CONSUMERS' STORE CHOICE BEHAVIOR FOR FRESH FOOD 1)

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Abstract

Consumer behavior with respect to food typically is analyzed by relating consumers' intentions or decisions to consumers' characteristics and to marketing variables. For consumers' choice of a specific variety or brand the type of store visited might be an important explanatory variable too. Therefore consumers' store choice not only is of great interest to food retailers but also seems an important issue to food producers and agricultural producers.

In this paper consumers' preference for fresh food stores is analyzed. In particular the choice between supermarkets and specialized shops for purchasing fresh food is analyzed. Attention is given to the factors influencing this choice. For this purpose a number of research questions with respect to store choice for fresh foods have been formulated and empirically tested.

1. Introduction

Consumer behavior with respect to food typically is analyzed by relating consumers' intention or decisions to consumers' characteristics

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and marketing variables. The type of store visited is not often considered as an explanatory variable of consumers' choice of a particular item/brand. The relationship between consumers' store choice and choice of a particular item/brand seems relevant to the market of groceries, in particular when retail chains carry strong private labels. It might become increasingly important in the case of fresh foods like fresh meat and fresh produce, since retail chains try to differentiate themselves from competitors through their supply of fresh foods. A good understanding of the factors influencing consumers' store choice is needed, both in relation to product supply and to general characteristics of the store.

While much research has been carried out on consumers' evaluation and choice of food stores in general, the impact of factors relating to retailers' fresh food supply on store choice has been investigated to a lesser degree. In this paper consumers' preference for fresh food stores will be analyzed. More specifically it will be investigated to what extent consumers purchase fresh foods in supermarkets or in specialized shops and which factors influence store choice for fresh foods.

The paper is organized as follows. First, some relevant literature with respect to store choice, in particular with respect to fresh food, will be reviewed. Afterwards some hypotheses about the factors influencing store choice with respect to fresh products are presented. Data available will be discussed and the results of our analyses will be reported. Finally some conclusions will be drawn.

2.   Store choice, a concise review of the literature

Store patronage has been extensively investigated, in particular in the United States. Nevertheless, Sheth (1983) concluded: 'What is conspicuously lacking in this impressive research tradition is the development of a theory of patronage behavior'. Still, a great many authors have developed and empirically tested patronage models of sometimes limited scope.

Consumers' store choice behavior concerns a highly complex multi-attribute decision as a great many factors may be involved in the store

choice decision. Often, these factors are integrated into the higher order construct of store image. Store image is hypothesized to be an important variable in explaining store patronage. In a review of the literature on store image up till 1983 Peterson and Kerin (1983) argue that: '..., the image a retail store possessed in the minds of consumers was assumed to consist of all the knowledge and beliefs about the store resulting from the consumers' experiences or impres-sions'. They report a great many different definitions of store image over the period from 1958, when Martineau triggered off the literature on store image, up till 1981: 'Most attempts to represent store image conceptually have treated it as consisting of distinct dimensions, elements, components, or attributes ...' (Peterson & Kerin 1983). In a review of research on store image Lindquist (1974) demonstrated that store image typically was measured with reference to merchandise (selection, quality, styling, and price), locational convenience, and service (Peterson & Kerin 1983). More generally speaking, the dimensions to be distinguished in measuring the image of a store are: assortment, service, type of customers, physical facilities, location, promotion, institutional aspects and (dis)satisfaction (see for instance Lindquist 1974; Hansen & Deutscher 1977; Glerum-van der Laan 1981). Based on a content analysis of open-ended image data concerning three retail chains obtained from a national consumer mail panel, Zimmer and Golden (1988) determined distinct types of image perceptions: '... attribute specific, global affective, store labels, prototypes and exemplars, product-related, and behavioral.' Davies and Brooks (1989) argue that '.... the use of price and ambience are the factors that seem, in practice, to be more generally relevant in differentiation between stores' and also argue for '...coherence between department, store and chain image'.

Store patronage models use store image or consumer perceptions of its constituting store characteristics as explanatory variables of store patronage. They differ in the type of relationship and the type of additional explanatory variables used. In his Extended Beliefs-Only model Darden based store patronage behavior on multiattribute attitude theories: '..beliefs about store attributes, normative beliefs about stores in the trade area, knowledge about retail operations, and patronage experience

can be used to model patronage purchase intentions' (Darden et al. 1983). This model was shown to outperform the extended Fishbein model as reconceptualized by Ryan and Bonfield (1975) in explaining store patronage intention (Darden et al., 1983). Eagle (1984) introduced three variables: price, selection and distance in retail choice models of consumers. In his threshold model, applied to the choice of record stores, Malhotra (1983) specified five characteristics to explain store choice behavior: variety and selection, personnel and service, acceptable price, convenience of location, and physical facilities. Lumpkin, Greenberg and Goldstucker (1985) identified attributes related to service, quality, price and assortment as important determinants of consumers' store choice, when they shop for wearing apparel. Also these authors conclude that: '... the elderly generally base their patronage decisions on the same attributes as their younger counterparts.' Korgaonkar, Lund and Price (1985) explaining store patronage through attitudes based on motivational patterns (utilitarian, ego-defensive, knowledge and value-expressive) concluded that the utilitarian item had the strongest influence. Uncles and Ehrenberg (1990) represented the buying of ground coffee by consumers at different retail chains by a Dirichlet model. This model represents buyer behavior over time at the individual household level for stationary and unsegmented markets.

Specifically applied to food store choice, Tigert (1983) concluded from a survey conducted in three different cities locational convenience, low prices, and good variety/assortment to be the most important attributes (importance measured as 'the total mentions as the single or second most important reason you shop at the store where you shop most often'). Quality of fresh meat and of fresh produce ranked from fourth to seventh in importance. Louviere and Gaeth (1987) analyzing retail facility choice of consumers by using the method of hierarchical information integration, concluded that price and quality were important determinants of 'Overall' judgments of supermarkets. From the set of fresh foods, quality of produce exerted the largest influence on quality perception of the supermarket, while the price of fresh meat exerted the largest influence on price perception of the supermarket. In a project on store patronage for fresh pro-

duce Glerum van de Laan (1987) used ten store attributes as explanatory variables: quality, price, locational convenience, selection, friendliness of personnel, store atmosphere, speed of service, expertise of personnel, specials and distance to shop. Quality of produce consistently had a significant influence on shop preference. Specials and speed of service had a significant influence in some instances. Meulenberg and Steenkamp (1991) concluded that product quality, respectively service and atmosphere of the shop, determined to a large extent the image of retail shops selling meat. Also they concluded that store image had a significant positive influence on store patronage and that distance to the store had a significant negative influence.

Sheth (1983) developed an integrative theory of patronage behavior, which to our knowledge has not been empirically tested yet. He suggests that consumers have a number of shopping options, which are largely controlled by the retail structure in a given trading area. Shopping motives determine which outlets from this set of options are considered appropriate by a consumer. The number of outlets consumers will consider for shopping will according to Sheth depend on the costbenefit ratio associated with each outlet. Sheth classified the factors determining shopping preference into supply side determinants (market determinants: location, retail structure and positioning; company determinants: merchandise, service and promotion) and demand side determinants (personal determinants: personal values, social values, and epistemic values; product determinants: product typology, usage typology and brand loyalty). Patronage behavior according to Sheth '..is a function of preference-behavior discrepancy'. Supply side determinants in Sheth's model resemble the shop characteristics introduced in other research on store choice which has been reviewed. The model is more complete in specifying relations and variables being potentially important in explaining store patronage behavior. Various other authors have addressed specific problems of specification and measurement in analyzing store patronage. Jain and Etgar (1976-1977) measured store image through multidimensional scaling of free response data of households on the image of stores. Black (1984) argues that the definition of the choice set deserves special attention in store

choice analysis. He suggests a definition of the choice set on the basis of a threshold distance value. Peterson (1981) argued that the image response of a consumer is not only determined by retail characteristics but also by subject characteristics and measurement characteristics. Achabal, Kriewall and McIntyre (1983) concluded that the importance weights of time factors as a variable influencing store choice increased in the sequence Stock-up trip, Fill-in trip and Emergency trip. This result suggests that patronage behavior has to be analyzed specifically in relation to the type of shopping. Louviere and Johnson measured retail image by BAC (brand anchored conjoint measurement), measuring '...preferences for hypothetical combinations of attribute levels of existing retail outlets by using traditional conjoint procedures, except that the *names* of existing retailers, instead of objective attribute levels, are employed as attribute level exemplars' (Louviere & Johnson 1990). Rosenbloom suggests that congruency between store image criteria and consumer store choice evaluative criteria is not self evident. This will happen to be the case when the store image is derived from the target market a retailer intends to serve, but it might not be the case when the store image is based either on internalized values and traditions held by the store's founders and successive managements, or from the store image of similar retailers in its line of trade (Rosenbloom 1983).

This concise review of research on store patronage shows a great variation in approaches and in methodological problems yet to be solved in this field of research. Nevertheless it seems that there is some agreement in the type of shop characteristics influencing store patronage. In particular product assortment, product quality, price and service in many instances appeared to be determinant characteristics of food store choice. In the following section, it will be investigated to what extent these factors contribute to shop patronage for fresh foods. In particular attention will be paid to the choice between supermarket and specialized shop in purchasing fresh food.

3.   Research questions being considered

    Various aspects of consumers' shop patronage with respect to fresh
food in the Netherlands will be analyzed. In the Netherlands fresh food,
like fresh meat, meat products, fresh fruit and vegetables, bread and
cheese were traditionally sold through specialized shops. Since the advent
of supermarkets in the beginning of the sixties these shops have lost
market share. In 1989 market share of the specialized shops was: 41% for
bread, 40% for fruit, 36% for fresh meat, 36% for fresh vegetables, 22%
for cheese and 19% for meat products (CBL Consumententrends - AGB
ATTWOOD). Which consumers prefer either supermarkets or specialized shops
for buying fresh food and which personal characteristics and store charac-
teristics influence store preference? The following research questions
have been investigated.

3.1 Some general characteristics of store patronage with respect to fresh
     food.
     * What is the importance of consumers' patronage to specialized
        shops in purchasing fresh food.
     * Is consumers' patronage to specialized fresh food shops a genera-
        lized shopping habit across all fresh foods, or a specific
        shopping habit per type of fresh food?

3.2 The importance of store characteristics in choosing a food store for
     fresh food.
     * Which store characteristics, in particular with respect to fresh
        food supply, are important in consumers' choice of a supermarket?
     * Can clusters of consumers be identified, which use a specific set
        of store characteristics as a criterion variable for supermarket
        choice?

3.3 Consumers' perception of fresh food sold by specialty shops and supermarkets, respectively.

   * Do consumers perceive fresh food sold by specialty shops differently from fresh food sold by supermarkets?

   * Is this difference in consumers' perception of fresh food sold by supermarket and specialty shop related to the actual shopping pattern of consumers?

3.4 Consumers' characteristics influencing store patronage for fresh food.

   * Do behavioral characteristics of consumers influence store patronage for fresh food?

   * Are demographic characteristics related to store patronage for fresh food?

4.   Data collection

The data used for this study were kindly made available to us from the CBL Shopper Profile by AGB ATTWOOD a Dutch Market Research Agency. They were collected to provide for CBL - a dutch organization of food retailers - a picture of consumers' shopping behavior particularly with respect to store choice of supermarkets and with respect to the purchase of fresh foods. So, data to be used in our analyses were not collected specifically for the purpose of this study. This puts technical limitations on the research questions to be analyzed and the methodology to be applied. Two types of data from a representative sample of 2071 Dutch households were at our disposal. Household panel data were available concerning the purchasing histories with respect to fresh products during a 13 week period in 1989. Six categories of fresh products were included in data collection: fresh meat, fresh meat products, bread, cheese, fruits, and vegetables. Panel members reported both, total spending on the respective product group and the outlet where the products were purchased. Only data on the two most important types of outlet for the respective product

(in terms of total spending) were included in the analysis. These outlets were classified and aggregated into three categories: supermarkets, specialty shops and others. Based on these data the 'Total amount of spending on fresh products in the specialty shops relative to the total amount of spending in the specialty shop plus the supermarket' was calculated for each of the categories of fresh food separately and used as a dependent variable.

Further, for the same sample data were available from an ad hoc survey carried out in august 1989. The survey covered questions concerning the perception and evaluation of supermarkets and specialty shops, particularly in relation to fresh products. Only information of the survey related to store patronage with respect to fresh products will be used. Shortage of space prevents reporting of all questions of the survey. If necessary, some additional information about the questions posed in the survey will be given in combination with reporting of the research results. It seems appropriate to elaborate upon one question concerning the relative importance of attributes in choosing a particular supermarket. Twelve attributes were distinguished: quick service, atmosphere, attractive specials, good quality of fresh food, good variety/assortment, low prices, friendly service, cleanliness, expert service, good parking facilities, suitable opening hours, and good quality. In a balanced design, 66 of the 495 possible combinations of four attributes were submitted to the respondent who was asked to indicate which of the four attributes was preferred in relation to supermarket choice. Relative importance of the 12 attributes was operationalized as the number of times any of the aspects was chosen as the most preferred (with a maximum of 22).

5.   Analysis and research results

5.1 General characteristics of store patronage with respect to fresh
     foods.

* What is the importance of consumers' patronage to specialized
  shops in purchasing fresh food.

The percentage of households reporting that the specialized shop is
the first, and most important outlet (in terms of expenditure) for
purchasing fresh food is less than 40%. This percentage is highest for
fresh meat, 37% and lowest for cheese, 12% (table 1).

Table 1 The percentage of Dutch households visiting specialized shop as
         the first, the most important, outlet (in terms of expenditure)
         for purchasing fresh food. Based on stated behavior in survey

	Specialized shops	National Chains	Regional Chains Voluntary Chains and Others
Fresh meat	37	26	37
Meat Products	22	31	49
Fruit and Vegetables	25	25	50
Bread	34	21	45
Cheese	12	32	56

Source: CBL Consumententrends, AGB ATTWOOD.

Percentages of households 'Having children' do not significantly
differ from those in the total sample. It appears that the competitive
position of the butcher and bakery are, relatively speaking, strongest.
The position of the specialized shop in fresh food is in particular weak
for cheese and meat products. The relative position of specialized shops
vis à vis supermarkets may have been weakened in the case of meat products
and cheese by the fact that the amount of cheese/meat products per
purchase is significantly larger in a supermarket than it is in a spe-

cialized shop. This does not hold for the other fresh products considered in our analysis.

The strength of a specialized shop does not only depend on being considered by consumers the most important shop for the relevant product. Share of total sales is the ultimate test for the importance of specialized shop.

Table 2 Consumers' expenditure in specialized shops for different fresh foods (expressed as a fraction of total expenditure on that fresh food). Based on panel data over a 13 week period (N=2071)

	Fresh meat	Meat products	Vegetables	Fruits	Bread	Cheese
Fraction	0.36	0.19	0.36	0.40	0.40	0.22

The share of specialized shops in sales of various types of fresh food (table 2) compares well to the relative frequency of the specialized shop being reported as the most important outlet (table 1). This implies that consumers' stated behavior in this respect provides an accurate description of their actual behavior. Oneway analysis of variance reveals a significant difference between meat products and cheese on the one hand and fresh meat, vegetables, fruits and bread on the other hand (Scheffé-test; α=.01). This implies that for meat products and cheese consumers spend a significantly smaller amount of their total expenditure in specialized shops than they do for the other fresh foods.

*   Is consumers' patronage of specialized fresh food shops a generalized shopping habit across fresh foods, or a specific shopping habit per type of fresh food?

For each category of fresh food, consumers' expenditure in the spe-
cialized shop relative to total expenditure in supermarkets and spe-
cialized shops combined was calculated from the household panel data.
Bivariate Pearson correlation coefficients provide insight into the
generalizability of the behavioral pattern across product categories. The
results are given in table 3.

Table 3 Bivariate Pearson correlation coefficients expressing the linear
relationship between the relative household-expenditure
(=relative expenditure in specialized shop/total expenditure for
the type of fresh food) for various types of fresh food
(N=2071)

	1	2	3	4	5
1. Fresh meat					
2. Meat products	0.59				
3. Bread	0.27	0.27			
4. Cheese	0.22	0.22	0.21		
5. Fruits	0.31	0.24	0.25	0.31	
6. Vegetables	0.36	0.27	0.27	0.31	0.75

All correlation coefficients are statistically significant at the
.001-level, which is partly due to the large number of observations
(N=2071). The small size of most correlation coefficients suggests that
the generalizability of specialized store patronage for fresh food is of
limited, or negligible, importance. However Table 3 reveals that correla-
tion coefficients are substantial between fresh meat and meat products
(r=0.59), and between vegetables and fruits (r=0.75). It is not clear
whether these large correlation coefficients are brought about either by
consumers' generalization of fresh food store patronage over products or

by the coincidence that fresh fruit and vegetables, and fresh meat and meat products respectively, are often for sale at the same outlet. Therefore the high correlations do not allow a firm conclusion about the presence of generalization of store patronage over subsets of fresh foods. This pattern of store patronage was confirmed in a Principal Components Analysis on the fractions of expenditure on fresh food categories in specialized shops. This analysis revealed that fruit and vegetables load heavily on the first principal component, while fresh meat and meat products load heavily on the second one.

5.2 The importance of store characteristics in choice and evaluation of a particular supermarket.

* Which choice criteria, in particular with respect to product assortment and product quality, do consumers consider important in their choice of a particular supermarket?

In the Netherlands fresh food shops, like butchers, greengrocers and bakers, are loosing market share to supermarkets. From that point of view it is interesting to find out the importance of different shop characteristics in consumers' choice of a supermarket, in particular the importance of fresh food in this respect.

From the 2071 respondents 1871 completed the question on the importance of characteristics in the choice of a supermarket. Good quality was considered the most important characteristic, followed by low prices, and attractive specials. It must be noticed that the important characteristic "Distance to shop" was not included in the survey made at our disposal. Nevertheless, results look similar to other research, like the analysis of Tigert (1983). Good fresh food departments ranked fifth in importance (table 4). It suggests that fresh food is important but not the overriding characteristic in supermarket choice. Our results suggest however that in case the four most important characteristics are at an acceptable level the quality of fresh food departments may become decisive in the supermarket choice of a consumer.

Table 4 Relative importance attributed by respondents to various store
characteristics when choosing a supermarket (Average number of
times a characteristic is chosen as the most important one is
given in parentheses; maximum number per characteristic is 22)1).
(N=1871)

Good overall quality	(10.9)
Low prices	(8.1)
Attractive specials	(7.9)
Broad assortment	(7.3)
Good fresh food departments	(6.1)
Cleanliness	(5.1)
Good parking facilities	(3.9)
Friendly service	(3.7)
Quick service	(2.9)
Suitable opening hours	(2.5)
Nice atmosphere	(2.2)
Expert service	(2.1)

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1) The reader is referred to section 4 for a description of the procedure
followed to draw the ranking per respondent.

  * Can clusters of consumers be identified, which use a specific set
    of store characteristics as a criterion variable for supermarket
    choice?

     Cluster analysis using SPSS QUICK CLUSTER reveals six clusters of
respondents, being identifiable on the basis of the relative importance
attached to store characteristics. These clusters are given in table 5.

*Table 5 Clusters of consumers identifiable on the relative importance of
store characteristics in supermarket choice. Percentage of total
sample is given in parentheses 1)*

Cluster	Supermarket characteristic
Average buyer (26%)	Attractive specials
	Good fresh food departments
	Low prices
	Good overall quality
Price-conscious buyer (18%)	Low prices
	Attractive specials
Hurried buyer (16%)	Quick service
	Suitable opening hours
Congenial buyer (14%)	Pleasant atmosphere
	Friendly service
	Expert service
Quality conscious buyer (13%)	Good quality
	Broad assortment
	Cleanliness
	Good fresh food departments
	Expert service
Convenience buyer (6%)	Good fresh food departments
	Broad assortment
	Good parking facilities
	Suitable opening hours

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1) CBL Consumententrends AGB-ATTWOOD 1989 produced a similar break down of
the respondents on the basis of cluster analysis.

The clusters have somewhat arbitrarily been described as 'average
buyer', 'price conscious buyer', 'quality conscious buyer', 'hurried
buyer', 'service oriented buyer', and 'convenience oriented buyer' respec-

tively. A seventh cluster is not easily identifiable. Three clusters, the
'average buyer', the 'quality conscious buyer', and the 'convenience
oriented buyer' consider good fresh food departments an important super-
market characteristic. They represent a substantial section, 45 %, of the
total sample. Other clusters do not ascribe such great importance to good
fresh food departments.

   * Which criteria underlie the evaluation of the frequented supermar-
     ket and what is their relative importance?

   Respondents evaluated their most important supermarket on 36 charac-
teristics relating to distance, parking facilities, service elements, and
price, quality and assortment of fresh food and groceries. The charac-
teristics were scored on three point scales, with categories labelled as
'certainly applies to this supermarket', 'certainly does not apply to this
supermarket', and 'don't know'. Next, they provided an overall evaluation
score for their most important supermarket on a ten-point scale of which
only the end-poles were labelled as 'very bad' (1), and 'very good' (10).
   As a first step in the analysis, the underlying structure of the set
of 36 characteristics was examined, using a non-linear version of
Principal Components Analysis (PRINCALS; Gifi 1985). For this purpose the
three possible scores were treated as an ordinal scale with 'certainly
does not apply' and 'certainly applies' as extremes. As respondents eva-
luated their most important supermarket, the category 'don't know' was
interpreted as an intermediate score on this ordinal scale. Table 6 gives
the matrix of component-loadings of the three-dimensional PRINCALS solu-
tion, accounting for 31.4% of the variance in the original ratings.
   Table 6 reveals that the first dimension of the PRINCALS-solution
refers to the quality of the fresh food sections of the supermarket, both
in terms of service encountered and the quality and assortment of the
fresh food supply. The second dimension may be interpreted as the price
dimension and relates to the general price level of groceries and fresh
foods as well as price offers for groceries and fresh foods. The third
dimension reflects the 'general service' level of the supermarket, both in

Table 6 Pattern of component loadings of the three dimensional
         PRINCALS-solution, after VARIMAX-rotation (N=1733)

	I	II	III
Broad assortment of meat products	0.74	-0.02	0.12
Good quality meat products	0.69	0.03	0.02
Good quality meat	0.68	-0.00	0.12
Broad assortment of meat	0.67	0.04	0.16
Pleasant service at fresh food sections	0.59	-0.02	0.32
Quick service at fresh food sections	0.53	0.05	0.35
Broad assortment of cheese	0.53	-0.01	0.15
Good quality cheese	0.51	0.12	-0.00
Expert service at fresh food sections	0.50	0.05	0.44
Broad assortment of vegetables and fruits	0.47	0.10	0.31
Good quality bread	0.44	0.18	0.03
Broad assortment of bread	0.44	0.17	0.16
Good quality vegetables and fruits	0.40	0.13	0.24
Low prices for meat products	0.22	0.67	-0.03
Low prices for vegetables and fruits	0.04	0.67	0.05
Low prices of groceries	-0.21	0.65	0.04
Low prices for cheese	0.06	0.61	-0.01
Low prices for meat	0.30	0.59	0.02
Low prices for bread	0.12	0.49	-0.08
Many attractive offers for groceries	0.02	0.44	0.31
Often attractive offers for fresh products	0.36	0.44	0.25
Supermarket looks attractive and pleasant	0.24	-0.04	0.68
Always looks neatly and tidy	0.16	-0.07	0.58
Has an easy and broad set up	0.02	0.07	0.58
Is always cleaned up	0.13	-0.01	0.53
Pleasant setup of the supermarket	-0.05	0.12	0.51
Quick and accurate service at check-out	0.00	0.07	0.49
Broad assortment of major brand groceries	0.30	-0.15	0.43
Provides much information on nutrition	0.18	-0.05	0.43
Has pleasant light	0.06	0.06	0.40
Good quality of groceries	0.13	0.06	0.30
Plenty and high quality parking facilities	0.05	0.03	0.30
Broad assortment of private label groceries	0.23	-0.10	0.25
Has pleasant music	0.06	-0.01	0.25
Setup of outlet does not change often	-0.01	0.11	0.14
Is nearby	0.11	0.03	-0.03

terms of service to the customer (service at check-out point, information about nutrition and service of personnel) as well as the physical facilities (attractiveness, cleanliness, and set up of the supermarket). Two characteristics, do not have substantial loadings on any of the components: 'the setup of the supermarket does not change very often' and 'is nearby'.

The relative importance of the three factors in explaining consumers' overall evaluation of the supermarket was assessed through regression-analysis of the factorscores on overall evaluation. The results are given in Table 7.

Table 7   Results of the regression analysis of componentscores on overall
         evaluation of the supermarket (N=1726)

	B	Beta	sign
Quality of fresh food sections	0.357	0.316	<0.0001
Price level	-0.205	-0.182	<0.0001
General service level	0.623	0.551	<0.0001
R^2	43.5%		

Results of Table 7 show that the 'general service' level of the supermarket has the largest contribution in explaining consumers' overall evaluative judgment on the supermarket. Quality of the fresh food sections also exerts a considerable influence on overall judgment of the supermarket. In absolute value, its influence exceeds that of consumers' evaluation of the general price level of the supermarket.

5.3 Consumers' perception of fresh food sold by specialized shops,
     respectively by supermarkets.

     * Do consumers perceive fresh food sold by specialty shops dif-
       ferently from fresh food sold by supermarkets?

     It was investigated whether respondents perceive fresh food supplied
by supermarkets differently from fresh food supplied by specialized shops
on a number of characteristics (table 8).

*Table 8 Differences in perception of fresh food characteristics supplied
          by supermarkets and by specialized shops. In the table, the per-
          centage of respondents that judge a particular characteristic
          applicable to either the supermarket or the specialized shop is
          given 1)*

	SUPERMARKET					SPECIALIZED SHOP				
	MP²	FM	FV	BR	CH	MP	FM	FV	BR	CH
Attractive prices	60	59	25	67	38	10	15	13	10	8
Attractive specials	59	56	34	55	41	14	20	15	14	11
Good quality	29	27	22	22	29	42	45	37	46	26
Broad assortment	33	26	18	21	24	37	48	34	52	35
Exclusive products	10	7	9	7	9	54	59	50	63	52
Expert service	15	14	10	10	13	61	65	56	61	46
Friendly service	30	24	18	21	24	33	41	34	41	25
Special service	18	15	11	10	12	54	59	52	57	44

1) Note that this table is limited to supermarket and specialized shop.
Sales at market place and at the doorstep are not included. They are of
some importance for Fruit and Vegetables and Cheese; 2) MP=Meat products,
FM=Fresh meat, FV=Fruit and Vegetables, BR=Bread, CH=Cheese.

In the ad hoc survey perceptual data were collected on eight charac-
teristics related to the sale of fresh foods in specialized shops and
supermarkets. These features relate to price, quality, service and assort-
ment of the outlets. For each product category respondents indicated
whether it applied to the supermarket, the specialty shop, to both of them
or to neither of them. Supermarkets are perceived to have lower prices and
more attractive specials. In the eyes of the respondents, specialized
shops provide better quality, a broader assortment and better service.
This difference is most pronounced in the case of bread and fresh meat and
least in the case of cheese.

* Is the difference in consumers' perception of fresh food sold by
  supermarket and specialized shop related to the actual shopping
  pattern of consumers?

Do consumers' perceptions of fresh food characteristics in super-
markets and specialized shops influence store patronage? A stepwise
regression has been performed, using expenditure on a specific fresh food
in specialized shops as a percentage of total expenditure as the dependent
variable and consumer's perception of the respective characteristics as
the explanatory variable (table 9). The explanatory variables were intro-
duced in terms of dummy variables that took value one if the charac-
teristic was perceived to apply and zero otherwise. In addition a number
of behavioral variables of respondents were introduced as an explanatory
variable in the regression analysis. The impact of these variables will be
discussed in section 5.4.

The fit of the regression is poor. Nevertheless the statistically
significant results reported in Table 9 allow some tentative conclusions.
In particular consumer's perception of attractive prices, good quality and
friendly service with supermarkets has a negative influence on the share
of specialized shops in fresh food markets. These marketing instruments
appear to be important competitive weapons of supermarkets in the fresh
food market. The relevance of quality competition is underlined by the,

Table 9 *The impact of consumers' perception of store characteristics 1)
and of behavioral variables 2) on store patronage with respect to
fresh food: statistical significant (α<5%) results of stepwise
regression analyses*

	FM.	MP.	VG.	FR.	BR.	CH.
Independent Variables						
– Perception of Store Characteristics						
SM.Attractive Price	-0.122	–	-0.070	-0.064	-0.153	-0.096
SS.Attractive Price	0.074	0.094	–	–	–	0.116
SM.Attractive Specials	–	-0.170	–	–	–	-0.069
SS.Attractive Specials	0.075	–	0.121	0.123	–	0.070
SM.Good Quality	-0.237	-0.090	-0.121	-0.166	-0.188	-0.174
SS.Good Quality	–	0.067	–	–	0.102	–
SM.Broad Assortment	–	–	-0.114	–	–	–
SS.Broad Assortment	–	–	–	–	0.093	–
SM.Exotic Products	–	–	0.053	–	–	–
SS.Exotic Products	-0.079	-0.051	–	–	-0.080	–
SM.Expert Service	–	–	0.073	–	–	–
SS.Expert Service	–	–	–	–	–	-0.062
SM.Friendly Service	-0.083	-0.136	-0.112	-0.133	-0.103	-0.108
SS.Friendly Service	0.109	0.113	0.087	–	0.103	–
SM.Special Service	–	–	–	–	–	–
SS.Special Service	0.076	–	–	–	–	-0.068
– Behavioral Changes						
More Healthy Eating	–	–	–	–	–	–
Less Healthy Eating	–	–	–	–	–	–
More Convenience Food	-0.056	–	-0.058	-0.071	-0.055	-0.095
Less Convenience Food	–	–	–	–	–	–
More Expensive Eating	–	–	–	–	–	–
Less Expensive Eating	–	–	-0.048	–	–	–
More Exotic Products	–	–	-0.048	–	–	-0.046
Less Exotic Products	–	–	–	–	0.051	–
R^2 - adj.	0.274	0.198	0.142	0.128	0.265	0.191

1) FM=Fresh Meat, MP=Meat Products, VG=Vegetables, FR=Fruit, BR=Bread,
CH=Cheese; 2) Explanatory variables are specified as dummy variables being
1 if respondent's answer is yes and 0 if respondent's answer is no. This
specification does not cause multicollinearity since: a) perception of
shop characteristics to supermarket and specialized shop is not mutually
exclusive (e.g. ascribing good quality to a supermarket does not imply
ascribing poor quality to a specialized shop) and b) the questions on
behavioral change have a third answer category 'no change in eating
habits'.

relatively speaking, large size of the regression coefficients of the variable 'Good quality supermarket'. There is no symmetry in the regression results in the sense that consumer's perception of the same characteristics (attractive prices, good quality and friendly service) in specialized shops has a significant influence on market share of specialized shops in the reverse direction too. In particular, perception of attractive specials by specialized shops has a significant positive influence on the market share of that type of shop. These results do not imply that quality is not an important marketing instrument to specialized shops. Good quality seems self evident for a specialized shop. It suggests that specialized shops might gain market share in competition with supermarkets in particular if they could add attractive specials to their strong points in quality and service.

5.4 Consumers' characteristics influencing store patronage in respect to fresh food.

* Do behavioral characteristics of consumers influence store patronage in respect to fresh food?

In the survey respondents were interviewed about changes in eating habits. Subjects were asked, for example, to indicate whether their food consumption has become more healthy, less healthy or whether they felt no change on that matter during the past year. The following possible changes in food consumption habits have been considered in relation to store patronage: more healthy consumption, more convenience food, more expensive food products, and more exotic products. They have been introduced as explanatory variables in a regression equation explaining the relative expenditure of a particular fresh food, say fresh meat, in specialized stores, as a dependent variable. They have been specified in terms of dummy variables, one dummy variable being 1 in the case of a positive change and zero otherwise, one dummy variable being 1 in the case of negative change and zero otherwise, leaving the third option, no change in the

respective eating habit, as the base level. Actually, these explanatory dummy variables have been included in a regression equation which explained the relative expenditure of a particular fresh food, say fresh meat, in specialized stores also by variables expressing consumer's perception of store characteristics (table 8). The influence of the latter variables has been discussed already in section 5.3. It appears that all changes in eating habits, being statistically significant, have a negative influence on the market share of specialized shops. In particular going for more convenience food has a systematic negative influence on market share of specialized shops: for fresh meat, fruit and vegetables, bread and cheese but not for meat product. Striking in this respect is that eating more exotic foreign food products has a negative impact on the market share of specialized shops in the case of cheese and vegetables.

* Are demographic characteristics related to store patronage in
  respect to fresh food?

In order to investigate the relationship between store patronage for fresh food and demographic variables separate regression analyses were run for each of the fresh food products distinguished in this paper. Dependent variable was specified as the expenditure for a particular fresh food (fresh meat, meat products, fruit, vegetables, bread and cheese) in a specialized shop as a percentage of total expenditure on that fresh food. Explanatory demographic variables were social class, age, family cycle, and region. They were specified as dummy variables. The regression results were extremely poor, $R^2 < 4\%$. This implies that the demographic characteristics applied in our analyses have a very limited, if any, impact on store patronage for fresh products. The only statistically significant influence is the negative influence of age between 20 and 35 years on store patronage for specialized shops. This holds in particular for the age group 20 - 25 years.

6.   Summary and conclusions

Food store choice is of great relevance both to retailers and to agribusiness, being involved in the production and marketing of food. A review of the literature shows that consumers' store choice has been studied extensively. Also food store choice has been analyzed by various authors. Specific analyses of store choice in regard to fresh food are scarce, however. Tigert (1983) analyzed the impact of fresh produce and fresh meat as attributes on consumers' choice of a general food store. Glerum van de Laan (1987) investigated store patronage for fresh fruit and vegetables.

Our analysis is specifically concerned with consumers' store patronage with respect to fresh food. In particular, attention is paid to consumers' choice of supermarket or specialized shop in purchasing fresh food. Our analysis is based on a survey and on household panel data about purchasing of fresh food in the Netherlands. Data were kindly made available to us by the Dutch food retail organization CBL and the market research organization AGB-ATTWOOD. Our analyses had to be executed within the boundaries of these data. The large size of the sample (N=2071) and the great variety of subjects covered in the survey make these data extremely useful material to investigate store patronage for fresh food. An interesting aspect of our data base is that we dispose both of household panel data and survey data from the same households.

A number of research questions on store patronage for fresh foods have been formulated and tested. The following results seem interesting in this respect.

* Consumers' patronage to specialized shops is not a dominating shopping habit in purchasing fresh food: the percentage of households reporting that the specialized shop is the first, the most important outlet (in terms of expenditure) is less than 40% for all types of fresh food considered. This percentage is highest for fresh meat, 37% and lowest for cheese, 12%.

* Consumers' patronage of specialized fresh food shops does not seem
  to be a generalized consumer's habit for all fresh food, considered
  in this investigation. Our results suggest generalized shopping
  habits for subsets of fresh foods, namely for fresh meat and meat
  products, and for fruit and vegetables, respectively.
* Good quality was considered the most important supermarket charac-
  teristic, followed by low prices, and attractive offers. It must be
  noticed that the important characteristic 'Distance to shop' was
  not included in the survey data put at our disposal. Good fresh
  food departments ranked fifth in importance. These results suggest
  that fresh food is an important but not the predominant charac-
  teristic in supermarket choice.
* Six clusters of respondents can be distinguished in the use of
  specific sets of store characteristics as a criterion variable for
  supermarket choice. Three clusters representing 45% of the total
  sample, described as 'average buyers', 'quality conscious buyers',
  and 'convenience oriented buyers' consider good fresh food depart-
  ments an important supermarket characteristic.
* Consumers' evaluation of the 'general service' level of the super-
  market makes the largest contribution to the overall evaluation of
  the supermarket. Quality of the supermarket's fresh food sections,
  in term of quality of supply and service encountered also makes a
  large contribution. Its influence exceeds the influence of con-
  sumers' evaluation of the general price level of the supermarket.
* Differences in consumers' perception of fresh foods supplied by
  specialized shops and supermarkets are most pronounced for bread
  and fresh meat and least for cheese. Supermarkets are perceived to
  have lower prices and more attractive specials. In the eyes of the
  respondents, specialized shops offer in the eyes of the respondents
  better quality, a broader assortment and better service.
* Consumer's perception of attractive prices, good quality and
  friendly service with supermarkets has a negative influence on the
  share of specialized shops in fresh food markets. These marketing
  instruments appear to be important competitive weapons of super-
  markets in the fresh food market.

* In the evaluation of assortment and quality of supermarkets grocer-
  ies were evaluated better than fresh foods.
* A change in eating habits during the last year toward the consump-
  tion of more convenience food, has a systematic negative influence
  on frequenting specialized shops for fresh meat, fruit and vegeta-
  bles, bread and cheese.
* Demographic characteristics have a very limited, if any, impact on
  store patronage with respect to fresh products. There is only a
  negative influence of age between 20 and 35 year.

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