The Role of Store Image
in Food Store Patronage Behaviour

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1 Introduction

A critical aspect of food retailers' ability to maintain their market position is to develop and manage a favourable store image (Nevin and Houston, 1980; Samli, 1989). Image considerations are an important aspect in the development of an integrated marketing strategy for individual food stores and food store chains. Stores that have a favourable image can draw customers from larger distances, and in this way can mitigate possible locational inconveniences (Stanley and Sewall, 1976). A unique store image is one of the retailer's most valuable marketing assets as it can create a competitive advantage that is not easily duplicated by other food retailers (Rosenbloom, 1983).

Despite the considerable amount of previous research, little consensus exists as to the operationalization of the various attributes underlying the concept of food store image and their relative importance, or about the explanatory contribution of store image versus other factors affecting food store patronage, most notably the distance toward the store. This issue is not only important for food retailers but also for producers in agribusiness as most of their revenue is generated by sales through food stores.

The purpose of this study is to propose and test a general causal model for quantifying the role of store image in food shopping patronage. The model is formulated at a high level of generality so that it is applicable to different food retail outlets and to different countries. The model is empirically tested for store patronage with respect to meat in the Netherlands.

2 The model

2.1 Store image attributes

While there appears to exist substantial agreement upon the definition of store image as the overall attitude towards the store, based upon the perceptions of relevant store image

attributes (Bearden, 1977; Doyle and Fenwick, 1974-1975; James et al., 1976; Korgaonkar et al., 1985; Marks, 1976), considerable variety can be observed with respect to the store image attributes included in a particular study. Doyle and Fenwick (1974-1975) identified for grocery stores the following three image attributes: product quality, price, and variety. Arnold et al. (1978) investigated food store patronage in the U.S.A., Canada, and the Netherlands. Five reasons, covering four attributes, viz. price, assortment, quality, and locational convenience were considered by the respondents as most important in deciding which store to patronize. The former three attributes can be considered store image attributes (see below). The four attributes identified by Arnold et al. were also used by Verhallen and DeNooy (1982) to analyze retail patronage for bread, vegetables, milk, meat, softdrinks and beer, and groceries.

In a study of Hansen and Deutscher (1977-1978), the importance of 41 attributes was measured for grocery stores. Product quality, price, and service-related aspects (personnel, cleanliness, check-out time, etc.) were found to be the most important attributes. Product quality and price were the two most important reasons to shop at a certain store for fresh fruits and fresh vegetables in a study of Glerum (1986). Hildebrandt (1988) modelled food store image on the basis of quality, store atmosphere, and price.

In previous research, the number of store image attributes ranged from three (Doyle and Fenwick, 1974-1975; Nevin and Houston, 1980) to 41 (Hansen and Deutscher, 1977-1978). This is partially due to different data analytical techniques employed (use of attribute reduction techniques such as factor analyses versus use of the attributes as originally specified), to the level of abstraction on which the attributes were specified, and to the store type investigated. However, such a confusing state of affairs clearly hampers progress in store image research. We agree with Peterson and Kerin (1983) who stated that "for progress to be made a standard set of image dimensions should be investigated" (p. 299).

We propose that product quality, pricing, service, store atmosphere, and assortment may serve as standard set of store image attributes. The relevance of these attributes is supported by the studies concerning foods reviewed above, and by a recent comprehensive review of the store image literature (Mazursky and Jacoby, 1986). These authors concluded that "merchandise related aspects (such as quality, pricing, and assortment), service related aspects (such as quality in general and salespersons' service), and pleasantness of shopping at the store are among the most important components of store image" (p. 150). Note that distance/locational aspects are not included in the standard set of store image attributes, which is consistent with the approach taken by Gautschi (1981), Nevin and Houston (1980), and Stanley and Sewall (1976). The rationale for excluding these aspects from the construct of store image is discussed in more detail below.

The set of five image attributes is general enough to be applicable to a wide range of food store types and food product categories and it can be used for hypotheses testing, thus increasing our understanding of the food store image concept. For example, product quality may be relatively more important for fresh food products while price could be relatively more important for packaged foods.

2.2 Store patronage

Gravitational models have been frequently used to model consumer retail patronage decisions. Probably the most popular gravitational model is the model proposed by Huff

(1963). Huff's model was originally developed for shopping areas and used the size of the shopping area and the consumers' distance or travel time from the shopping centre for predicting consumers' patronage decisions. Size was hypothesized to be positively related and distance was hypothesized to be negatively related to the probability of patronage. Huff's model has yielded reasonably good estimates of consumers' shopping area patronage decisions (Nevin and Houston, 1980). However, the explanatory power of Huff's model with respect to individual stores has been found to be limited. As Kotler (1971, p. 319) observed: "it is felt by many analysts that Huff's equation is of limited value in estimating sales potential for single stores. Individual store size per se has not been found to have the great influence claimed on drawing power. Size appears to be more of a factor in explaining drawing power differences of shopping centres and here is where Huff's model may be most effective."

Huff acknowledges that the two explanatory variables in his model might be of limited value when consumers perceive substantial image differences between competing retail facilities. Stanley and Sewall (1976) extended Huff's model by incorporating the image of the outlet along size and distance. They found that the addition of store image significantly increased the model's ability to explain food store patronage. Moreover, size did not contribute significantly to explaining store patronage. Store image also played an important role as explanatory variable in the studies of Gautschi (1981) and Nevin and Houston (1980).

We hypothesize that consumer patronage of retail food stores depends on store image and distance. It is predicted that food store patronage is positively affected by the image of the food store and inversely related to the distance toward the store. This approach allows a clear distinction between (re)locational decisions and decisions regarding the store given its location, the former often entailing higher costs and different marketing strategies. Whereas the retail firm may develop an advertising campaign to create homogeneous perceptions on the various image attributes in the target segment, distance is a given that varies across consumers, and is primarily affected by the firm's strategy concerning denseness of outlets.

2.3 Model

Our causal model of food store patronage behaviour is shown in the Figure. It is hypothesized that patronage of a food store is a function of the image of that store and the distance to that store. The image of the store, in its turn, is hypothesized to be affected by consumer perceptions of the store on five general store image attributes, price, product quality, assortment, service, and store atmosphere.

The model is recursive in that there are no reciprocal causations between constructs. An alternative specification would be to include reciprocal relations, most notably between store patronage and store image. The reasoning would be that people not only patronize a particular food store because they have a favourable image of the store, but also that they have a favourable image because they patronize the store. This reciprocal relation can be explained by self-perception theory (Bem, 1972). Bem posits that people come to 'know' their own attitudes partially by inferring them from the observation of their own overt behaviour. There is some evidence for the recursive relationship between store image and store patronage as specified in our model (Korgaonkar et al., 1985), but the possibility of a nonrecursive relation will be empirically investigated in this paper.

2.4 Measurement methodology

Two techniques that have been used in store image and store patronage research to assess the importance consumers attach to different store attributes are: 1) direct rating of attribute importances (e.g. Bearden, 1977; James et al., 1976; Samli and Lincoln, 1989; Tantiwong and Wilton, 1985), and 2) estimation of attribute importances on the basis of the overall evaluation of the store using a technique like regression analysis (e.g. Tantiwong and Wilton, 1985; Verhallen and DeNooy, 1982). In general, however, there is little relationship between self-stated and statistically derived importance weights (Slovic and Lichtenstein, 1971). Empirically derived importances appear to represent subjects' actual weights more accurately than their self-stated weights (Fishbein and Ajzen, 1975). People tend to overestimate the importance of minor attributes and to underestimate the importance of a few major attributes (Slovic and Lichtenstein, 1971). Thus, consumers often think that their evaluations and decisions are based on more attributes than is actually the case. Gentry and Burns (1977-1978) found in the context of store image research that consumers are unable (or unwilling) to accurately rate attribute importances. They concluded that direct ratings of importance "may well be of questionable value", and cautioned against their use in store image research: "this finding tends to discourage the direct measurement of importance" (p. 95).
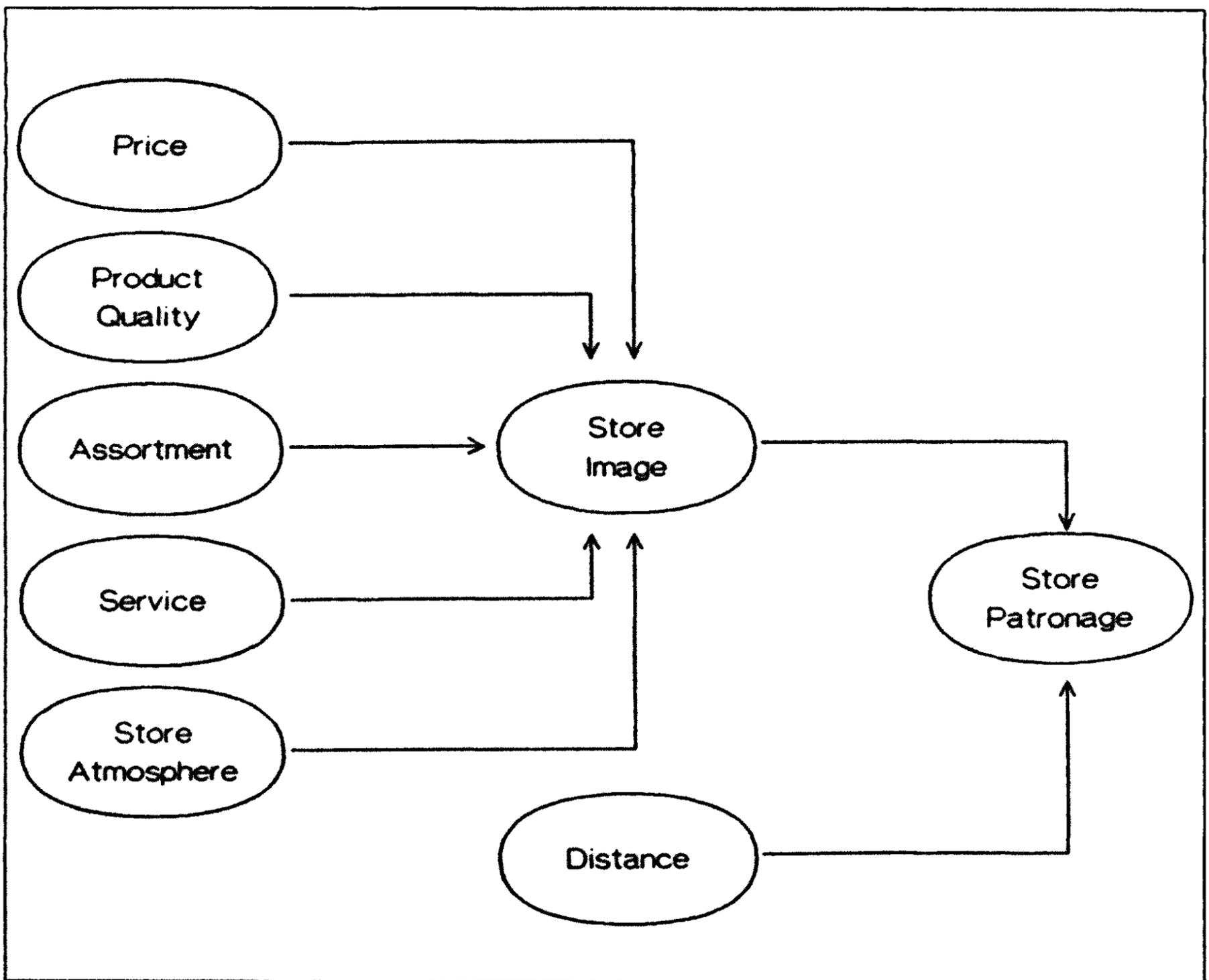

Figure: Model of Food Store Patronage Behaviour

In sum, there is considerable evidence that derived importances possess greater validity than self-stated weights. Therefore, in the present study, the effects of the various variables specified in the Figure were empirically derived rather than directly rated by consumers.

A related issue concerns how the various constructs are to be measured. In this study each construct was measured using several items. Multiple item measures have lower specificity, allow a finer distinction among subjects, and contain less measurement error, i.e., they are more reliable than single-item measures (Churchill, 1979). In a study, the attributes should be operationalized by items that are internally consistent and managerially relevant. An important corollary of the multi-item approach is that it allows management to operationalize the findings in the context of specific items.

3 Method

The model of store patronage developed in the previous section was empirically tested for outlets selling meat in the Netherlands. Meat is an important product category in the Netherlands, total retail sales in 1988 exceeding 8.5 billion guilders. Meat is sold through a wide variety of specialized stores, discounters, and supermarkets.

3.1 Sample

A nationally representative sample of 553 consumers were surveyed by personal in-home interview. Interviews were conducted with portable personal computers using the computer-interactive questionnaire design and data collection system Ci2 (Smith, 1986). All subjects were the primary meat shopper in the household. Subject interest in and involvement with the computer-aided questionnaire was high. Data were collected for the two stores in which subjects bought most of their meat.

3.2 Measures

The relevance of the above five general store image attributes was confirmed in qualitative research conducted for this study, involving 20 in-depth interviews with food shoppers concerning meat conducted at the central facility of a major market research agency, 30 in-depth interviews with food shoppers conducted in various stores, and extensive discussions with retailers and managers in the meat industry as well as in a pilot study involving 148 consumers. The results of the qualitative research and the pilot study were used to operationalize each construct with a number of items.

Price image was measured with five items dealing with the general price image of fresh meat and of processed meat, as well as the price image of specific meat cuts. In the pilot research, it became apparent that these meat cuts served as indicators for the overall price image. In similar vein, product quality was measured with four items, covering the overall quality image of fresh meat and processed meat and the quality image of sirloin steak. Assortment perceptions were measured with three items, service was operationalized with eight items, and store atmosphere with four items. Overall store image was measured with five evaluative items. Distance was measured by two perceptual items and by the travel time in minutes. Store patronage was measured by three items. Table 1

details the measures used for each construct. Except when indicated otherwise, responses were measured on a 50-point graphical scale. Direction of items was randomized upon presentation to subjects.

4 Results

LISREL 7 (Jöreskog and Sörbom 1988) was used to estimate the parameters of the model. LISREL differs from the traditional regression models used in economics primarily in its ability to separate and estimate errors in variables from errors in structural equations. It thus permits the researcher to estimate the relations between the constructs of interest without the distorting effects of measurement error. Further, LISREL allows the researcher to perform a comprehensive assessment of the fit of the total model as opposed to assessing the fit of each structural equation only. The maximum likelihood estimation procedure was employed.

Table 1: Operationalization of the constructs involved in food store patronage.

Constructs and items
Price (bipolar scale) P1. Fresh meat is in general: very cheap .... very expensive. P2. Processed meat is in general: very cheap .... very expensive. P3. Sirloin steak is: very cheap .... very expensive. P4. Minced meat is: very cheap .... very expensive. P5. Pork chop is: very cheap .... very expensive.
Product Quality (bipolar scale) PQ1. The quality of fresh meat is in general: very bad .... very good. PQ2. The fresh meat is in general: not always very fresh .... always very fresh. PQ3. The sirloin steak is usually: very tough .... very tender. PQ4. The quality of processed meat is in general: very bad .... very good.
Assortment (bipolar scale) AS1. There is [very little choice .... very much choice] with respect to fresh meat. AS2. There is [very little choice .... very much choice] with respect to originally produced processed meat. AS3. There is [very little choice .... very much choice] with respect to processed meat in general.
Service (Likert scale: completely disagree .... completely agree) S1.The service is good. S2.The personnel is knowledgeable. S3.The personnel is helpful. S4.The personnel wear clean clothes. S5.If desired, the personnel give advice. S6.The personnel give good advice. S7.In general, the hygienic conditions in the store are good. S8.The show-cases are clean.

Table 1, continued

Store Atmosphere (Likert scale: completely disagree .... completely agree)
AT1. In general, the store atmosphere is good.
AT2. I like the type of customers that patronize the store regularly.
AT3. I enjoy buying in the store.
AT4. The store looks pleasant.

Distance
D1. The store is easily reachable, rated on a [completely disagree .... completely agree] Likert scale.
D2.The store is nearby; rated on a [completely disagree .... completely agree] Likert scale.
D3.Travel time to the store in minutes.

Overall store image (bipolar scale)
SI1. Very bad .... very good.
SI2. Very unattractive .... very attractive.
SI3. Very unreliable .... very reliable.
SI4. Very unpleasant .... very pleasant.
SI5. Very unprocessed .... very processed.

Store patronage
SP1. Number of times in the last ten visits to a meat retailer that the subject patronized the store in question.
SP2. The frequency of past shopping patronage of that store expressed on a 10-point scale ranging from "less than once a month" (1) to "six times a week" (10).
SP3. Likelihood of shopping at the store the next time meat is purchased, rated on a bipolar scale with poles: very small probability .... very high probability.

The chi-square value was significant: $\chi^2(538) = 2090.39$ ($p < .001$), but that may be expected given that the sample size was very large (Marsh et al. 1988) and that the present application is a large, complex problem in which there are many variables and degrees of freedom (Marsh and Hocevar 1985). Other fit indices indicated a satisfactory fit of the model to the hypothesized structure. The χ^2/df was 3.89, the root mean squared residual (Jöreskog and Sörbom 1988) was .049, and Bentler's (1990) comparative fit index was .896. The Tucker-Lewis index (Marsh et al. 1988), which takes both model fit and model complexity into account, contains a penalty function against overfitting, and is relatively independent from sample size, was a high .885. Given the acceptable overall fit of the model, we can now proceed to assess the parameter estimates in more detail.

4.1 Measurement model

Table 2 presents the factor loadings for the items. Two conditions for convergent validity of the items are that the factor loading of the item in question is statistically significant and that the factor loadings exceeds .50 (Steenkamp and Van Trijp, 1991). All factor loadings exceeded the cutoff value of .50 and all loadings were highly significant, the minimum t-value being 12.74. Thus, convergent validity was achieved. For most constructs, the items did not vary substantially in magnitude but three exceptions may be noted. AT2, referring to type of customers that patronize the store, was considerably less strongly related to store atmosphere than the three other items that deal with the store itself. Travel time to the store in minutes (D3) had a much higher loading than the other two items involving

psychological distance rather than actual travel time. The likelihood of shopping at the store the next time (SP3) had a substantially lower loading on store patronage than the two items that pertain to past behaviour. This suggests that in research settings where the number of items must be reduced due to financial or time constraints, these items are prime candidates for removal.

The reliability of the constructs is also reported in Table 2[1]. The reliabilities were acceptable for basic research (Nunnally 1978).

Table 2: Factor loadings and construct reliability

Construct/ item	Factor loading	Construct reliability	Construct/ item	Factor loading	Construct reliability
Price		.874	Atmosphere		.806
P1	.861		AT1	.831	
P2	.742		AT2	.501	
P3	.684		AT3	.809	
P4	.774		AT4	.688	
P5	.747				
			Distance		.766
Product quality		.789	D1	.599	
PQ1	.832		D2	.593	
PQ2	.678		D3	.946	
PQ3	.602				
PQ4	.658		Store image		.869
Assortment		.664	SI1	.773	
AS1	.753		SI2	.715	
AS2	.519		SI3	.768	
AS3	.609		SI4	.807	
			SI5	.708	
Service		.894			
S1	.849		Store patronage		.827
S2	.658		SP1	.857	
S3	.796		SP2	.888	
S4	.663		SP3	.587	
S5	.662				
S6	.689				
S7	.694				
S8	.701				

4.2 Structural model

The overall indices of fit of LISREL are usually heavily influenced by the goodness-of-fit of the measurement part of the model, and to a far lesser extent by the goodness-of-fit of the

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[1] It is somewhat superfluous to report the reliability of the individual items as these are simply the squared factor loadings.

structural relations part. This is because in most situations, including this study, by far the greater proportion of the parameters to be estimated belong to the measurement part (Mulaik et al., 1989). Mulaik et al. (1989) and McDonald and Marsh (1990) propose the non-centralized relative normed fit index (NRNF) to assess the fit of the structural part of the model, with values close to one indicate a good fit. In the present study, NRNF was .983, suggesting a very good fit for the structural part of the model[2]. Thus, there is little room for improvement by specifying direct causal effects of the store image attributes on store patronage. (In this context, it is interesting to note that store image correlates higher with store patronage (r=.320) than does any of the store image factors (r ranging from .065 to .281).)

The LISREL standardized estimates of the structural coefficients are reported in Table 3. Store image was significantly influenced by perceived quality, service, and store atmosphere, while the structural coefficients of price and assortment were not significant. The R2 for this equation is a high .824. The nonsignificant effect of price is probably due to the dual effect of price on overall store image (cf. Steenkamp, 1989). On the one hand, price is cost factor and therefore represents a sacrifice to the consumer. The higher the price image of a store, the more must be sacrificed to purchase meat in that store, and this will have a negative effect on the overall attitude toward the store. On the other hand, price carries quality connotations. The higher the price, the higher the perceived quality of the meat sold in that store, and this will have a positive effect on the overall attitude toward the store. The net effect is that price did not exert a significant effect on store image.

Table 3: Standardized structural coefficients estimates

| Predictor variables | Criterion variables | | | |
	Store image	t-value	Store patronage	t-value
Price	−.025	−1.003		
Product quality	.649	10.878		
Assortment	−.010	−.174		
Service	.208	3.415		
Atmosphere	.134	2.769		
Store image			.320	8.251
Distance			−.131	−3.503
R2	.824		.120	

Both store image and distance had a significant effect on store patronage behaviour. As may be expected, store image was positively related to store patronage and distance to

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[2] The formula for NRNF is

$$NRFN = \frac{\{ (\chi_n^2 - df_n) - (\chi_i^2 - df_i) \}}{\{ (\chi_n^2 - df_n) - (\chi_s^2 - df_s) - (df_i - df_s) \}}$$

where χ_n^2, χ_s^2, and χ_i^2 are the fit of the null structural model constraining all structural parameters to zero, the saturated structural model in which all structural parameters that can possibly be specified are estimated, and the structural model under investigation, respectively, and df_n, df_s, and df_i are their respective degrees of freedom.

the store was negatively related to store patronage. Interestingly, store image has a larger impact on store patronage than distance[3]. However, the low variance explained (.120) suggests that other factors exist that affect store patronage. Moreover, store patronage, just as brand choice, may to some extent be inherently stochastic (cf. Bass 1974). The reciprocal relation between store image and store patronage was also examined. Consistent with the hypothesis, analysis of the model specifying a recursive relation between store patronage and store image showed that the effect of store patronage on store image was not significant (β = -.029, p > .20).

Further, it is worth noting that distance and store image were virtually uncorrelated (r = -.002). In some other studies (e.g., Schiffman et al., 1977) distance was treated as one of the store image dimensions, but the present findings suggest that store image and distance should be treated as separate constructs influencing store patronage.

5 Conclusions

In this paper, a causal model concerning the role of store image in shopping behaviour with respect to foods is developed. The model was empirically tested for store patronage with respect to meat in the Netherlands. The model was supported by the data. The items achieved convergent validity and the reliability of the constructs was adequate to good. The fit of the structural part was very good. Store image was significantly influenced by product quality, service, and atmosphere. The effects of price and assortment were not significant but may be of importance to subgroups of consumers (Steenkamp and Wedel, 1991). Product quality had the largest effect on store image, which is consistent with the great importance of quality in consumer behaviour with respect to foods noted by Steenkamp (1989). The role of product quality in food store patronage behaviour emphasizes the importance of cooperation between retailers and producers in the distribution chain. Producers that offer the quality consumers want can thus strengthen the competitive position of the retailer. A system of quality control that integrates the operations of different members in the distribution chain and an efficient organization of the physical distribution system can be beneficial to both producer and retailer (Steenkamp and Hoffman, 1991).

The items employed to operationalize the store image attributes can be used for developing store image improvement strategies. For example, retailers that want to improve service perceptions should put special emphasis on hiring and training personnel that are knowledgeable about meat and that are very hygiene-conscious.

Store image and distance both affected food store patronage behaviour. Store image was more important in predicting patronage behaviour than distance which supports the strategic importance of this marketing variable to food retailers. In addition, these findings indicate that within certain limits, a favourable store image can mitigate locational disadvantages.

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[3] A cautionary remark is appropriate here. Data were collected for the two stores where subjects bought most of their meat and it is likely that these two stores are chosen as much on the basis of distance as on store image. (cf. Stanley and Sewall, 1976). However, it may be interesting to note that Doyle and Fenwick (1974-1975) already stated that distance is "no longer the overwhelming factor in store choice" (p. 39) and this opinion was recently received empirical support in a study by Hortman et al. (1990).

A limitation of the present study is that the model is estimated across consumers. If consumers are not homogeneous with respect to the importance they attach to the variables in the model, the parameters are biased. Future research could estimate the model for different segments of consumers. Another avenue for future research is to test the approach in a cross-cultural context to enhance our understanding of food store patronage behaviour in Europe. The model and measurement methodology described in this paper can be used in other countries as well, although minor modifications in the items employed to operationalize the constructs may be necessary.

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