and planning,* London, Routledge.

Hackett P M W and **Foxall G R** (1994) 'A factor analytic study of consumers' location specific values: a traditional high street and a modern shopping mall', *Journal of Marketing Management* 10: 163-178.

Hankinson G and **Cowking P** (1993) *Branding in Action* Maidenhead, McGraw-Hill: 1.

Houston M J and **Nevin J R** (1980) 'Retail shopping area image: structure and congruency between downtown areas and shopping centers', in Monroe (1980) 677.

Howard E (1995) *Partnerships in Shopping Centres*, Oxford, OXIRM

Howell R D and **Rogers J D** (1980) 'Research into shopping mall choice behaviour', in Monroe (1980) 671-676.

Jackson C (1995) *What Attributes Constitute a Successful Shopping Centre? Study of Consumer Buying Behaviour Case Studies,* (Dissertation - unpublished), London, Brunel University College.

James D L, **Durand R M and Dreves R A** (1976) 'The use of a multi-attribute attitude model in a store image study', *Journal of Retailing,* 52 (2): 24.

Kinnear P R and **Gray C D** (1997) *SPSS for Windows*, Hove, Psychology.

Kirkup M and **Rafiq M** (1993), 'An Examination of Occupancy Dynamics in New Shopping Centres', *Marketing Education Group, Proceedings of Annual Conference* 2: 559-69.

Kirkup M and **Rafiq M** (1994a) 'Tenancy Development in New Shopping Centres: Implications for Developers and Retailers' *The International Review of Retail Distribution and Consumer Research* 4 (1): 17-32.

Kirkup M and **Rafiq M** (1994b) 'Managing Tenant Mix in New Shopping Centres', *International Journal of Retail and Distribution Management* 22 (6): 29-37.

Kunkel J H and **Berry L L** (1968) 'A behavioural concept of retail images', *Journal of Marketing*, 32 (4): 21-27.

Lindquist J D (1974) 'Meaning of image: a survey of empirical and hypothetical evidence' *Journal of Retailing* 50 (4): 29-38, 116.

Marjanen H (1993) *Store Location Analysis and the Mystery of Consumer Spatial Behaviour: competition between downtown shopping areas and out-of-town shopping centres as a special case,* Turku (Finland), Turku School of Economics and Business Administration.

Marjanen H (1995) 'Longitudinal study on consumer behaviour with special reference to out-of-town shopping: Experience from Turku, Finland', *Journal of Retailing and Consumer Services,* 2 (4): 163-174.

Markin R J, **Lillis C M** and **Narayana C L** (1976) 'Social psychological significance of store space' *Journal of Retailing,* 52 (Spring): 43-54.

McGoldrick P J (1990) *Retail Marketing*, Maidenhead, McGraw Hill.

McGoldrick P J (1998) Manchester, UMIST, private communication.

McGoldrick P J and **Andre E** (1997) 'Promiscuity or loyalty in grocery shopping' *Journal of Retailing and Consumer Services,* 4 (2): 73-81.

McGoldrick P J and **Thompson M G** (1992a) 'The role of image in the attraction of the out of town centre', *The International Review of Retail, Distribution and Consumer Research* 2 (1): 81-98.

McGoldrick P J and **Thompson M G** (1992b) *Regional Shopping Centres: Out-of-Town versus In-Town,* Aldershot, Avebury.

Martineau P (1958) 'The personality of the retail store', *Harvard Business Review,* 36 (1): 47-55.

Monroe K B (ed., 1980) *Advances in Consumer Research,* Ann Arbor, Association for Consumer Research.

Nevin J R and **Houston M J** (1980) 'Image as a component of attraction to intra-urban planning areas', *Journal of Retailing* 56 (1): 77-93.

Nishikawa T (1989) 'New product planning at Hitachi', *Long Range Planning,* 22 (4): 20-24.

Oppenheim A N (1992) *Questionnaire Design, Interviewing and Attitude Measurement*, London, Pinter.

Oppewal H and **Timmermans H** (1999) 'Modelling consumer perception of public space in shopping centres', *Environment and Behaviour,* 31 (1): 45.

Osgood G E, **Suci G J** and **Tannenbaum P M** (1957) *The Measurement of Meaning,* Urbana, Illinois, University of Illinois.

Reynolds J (1992) 'Generic Models of European Shopping Centre Development', *European Journal of Marketing* 26 (8/9): 48-60.

Reynolds J (1993) 'The proliferation of the planned shopping centre' in Bromley D F and Thomas C J (eds.), *Retail Change Contemporary Issues,* London, UCL.

SERPLAN (1987) Retail Monitoring Working Party. Regional shopping centres around London: background papers, London, SERPLAN.

Simkin L P (1996) 'Tackling barriers to effective implementation of modelling in retail marketing applications', *The International Review of Retail, Distribution and Consumer Research*, 6 (3): 225-241.

Smith P and **Burns D J** (1996) 'Atmospherics and retail environments: the case for the 'power aisle', *International Journal of Retail and Distribution management,* 24 (1): 7-14.

Stanley T J and **Sewall M A** (1976) 'Image inputs to a probabilistic model: predicting retail potential', *Journal of Marketing* 40 (3): 48-53.

Swinyard W R (1992) 'An opportunity based model of customer service', *The International Review of Retail, Distribution and Consumer Research* 2 (1): 1-12.

Timmermans H J P (1983) 'Non-compensatory decision rules and consumer spatial choice behaviour: a test of predictive ability', *Professional Geographer,* 35: 449-455.

Wakefield K L and **Baker J**, (1998) 'Excitement at the mall: determinants and effects on shopping response', *Journal of Retailing,* 74 (4): 515.

Westbrook R A (1980) 'Intrapersonal affective influences upon consumer satisfaction', *Journal of Consumer Research,* 7 (June): 49-54.

Wrigley N (ed., 1988) *Store Choice, Store Location and Market Analysis,* London, Routledge.

Table 1 Attributes most associated with relative spending at each centre compared with respondents' main competing centre, ranked by attribute weight (regression coefficient weighted by coefficient of determination, R^2)

Rank by attribute weight		*'Importance' rank (for comparison)*	R^2	*Regression Coefficient (B)*	*Attribute weight: R^2 X B X 100*
(a) White Water					
1	**Nice place to spend time**	**20**	**0.128**	**0.858**	**11.0**
2	**Cleanliness**	**1**	**0.104**	**1.04**	**10.8**
3	**Access by public transport**	**31**	**0.122**	**0.842**	**10.3**
4	**Travel distance**	**30=**	**0.222**	**-0.319**	**-7.1**
5	**Covered shopping**	**13**	**0.094**	**0.744**	**7.0**
6	**Availability of seats**	**26**	**0.084**	**0.662**	**5.6**
7	**Travelling time**	**22**	**0.161**	**-0.327**	**-5.3**
(b) Blue Rose					
1	**Nice place to spend time**	**21**	**0.094**	**0.674**	**6.3**
2	**'Quality' of the stores**	**25**	**0.075**	**0.678**	**5.0**
3	**Access to local cafes**	**40**	**0.045**	**1.08**	**4.9**
4	**Covered shopping**	**15**	**0.079**	**0.609**	**4.8**
(c) Jubilee					
1	**General layout**	**17**	**0.160**	**1.52**	**24.4**
(d) Metropolitan					
1	**Baby care facilities**	**40**	**0.307**	**1.16**	**35.6**
1	**Baby care facilities**	**40**	**0.307**	**1.16**	**35.6**
2	**Helpfulness of the staff**	**5**	**0.209**	**1.36**	**28.4**
1	**Baby care facilities**	**40**	**0.307**	**1.16**	**35.6**
2	**Helpfulness of the staff**	**5**	**0.209**	**1.36**	**28.4**
3	**Availability of good toilets**	**2**	**0.200**	**0.967**	**19.3**
4	**Environment outside**	**21**	**0.167**	**1.08**	**18.0**
5	**In-place (stylish)**	**36**	**0.175**	**0.764**	**13.4**
6	**Relaxed atmosphere**	**28=**	**0.107**	**0.772**	**8.3**
7	**Eating and drinking**	**22**	**0.087**	**0.717**	**6.2**
8	**Value for money**	**3=**	**0.066**	**0.890**	**5.9**
9	**Cleanliness**	**1**	**0.080**	**0.732**	**5.8**
10	**Availability of seats**	**31**	**0.084**	**0.648**	**5.4**

Note: The 'attribute weight' represents the regression coefficient weighted according to R^2, thus a term that reflects both the strength of association and the correlation.

Table 2 Models of individual relative spend.

Centre	*Intercept*	*Attractiveness coefficient*	*Distance coefficient*	R^2	*Significance level, p*	*Equation number*
White Water	**37.0**	**0.62**	**0.32**	**0.47**	**<0.0001**	**3.1**
Blue Rose	**32.2**	**0.53**	**0.31**	**0.19**	**<0.01**	**3.2**
Jubilee	**24.0**	**0.68**	**0.17**	**0.26**	**<0.001**	**3.3**
Metropolitan	**15.1**	**0.53**	**0**	**0.33**	**<0.001**	**3.4**

Table 3 Significant differences in associations of specific attributes (from bootstrapping)

Attribute	*Centre*	*P-value*
Access by public transport	**White Water**	**<0.0005**
General layout	**Jubilee**	**<0.0005**
Helpfulness of the staff	**Metropolitan**	**0.001**
Availability of good toilets	**Metropolitan**	**<0.0005**
Eating and drinking	**Metropolitan**	**0.025**
Access to local cafes	**Blue Rose**	**0.028**
'In-place' to go	**Jubilee**	**0.001.**

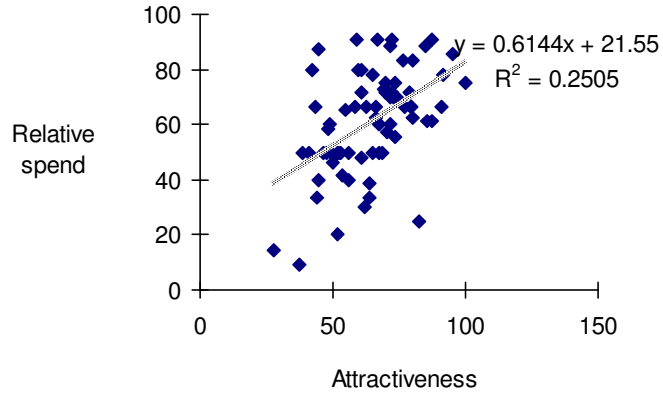

Figure 1 Scatter graph showing relative spend *vs*. attractiveness for the White Water Centre

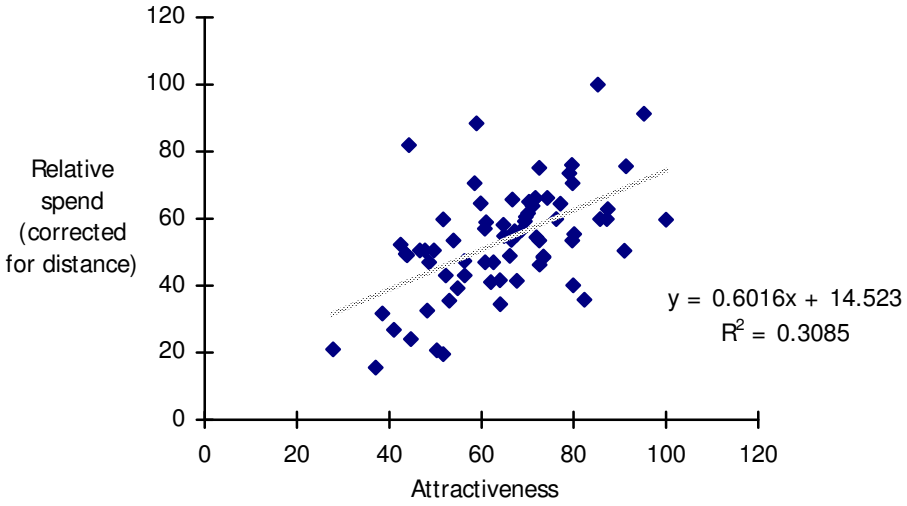

Figure 2 Scatter graph showing relative spend *vs*. attractiveness - with relative spend corrected for the distance effect - White Water Centre