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## **The relationship between brand loyalty, store loyalty and performance in the retail food sector**

- A causal-analytical analysis using the example of  
premium store brands

Hagen 2006



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## **Abstract**

The authors of this paper examine the relationship between brand loyalty, store loyalty and performance. Although both academics and practitioners are very much interested in an analysis of the interrelations, these constructs have not as yet been examined in a closed causal model. The findings of the analysis are based on a poll of 307 consumers of a retail company. In order to show the contribution of these customers to profits, the poll data was linked with shopping basket information from the polled consumers. The study was carried out using products of a newly launched premium store brand. In this way, this study can not only be used to answer open questions on the relationship of the mentioned constructs, but also to derive statements on the success potentials of premium store brands.



# 1. Central Concern of the Study

Brand *loyalty* (e. g. Copeland 1923; Churchill 1942; Brown 1952; Cunningham 1956; Frank 1967; Tucker 1964; McConnel 1968; Day 1969; Charlton and Ehrenberg 1976; Dick and Basu 1994) and store *loyalty* (e. g. Enis and Paul 1970; Lessig 1973; Monroe and Guiltinan 1975; Keng and Ehrenberg 1984; Uncles and Hammond 1995; East/Hamond/Lomax 2000; Sivadas and Baker-Prewitt 2000) are two frequently examined constructs in market research. Special attention is paid to these constructs from the aspect of business management in particular, because some authors suspect there is a positive correlation between the 'loyalty' of a customer and 'performance' (Reichheld/Sasser 1990; Heskett et al. 1994).

Relationship between brand loyalty, store loyalty and performance

A look at the published literature shows that the greater part of the studies consists of papers that examine the above-mentioned constructs in isolation. In contrast, up to now there have only been sporadic theory-based and empirical approaches that examine the relationship of cause and effect between the constructs brand loyalty and store loyalty (Cunningham 1961; Carman 1970; Steenkamp and Dekimpe 1997; Goerdt 1999; Corstjens and Lal 2000). Research approaches that link both constructs with performance variables have not yet been seen in the literature.

Research gap

The concern of this study is to make a contribution towards closing this research gap. The determinants, the interlinking of cause and effect and the profitability potentials of brand and store loyalty in the retail trade will be examined. In particular, in the framework of a causal-analytical examination a relationship of cause and effect between brand and store loyalty on the one hand and their potential for performance on the other hand will be established.

Causal-analytical analysis of relationship

The area of study under observation arouses not only the interest of academics. On the contrary, knowledge of influence factors that affect performance can be of particular relevance for companies that are exposed to high competitive pressure. With the continuing concentration tendencies in mind leading German trading companies have stated that in future they want to place greater value in particular on the sectors of customer relations and improving returns (Ahlert/Kenning/Schneider 2000, p. 21 ff.).

Economic relevance



## 2. Framework, Theoretical Background and Constructs

### 2.1. Framework and Theoretical Background

The first studies in the field of loyalty research initially examined the constructs brand and store loyalty in isolation (e. g. Copeland 1923). In the publications there is to a great extent agreement that measuring loyalty is determined by two material components: the numerous publications can be subdivided into behaviouristic, attitude-oriented and combined concepts on measuring loyalty, depending on the focus on the *attitude* or the *behavioural components*. Loyalty to a brand or to a store is expressed when, because of a positive attitude, a customer repeatedly demands goods or services within a suitably defined period of time.<sup>1</sup> In the case of brand loyalty the service offered is one brand or a limited number of brands. With store loyalty purchases are concentrated on one or a few stores.

Overview over loyalty research

*Behaviouristic* loyalty concepts can include those concepts that stress the behavioural components and that address attitudinal components marginally only, or even only implicitly. In the various approaches an attempt is made to draw conclusions with regard to a brand or a store by determining buying sequences, buying shares and buying probability.

Behaviouristic loyalty concepts

However, a criticism must be made of the implicit assumption of these measuring concepts, namely that buying behaviour is the expression of the attitude to the service offered (Day 1969, p. 29-35; Newman and Werbel 1973, p. 404-409; Monroe and Gultinan 1975, p. 19-28). This assumption can lead to misinterpretations, if, e.g., specific services or goods are temporarily unavailable/unattainable and therefore another service or good was demanded that is otherwise not preferred. DAY 1969 refers to the form of loyalty described here as 'spurious loyalty'.

Criticism

*Attitude-oriented* concepts focus their examination on the attitude of a buyer to a brand or a store. According to these concepts, loyalty can be derived from the attitude. In the case of brand loyalty, this is measured with the help of models of preferences, repurchasing intentions or willingness to accept substitutes. Often,

Attitude-oriented concepts

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<sup>1</sup> In their inventory of the published literature in the field of loyalty research Jacoby and Chestnut 1978 discovered 200 studies that dealt with operationalizing the construct brand loyalty. They were able to extract 53 terminological demarcations solely on the construct of brand loyalty from these approaches.

slightly modified variants of these procedures are used to measure the attitude of a consumer to a store.

Criticism

The criticism that can be made of attitude-oriented procedures is that the attitude does not necessarily lead to a purchase. On the contrary, intervening factors (e.g. an exorbitant price or mobility barriers) may be responsible for a service not being demanded in spite of a positive attitude.

Combined concepts

Since the 1960s publications have increasingly taken account of both attitude and behaviour components. These *combined* concepts presume a functional connection between the attitude and the purchase. There are numerous publications available on the aspect of the combined measurement of brand loyalty (e. g. Day 1969, p. 29-35; Jacoby 1971; 25-31; Newman and Werbel 1973, p. 404-409; Dick and Basu 1994, p. 99-113; Chaudhuri and Holbrook 2001, p. 81-93), whereas concepts for measuring store loyalty have not been very widespread up to now (Korgaonkar/Lund/Price 1985, p. 39-60; Mazursky and Jacoby 1986, p. 145-165; Osman 1993, p. 149-166; Bloemer and Ruyter 1998, p. 499-512; Sivadas and Baker-Prewitt 2000, p. 73-82).

Criticism

In spite of the remarkable attempt to record *brand loyalty* in the framework of a two-dimensional approach, it must be criticized that the measuring concepts that were published to about the end of the 1980s do *not* examine a functional connection between the attitude component and the behavioural component. On the contrary, loyalty is represented with the help of an aggregated loyalty parameter, so that no conclusions can be drawn to the underlying components. It is true that the proposed loyalty parameters can be used to determine unambiguous levels of loyalty for each customer, but the fixing of a 'threshold value' from which customers are seen to be loyal/disloyal, depend on the subjective assessment of the researcher. A further weak point of these concepts is found in the one-dimensional recording of the attitude component. According to a unanimous opinion in the literature the attitude should be represented by a great number of indicators that take account in particular of the cognitive, affective and conative elements of the attitude .<sup>2</sup>

Operationalizing difficulties

On the basis of plausibility consideration Dick and Basu 1994 are able to substantiate the relevance of the elements referred to. However, they are unable to underpin their findings empirically. Chaudhuri and Holbrook 2001 do make a connection between the behavioural and the attitude dimension, and support this

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<sup>2</sup> For a representative study see DICK/BASU 1994 or models such as the 'AIDA model'.

empirically; however, their approach must also be criticized because it maps the attitude dimension one-dimensionally only.

With regard to the combined measurement of *store loyalty* there are some empirical studies in existence that were carried out in department stores (Mazursky and Jacoby 1986; Osman 1993; Bloemer and Ruyter 1998; Sivadas and Baker-Prewitt 2000). These studies prove that the image of the store, the service quality and the satisfaction have a positive effect on store loyalty. However, these findings do not apply to every form of store. For example, other studies point out that choice behaviour in food retail stores is influenced by completely different factors, for example, the location or the range of products (see Huddleston/Whipple/van Auken 2004, p. 222). It can be seen that in the food retail sector attitude-relevant factors tend to move into the background. Here, too, the demarcation problem that was posed above is posed, namely when customers are seen as loyal/disloyal.

Operationalizing difficulties

Against the background of the research deficits shown the attempt is made in the present empirical study on the interactions of the constructs to eliminate a part of the operationalizing difficulties presented. The following research question is to be answered:

Elimination of operationalizing difficulties

*Research question 1:*

*What indicators can be used to operationalize the constructs brand loyalty and store loyalty?*

A further research branch is occupied with the question whether there is a connection between the constructs brand loyalty and store loyalty. However, publications that make a connection between brand and store loyalty restrict themselves to a few empirical studies (Cunningham 1961; Carman 1970; Steenkamp and Dekimpe 1997; Goerdts 1999; Corstjens and Lal 2000). Under the aspect of the aim of trading companies to bind customers to their stores, the analysis of the relationships between brand loyalty and store loyalty becomes very important. Retail companies in particular hope to bring about a positive effect of brand loyalty on store loyalty through their range of services, and recently in particular through placing store brands (Corstjens/Lal 2000, p. 281-291).

Relationship between brand loyalty and store loyalty

That these efforts can certainly lead to the goal was already indicated in early empirical study papers (Cunningham 1961, p. 134 and Carman 1970, p. 69). These examinations confirm that customers can be bound to a store with store

brands in particular.<sup>3</sup> However, the database and the analysis methods that were used in the studies referred to do not permit the conclusion whether customers visited the store *because of* the store brand (Cunningham 1961, p. 136). A more recent study examines this question on the basis of game theory considerations (Corstjens and Lal 2000). The authors are able to show that so-called 'quality store brands' are a suitable instrument for increasing store loyalty and store profitability. However, the opinions derived in the study are based on the very restrictive assumptions of game theory models. Because of their nature, findings that are acquired on the basis of models of this type cannot simply be generalized. As far as the author is aware, there have not been any empirical studies to date that examine a connection between brand loyalty and store loyalty using a practical example. In addition, the conditions under which this connection is stronger or weaker have not yet been examined. The following, second research question is therefore to be answered in this study.

*Research question 2:*

*Is it possible in an individual case to provide evidence of a connection between brand loyalty and store loyalty?*

Relationship between brand loyalty, store loyalty and performance

Numerous research- and practice-oriented articles refer to the high performance ability potentials of loyal customers (Reichheld and Sasser 1990; Heskett et al. 1994). However, it has scarcely been possible in previous publications to support the effect of brand loyalty and store loyalty on company performances. In particular there has not been any consideration that established a closed relationship connection between brand loyalty, store loyalty and a potentially derivable effect on performance. The study will attempt to close this research gap as well.

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<sup>3</sup> Although evidence of a correlation between brand and store loyalty could not be shown for manufacturers' brands in the study by CUNNINGHAM 1961, it was possible to ascertain a positive significant correlation between loyalty to a brand and loyalty to a store.

*Research question 3:*

*In the case examined, do brand loyalty and store loyalty have an effect on the company's performance?*

## 2.2. Constructs

### 2.2.1. Operationalizing Brand Loyalty

In order to explore the causes of possible changes in behaviour, brand loyalty is operationalized as a two-dimensional construct consisting of an attitude and a behavioural component. The operationalization approach suggested here assumes that buying behaviour is influenced by attitude. For some time some authors have suspected that from first becoming aware of the existence of a brand through to a purchase consumers pass through three 'successive related phases', namely a cognitive, an affective-evaluative and a conative phase (e. g. Lavidge and Steiner 1961, p. 61).

In this sense, the customer acquires knowledge of the existence of a brand in the *cognitive phase*. The indicator '*Familiarity of the store brand* ( $x_1$ )' measures whether consumers know the brand or not. The success of the newly launched brand could depend not inconsiderably on whether buying a 'brand' is a decisive criterion in the meat products sector under observation here. For this reason, '*brand awareness* ( $x_2$ )' on purchases of meat products is integrated in the model as a further indicator for registering cognitive elements.

Indicators for brand loyalty

In the *affective-evaluative phase* the (now familiar) brand is subjected to an evaluation that can lead to a positive or a negative judgment. The result of this evaluation is mapped by the indicator '*Satisfaction with the store brand* ( $x_3$ )'. The behavioural component of 'brand loyalty' is explained with the indicators  $x_1$ ,  $x_2$  and  $x_3$ .

The willingness of consumers to act in a way determined by the two previous phases is expressed in the *conative phase*. The buying behaviour that results from this intended behaviour is registered with the indicator '*Buying frequency of the*

*store brand*'. The behavioural component of 'brand loyalty' is operationalized with this indicator.<sup>4</sup>

### 2.2.2. Operationalizing Store Loyalty

The totality of the customers of a retail company can be subdivided according to various criteria into a great number of different customer groups, whereby customers would be found sometime in the same group, sometimes in different groups, depending on the criteria selected. With the objective of this study in mind, namely to demonstrate loyalty to a store, the relevance and irrelevance of differences between customers who are loyal to a store and those that are not must be clarified.

Indicators for store loyalty

In many empirical studies the '*Visiting frequency* ( $y_1$ )' in a set period is determined to register store loyalty and to identify regular customers (Keng and Ehrenberg 1984). If the examination were based solely on this criteria, it would not be possible to differentiate customers who bought frequently from a store, but only a small proportion of their food requirements, from those who not only buy frequently but also spend most of their money in a specific store. In spite of the resulting foreseeable problems of demarcation, the visiting frequency is used most frequently as the sole criterion to identify regular customers.

Because this indicator taken by itself does not provide any information on the important circumstance of *where* customers spend most of their money, this study will record in addition the store in which customers acquire the greater part of their weekly food requirements. This circumstance will be registered with the indicator '*Buying focus* ( $y_2$ )'.

In order to acquire knowledge of consumers' selection behaviour the items from the retail company in the study were subdivided first of all into ten product groups. These consisted of three groups of goods from the fresh food sector and seven groups of goods from the dry foods range. The indicator '*Number of goods groups* ( $y_3$ )' provides information on *how many* of the goods groups offered were actually demanded, i.e. how great is the product range cover for each customer.

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4 In the first measuring model (see Fig. 1) this indicator is designated with  $y_1$  and with  $x_4$  in the second, third and fourth measuring model (see, Fig. 2, Fig. 3, and Fig. 4).

### 2.2.3. Operationalizing Performance

The objective of binding customers to a company is usually linked with the intention of bringing about a positive effect on the company's profits. In this study, measuring potential effects on profits is carried out using indicators that were calculated from the shopping basket information from the customers who were surveyed. Indicators of this type, which on the one hand provide an indication of sales and turnover-related performance, can be of special interest to companies. On the other hand the model takes account of indicators with which profit-oriented performance can be measured. The indicators '*Number of items per cash register slip ( $y_4$ )*' and '*Cash register slip turnover ( $y_5$ )*' were taken into account for the first case of sales and turnover-oriented performance measurement. For the second case of profit-related performance measurement the '*Cover contribution per cash register slip ( $y_6$ )*' was included.

Indicators for  
performance



### 3. Hypothesis Development

With regard to the construct 'brand loyalty' there is an initial examination as to whether there is a connection in the present data between the attitude and the behavioural component. Not only the empirical studies that were shown in Section 2., whose home base is business administration literature, but also studies from bordering academic areas (for an overview of these theories see, e.g., Frey and Irle 1993), point to the, in the end evident, perception that customers with a positive (negative) attitude to a product will frequently (seldom) buy this product. It is therefore to be assumed that there is a connection between the *attitude component* and the *behavioural component*. The following hypothesis is to be examined in the course of the study.

Connection between attitude and behaviour

*Hypothesis 1: The attitude component has a positive effect on the behavioural component.*

In order to obtain information on whether the assumed connection may possibly be found in the data record, the registered characteristics were examined in the framework of a characteristics cluster to see whether distinctive features appear with regard to the attitude and the behavioural component. With regard to hypothesis 1 the following would then have to apply: "the higher the characteristics attributes of the attitude component, the more frequent is the 'buying frequency of the store brand'".

The characteristics attributes (high characteristics attributes with 'brand-loyal customers'; low characteristics attributes with 'non-brand-loyal customers') in Table 1 provide an initial indication that the presumed relationship connection can be verified in the framework of a confirmatory review as well.

Exploration of data

Table 1: Explorative analysis of brand loyalty

Cluster designation	Attitude component			Behavioural component	Cluster size
	Brand awareness	Familiarity of the store brand	Satisfaction with the store brand	Buying frequency of the store brand	
'Brand-loyal customers'	1.98	1.31	0.58	3.52	143
'Non-brand-loyal customers'	1.51	0.23	0.00	1.06	157
Sign. level (U-test)*	0.001	0.000	0.000	0.000	n=300
Range R	4	2	1	4	

\*U-test according to Mann-Whitney: with the given significance level the mean values show different mean values in the parent population.

Change of attitude	The launch of the store brand that was studied here was accompanied by a distinguishing campaign aimed at increasing the 'Familiarity of the store brand', 'brand awareness' when buying meat and the 'satisfaction with the store brand'.
External stimulus	POS advertising was intensified during the campaign, the flyer was redesigned and the brand placed in a block. In addition, the fact that this brand belonged to the store was pointed out. Customers were to be positively influenced by these measures in the cognitive phase of the buying decision.
Change of behaviour	If hypothesis 1 were to prove itself, the ' <i>buying frequency of the store brand</i> ' and with this the sales <i>performance</i> could be controlled by specific measures (such as, e.g., advertising) that should have a positive effect on the attitude to the store brand. The following potential changes are to be examined with regard to the operationalization of the attitude component shown here:  <i>Hypothesis 2: The advertising campaign increases 'Familiarity of the store brand'.</i>  <i>Hypothesis 3: The advertising campaign increases 'brand awareness' for buying meat products.</i>

*Hypothesis 4: The advertising campaign increases the 'satisfaction with the store brand'.*

The above-mentioned communication policy measures were not employed until after a specific time-lag after the actual roll-out of the store brand. Because of this circumstance it was possible to register potential attitude and behaviour changes between  $t_1$  (before the campaign) and  $t_2$  (after the campaign).

The following developments are conceivable with regard to the direct sales performance of the store brand (Table 2):

Table 2: Effects of the advertising campaign

	<b>Change between <math>t_1</math> and <math>t_2</math></b>	<b>Evaluation of the advertising campaign</b>
<b>Case 1</b>	The effect of the attitude on behaviour <b>remains the same.</b>	Stimulus has no effect
<b>Case 2</b>	The effect of the attitude on behaviour <b>increases</b>	Stimulus has positive effect
<b>Case 3</b>	The effect of the attitude on behaviour <b>decreases.</b>	Stimulus has negative effect

A positive effect on the sales success can be expected if the influence of the attitude on the behavioural component develops as in case 2:

*Hypothesis 5: The influence of the attitude on the behavioural component increases between  $t_1$  and  $t_2$ . )*

With the subsequent analysis of the relationship field between the constructs 'brand loyalty' and 'store loyalty' (cf. research question 2) the important question for the trading companies is to be answered, namely whether customers can possibly be bound to a store with a store brand. In the constructed analysis model the above-mentioned effect can be expected if a positive relationship between the constructs 'brand loyalty and store loyalty' can be verified. The assumed relationship appears to be plausible not at least because of the fact that store brands can only be asked for in the stores belonging to the retail company concerned, and customers 'inevitably' have to go to this retail company's stores to buy the store brand. The assumed relationship connection is to be examined with the following hypothesis:

Connection between brand loyalty and store loyalty

*Hypothesis 6: The greater the 'brand loyalty' the greater the 'store loyalty'.*

The exploration of the characteristics concerned shows that indications can be found in the data record that the relationship connection postulated just now can be verified in the case under observation as well (Table 3): the contrast of the cluster of 'non-brand-loyal customers' and 'brand-loyal customers' with the indicators with which store loyalty was operationalized shows that brand-loyal customers have significantly greater characteristic attributes than 'non-brand-loyal customers' with regard to the indicators 'visit frequency', 'buying frequency' and 'number of goods groups demanded'.

Table 3: Relationship between brand loyalty and store loyalty

Indicators of store loyalty	Cluster		Sign. level (U-test)*
	'Brand-loyal customers'	'Non-brand-loyal customers'	
Visiting frequency	3.62	2.96	0.000
Buying focus	0.70	0.44	0.000
Number of goods groups	7.58	6.09	0.000
*U-test according to Mann-Whitney: with the given significance level the mean values show different mean values in the parent population.			

Discussion about direction of the effect

However, at this time it is also conceivable that the direction of the effect could also run in the other direction. In order to obtain clarity about the postulated direction of the effect the customers were asked whether the newly launched store brand is a reason for the visit to the stores in the survey. The evaluation of the question showed that with the increasing establishment of the store brand this is regarded increasingly as a reason for visiting the store. For example, in the period under observation the proportion of customers doubled who saw in the store brand an important to very important reason for buying ( $t_1 = 10.2\%$ ;  $t_2 = 20.8\%$ ). In the same period the proportion of customers who did not regard the store brand as a material reason for buying fell from  $80.6\%$  to  $56.6\%$ . The characteristic changes between  $t_1$  and  $t_2$  are highly significant with  $\alpha = 0.002$ .

If hypothesis 6 stood up to an investigation, with regard to research question 3 an examination could then be carried out as to how 'brand loyalty and store loyalty' affect the customer's performance.

The statements in the literature on the performance potentials of 'brand and store loyalty' are not very precise. While a positive effect of brand and store loyalty on performance is generally assumed, concrete measuring indicators for performance are not usually reported. In the case examined the performance indicators presented in Section 2.3 are included and placed in a relative connection with the constructs that have already been referred to:

Connection between brand loyalty, store loyalty and performance

*Hypothesis 7: The greater the brand loyalty and the store loyalty the greater the performance.*



## 4. Method

In the framework of an oral survey 307 customers of a chain store were questioned on their purchasing behaviour with regard to meat products. This sector is particularly suitable for the present analysis for two reasons: firstly, a large number of articles of a premium store brand were introduced new in this category. It is therefore to be expected that the product launch will trigger changes to both attitude and behaviour in the customers. Secondly, a high level of involvement is to be expected from customers in this sensitive goods sector. This means that attitude and behaviour changes will probably appear more clearly than in other food categories.

Oral survey of 307 customers

The selection of the indicators that were to be taken into account took place with the aim of solving the discussed operationalizing problems. With 300 customers it was possible to record the characteristics that were of interest uniformly and use them for further analysis. This method should guarantee that possible location-specific characteristics (e.g. the accessibility of the store) did not affect the results of the study. In order to be able to show changes with regard to the characteristics that were relevant to the study the retail company's customers were surveyed in two waves, namely in week 48 in the year 2002 ( $t_1$ ) and in week 5 of the year 2003 ( $t_2$ ).

Along with the information from the consumer survey the shopping baskets of the customers in the survey were recorded in the second survey wave. In this way it was possible to link the information from the customer survey with the captured shopping basket data.

## 5. Results

Investigating hypothesis with Lisrel 8.54

LISREL, Version 8.54, was chosen as a further method for investigating this hypothesis. Because the majority of the indicators in the database used infringe the standard deviation assumption, the model evaluations were carried out with the help of the ULS evaluation method.

Hypotheses 1-7 are investigated with the help of four causal models. The assessment of the model quality is carried out on the basis of the global and detail criteria that are standard for these investigations (cf. Table A-1 to Table A-4 in the tables section).

The global criteria for evaluating the model that are used to investigate hypotheses 1-5 (cf. Fig. 1) indicate a very good explanation of the fundamental covariance matrix through the model. In total, very good values ( $t_1$ : GFI = 1.00; AGFI = 1.00; CFI = 1.00; RMR = 0.00486 and  $t_2$ : GFI = 1.00; AGFI = 0.99; CFI = 1.00; RMR = 0.00836), which are clearly within the limits reproduced in the literature, can be ascertained with the global quality dimensions (Baumgartner and Homburg 1996; Bagozzi and Yi 1988). All paths, both the paths between the indicators and the constructs and the paths between the constructs, show highly significant attributes.

Analysis: attitude and behaviour

*Hypothesis 1*, which assumes a positive relationship between the attitude and the behavioural component of brand loyalty, can be confirmed through the results ( $t_1$ :  $\gamma_1 = 0.96$  with t-value = 5.33;  $t_2$ :  $\gamma_1 = 0.87$  with t-value = 5.33). However, in the cohort comparison the influence of the attitude on the behavioural component is reduced.

Confirmation of hypothesis

*Hypothesis 2* postulates an increase of the 'familiarity of the store brand' through the advertising campaign. Here the model also indicates a slight increase between  $t_1$  and  $t_2$  ( $t_1$ :  $\lambda_1 = 0.75$  with t-value = 5.19;  $t_2$ :  $\lambda_1 = 0.77$  with t-value = 5.10).<sup>5</sup>

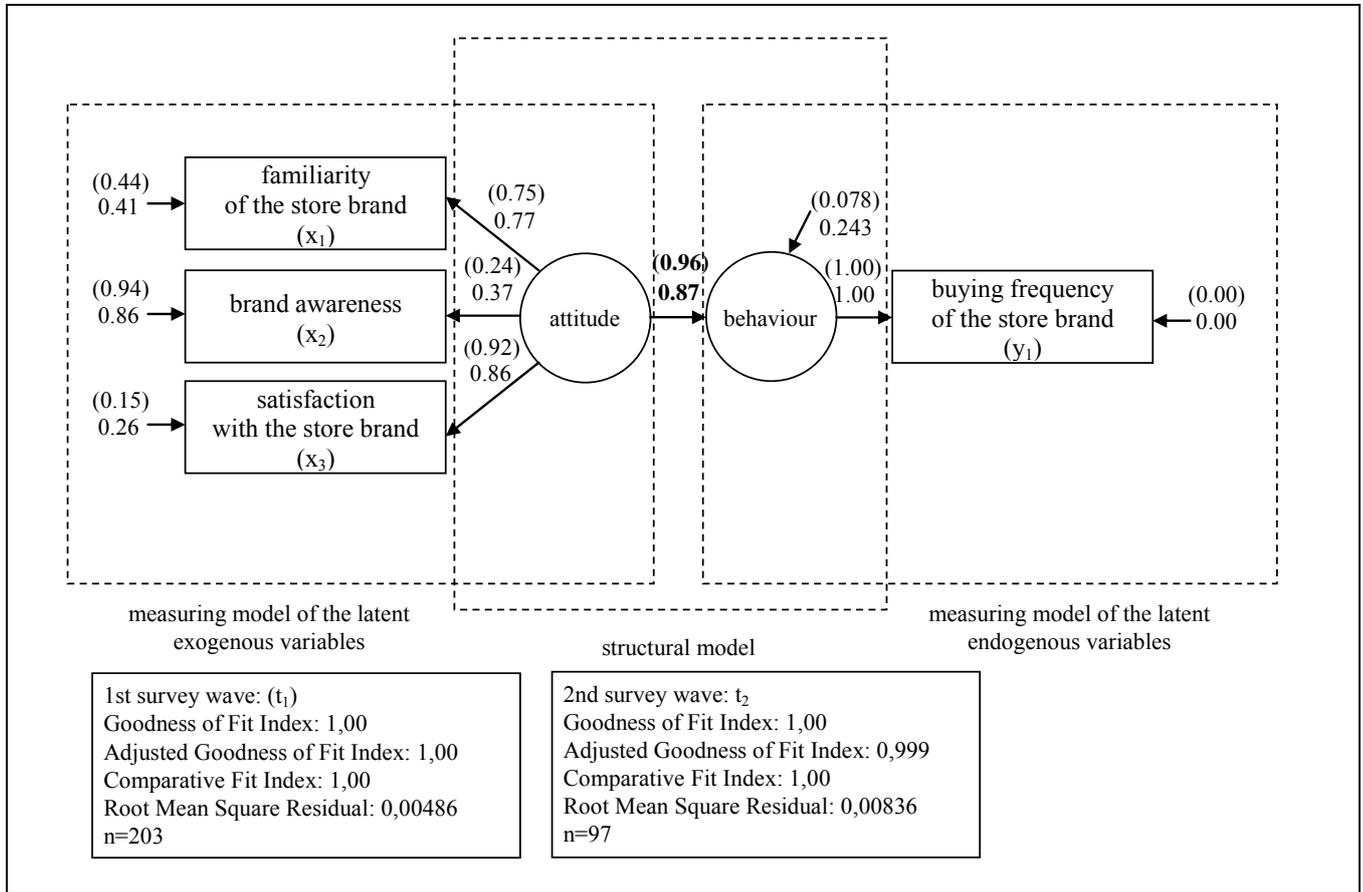
*Hypothesis 3* assumes that 'brand awareness' has increased through the external stimulus 'advertising campaign'. The values indicate that this assumption can be confirmed as well ( $t_1$ :  $\lambda_2 = 0.24$  with t-value = 4.69;  $t_2$ :  $\lambda_2 = 0.37$  with t-value = 5.10). However, it must be noted that the strength of the relationship connection, in spite of an increase, is not very pronounced. The 'brand awareness' therefore contributes only conditionally to explaining the construct 'brand loyalty'. The low

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<sup>5</sup> For  $x_1$  the U-test from Mann-Whitney, with  $\alpha = 0.003$ , results in a highly significant characteristic change between  $t_1$  and  $t_2$ .

explanation content of the 'brand awareness ' indicates that in the case of buying meat products buying a specific 'brand' does not possess a very high relevance.<sup>6</sup>

Fig. 1: Attitude and behavioural component of 'brand loyalty'



*Hypothesis 4* assumes an increase in 'satisfaction with the store brand' through the advertising campaign. However, the results confirm a decrease in the strength of the relationship connection of  $t_1$  to  $t_2$  ( $t_1$ :  $\lambda_3 = 0.92$  with t-value = 4.34;  $t_2$ :  $\lambda_3 = 0.86$  with t-value = 3.39). *Hypothesis 4* is rejected because of this development.

A material objective of the advertising campaign was achieved, namely, to increase the 'awareness of the store brand' and to strengthen customers 'brand awareness' when buying meat products. At the same time the findings show that the influence of the attitude on buying behaviour has declined. In the framework of this consideration of the model the greater influence of cognitive elements of the attitude leads less often to a purchase of the store brand. *Hypothesis 5* was

Objectives of advertising campaign reached

<sup>6</sup> For  $x_2$  the U-test from Mann-Whitney, with  $\alpha = 0.029$ , results in a significant characteristic change between  $t_1$  and  $t_2$ .

therefore rejected. The objective of increasing sales performance by controlling the attitude was therefore not possible to achieve through the advertising drive.

A reason for this development, even if it is possibly a negligible one, can be suspected in the (slight) decrease in the influence of the affective-evaluative attitude component ('satisfaction with the store brand') in the course of time (cf. the  $\lambda_3$  values).<sup>7</sup> However, because the absolute level of the characteristic attribute of this indicator points to an overall high level of satisfaction, the reasons for the decreasing 'satisfaction' are certainly to be looked for at positions that, in certain circumstances are not covered by the model. The increase of the  $\zeta$  value between  $t_1$  and  $t_2$  ( $\zeta_1 = 0.0078$ ;  $\zeta_2 = 0.243$ ) indicates that the described decrease in influence can be attributed to 'external' causes. It can, e.g., be presumed that the customers of the retail company increasingly regarded other product characteristics as decisive for the purchase. Against the background of the increasing competition situation in Germany many trading companies use the price and not the quality as the convincing sales argument. One consequence is that from the point of the consumers the price competitiveness of articles is gaining relevance.

Pricing as a reason for decreasing satisfaction with product?

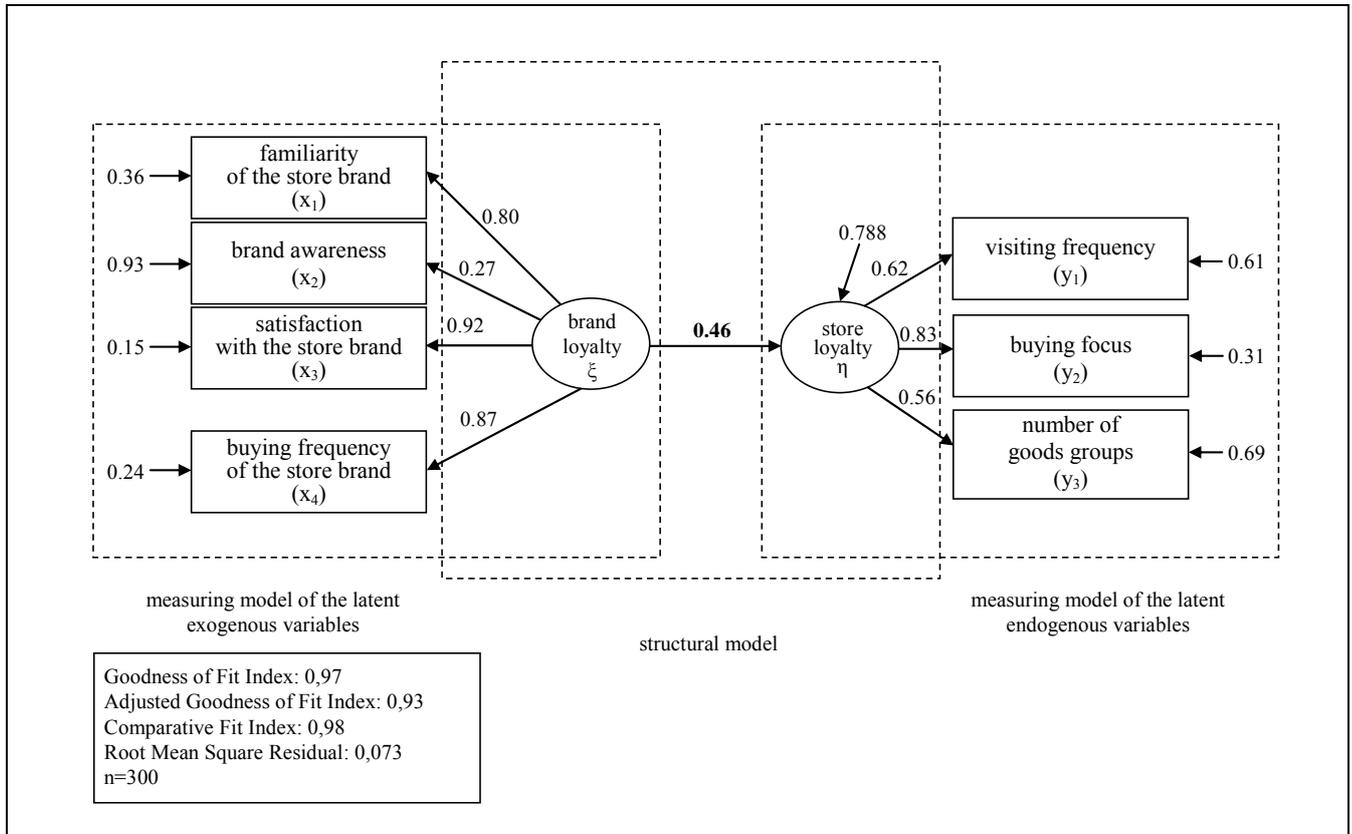
Analysis:  
brand loyalty and store  
loyalty

The analysis of the relationship connection between the constructs brand and store loyalty (cf. hypothesis 6) is investigated with the following structural equation model (Fig. 2). The analysis is no longer carried out in two parts ( $t_1$  and  $t_2$ ), because this subdivision is not important for investigating hypothesis 6.

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<sup>7</sup> However, for  $x_3$  the U-test from Mann-Whitney, with  $\alpha = 0.67$ , does not result in any significant characteristic change between  $t_1$  and  $t_2$ .

Fig. 2: Relationship between brand loyalty and store loyalty



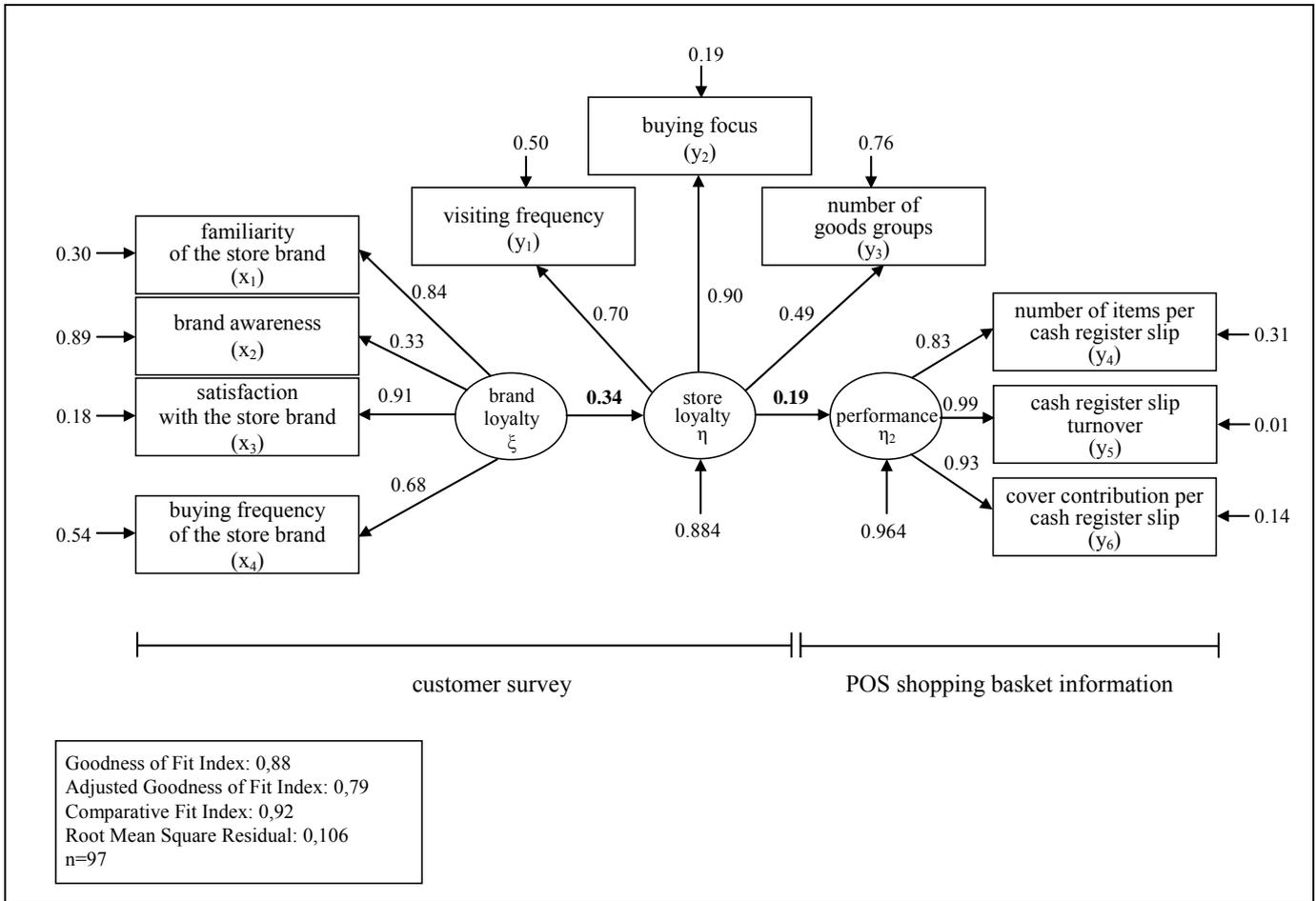
The model's global quality criteria indicate a good to very good explanation of the fundamental covariance matrix (GFI = 0.97; AGFI = 0.93; CFI = 0.98; RMSEA = 0.073). The paths between the indicators and the constructs and between the constructs show highly significant attributes. *Hypothesis 6*, which assumes a positive connection between 'brand loyalty' and 'store loyalty', can be confirmed ( $\gamma_1 = 0.46$  with t-value = 5.87;  $\zeta$ -value: 0.788). The strong connection between the constructs should be particularly acknowledged. Empirical studies show that a great number of different determinants for the choice of store can be relevant (Korgaonkar/Lund/Price 1985; Mazursky and Jacoby 1986; Osman 1993; Bloemer and Ruyter 1998; Sivadas and Baker-Prewitt 2000). These are then 'in competition' with the determinant 'store brand'.

Confirmation of hypothesis

The third model looks at the performance potentials of brand and store loyalty (cf. hypothesis 7). In the framework of this consideration the constructs that have already been examined are linked with the performance indicators that are calculated from the shopping baskets of the customers in the survey registered at the POS (Fig. 3).

Analysis: brand loyalty, store loyalty and performance

Fig. 3: Relationship between brand loyalty, store loyalty and performance I



Hypothesis confirmed

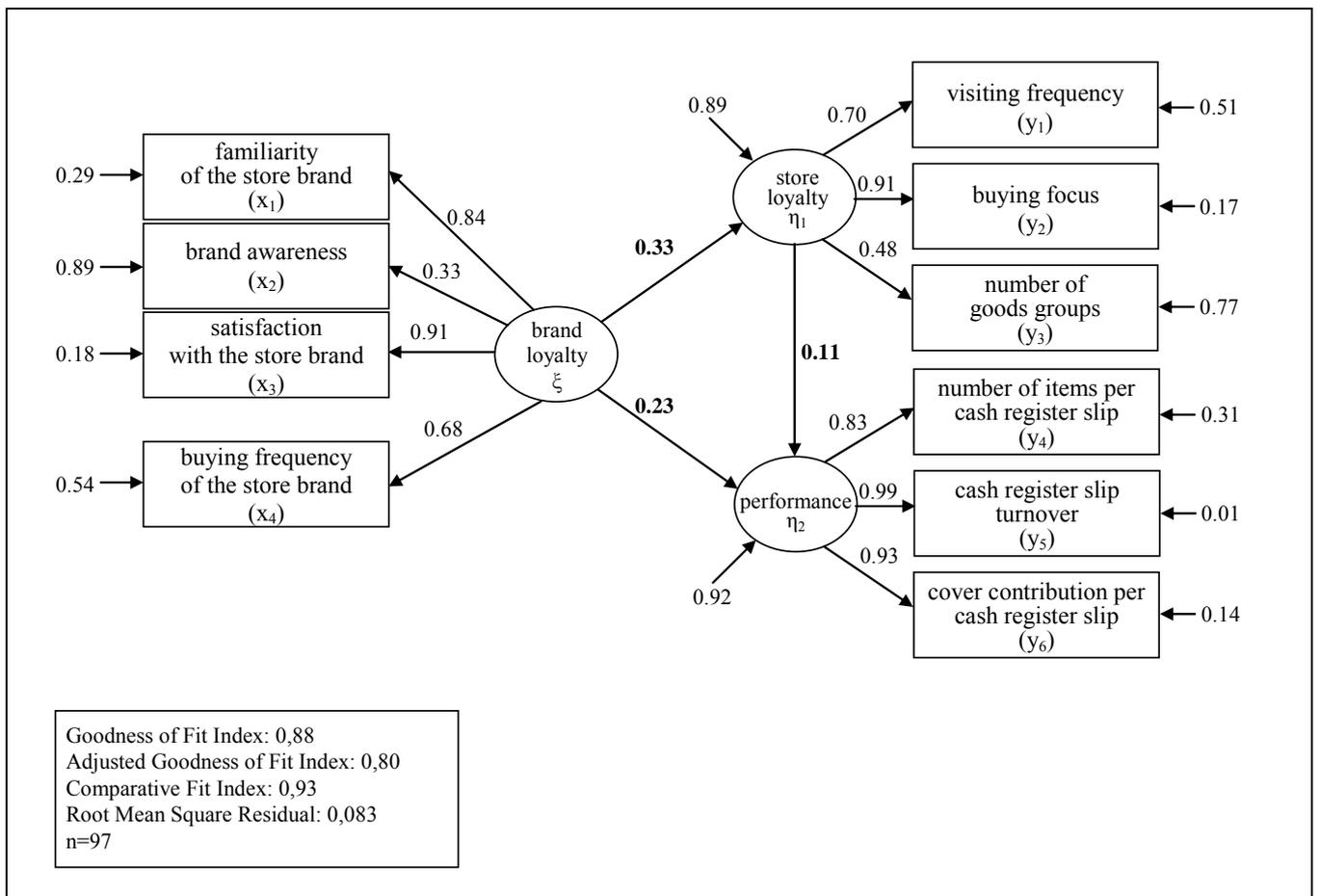
The model (GFI = 0.88; AGFI = 0.79; CFI = 0.92; RMSEA = 0.106) confirms the assumed relationship connection between 'brand and store loyalty' and performance. All paths, both the paths between the indicators and the constructs and those between the constructs, show significant attributes. *Hypothesis 7* is to be designated as a proven statement. In comparison with the previous model the results of the estimate show a less pronounced but still very high and significant causal effect of brand loyalty on store loyalty ( $\gamma_1 = 0.34$  with t-value = 2.75). The high  $\zeta_1$  value 0.884 makes clear that store loyalty is influenced by additional determinants. The connection between store loyalty and performance is positive and significant ( $\gamma_2 = 0.19$  with t-value = 2.77;  $\zeta_2$ -value: 0.964). If it is taken into account that the indicators for performance refer to the period of one week, it must be acknowledged in particular that positive effects on performance could be verified even in this short period. The not very great development of this effect can possibly be explained as well by the fact that the store brand was placed in a segment of the product range in which buying a 'brand' has up to now played a

subordinate role. The customer group that is possibly prepared to pay higher prices for a specific 'brand' when buying food is certainly present but is not very large.

A further model (cf. Fig. 4) provides greater insight into the discussed effective relationships between the constructs 'brand loyalty', 'store loyalty' and 'performance'. This model maps not only the relationship connection 'brand loyalty → store loyalty → performance' that has already been examined; how heavily performance depends on brand-loyal customers ('brand loyalty → performance') can also be examined.

Deeper insight into discussed relationships

Fig. 4: Relationship between brand loyalty, store loyalty and performance II



The positive connection between the constructs 'brand loyalty' and 'store loyalty' is again confirmed by this model ( $\gamma_{11} = 0.33$  with t-value = 2.62). In addition, a positive and significant relationship connection between 'brand loyalty' and 'performance' can be verified ( $\gamma_{21} = 0.23$  with t-value = 2.01). This connection is stronger than the relation between the constructs 'store loyalty' and 'performance'

( $\beta_1 = 0.11$  with  $t$ -value = 0.95). Positive effects of 'brand loyalty' on both 'store loyalty' and on 'performance' are confirmed by this model.

## 6. Discussion

### 6.1. Research Issues

Causal relationship proved for the first time

Although the literature again and again points to the performance potentials of brand loyalty and store loyalty there have not yet been any empirical studies that attempt to verify this type of connection in individual cases. With the present study it was possible to make a causal connection between the constructs brand loyalty, store loyalty and performance.

Comprehensive operationalization of constructs

With regard to *research question 1* the model takes account of cognitive, affective-evaluative and conative elements to explain 'brand loyalty'. In the light of this differentiated view it was possible to explain the circumstance that buying a specific 'brand' in the meat products segment has only slight relevance. In addition, the study shows that while intensive advertising efforts exercise a positive effect on the attitude component they did not have an effect on the buying behaviour of the customers in the survey. Not at least because of the great satisfaction, on the whole, with the store brand the question arises whether other, in the first place attitude-induced causes (such as, e.g., the non-availability of goods, competition through low-priced self-service goods) are relevant for the decrease in 'satisfaction'.

Binding potentials of (premium) store brands

With regard to *research question 2* the following findings can be summarised: the connection between brand and store loyalty that is assumed in the literature but has not yet been verified was verified in the framework of this model. In view of the fact that the choice of store by consumers does not depend solely on the brand loyalty that is taken into account in the model but is also influenced by other factors, such as, e.g., the accessibility of a store, the relatively strong connection between brand and store loyalty must be particularly acknowledged:

A not inconsiderable binding potential appears to emanate from (premium) store brands.

Positive effect on company performance

The question whether performance is influenced by brand and store loyalty, which is arguably decisive for companies, was answered with the last two causal models

(cf. *research question 3*). In these models the constructs referred to were placed in a relationship connection. The findings show that a positive effect on company performance can certainly be expected if customers can be bound to a company through a (premium store) brand.

In a general overview the findings support the approach of many trading companies of binding customers to their company through the placing of premium store brands in order to bring about a positive effect on performance.

## 6.2. Limitations and Managerial Implications

The presented study can still be developed in some points. For example, in order to examine the question of which factors influence the connection between brand loyalty and store loyalty, there should be an investigation of *which* customer groups in particular were reached through the newly launched premium store brand. It could then be examined whether an effect on the company's performance depends possibly on which customer groups are addressed through the store brand. In a previously unpublished empirical study an attempt is made to answer these questions as well.

Customer group-specific analysis

Furthermore, cohort examinations with POS data could represent a very promising opportunity to arrive at a deeper insight into the relationship network brand loyalty, store loyalty and performance. This present study provides initial support for the design of studies of this nature.

Deeper insights with cohort examination of POS data

## 7. Tables

Table A-1: Global and detail criteria for the model "Attitude and behavioural components of brand loyalty"											
1. Global criteria											
GFI	=	1.00 (t <sub>1</sub> ); 1.00 (t <sub>2</sub> )	8 (t <sub>1</sub> ) < 10 (t* <sub>1</sub> ); 8 (t <sub>1</sub> ) < 10 (t* <sub>1</sub> )								
AGFI	=	1.00 (t <sub>1</sub> ); 0.999 (t <sub>2</sub> )	$\chi^2 = 1,21$ (t <sub>1</sub> ); $\chi^2 = 1.69$ (t <sub>2</sub> )								
CFI	=	1.00 (t <sub>1</sub> ); 1.00 (t <sub>2</sub> )	df = 2 (t <sub>1</sub> ); df = 2 (t <sub>2</sub> );								
RMR	=	0.005 (t <sub>1</sub> ); 0.008 (t <sub>2</sub> )	$\chi^2/df = 0.65$ (t <sub>1</sub> ); $\chi^2/df = 0.84$ (t <sub>2</sub> )								
2. Detail criteria											
Construct	Indicator	Indicator Reliability		Convergent Validity				Discriminant Validity			
				Mean recorded Variance		Construct Reliability					
		$\rho_x > 0.4$ $\rho_y > 0.4$		$\rho_v > 0.5$		$\rho_c > 0.6$		$\rho_v > R^2_{ij}$			
		t <sub>1</sub>	t <sub>2</sub>	t <sub>1</sub>	t <sub>2</sub>	t <sub>1</sub>	t <sub>2</sub>	t <sub>1</sub>	t <sub>2</sub>		
$\xi$	x <sub>1</sub>	0.56	0.59	0.49	0.49	0.70	0.72	0.49<0.9216	0.49<0.7569		
	x <sub>2</sub>	0.06	0.14								
	x <sub>3</sub>	0.85	0.74								

Table A-2: Global and detail criteria for the model "Brand Loyalty and store loyalty"											
1. Global criteria											
GFI	=	0.97	10 (t) < 23 (t*)								
AGFI	=	0.93	$\chi^2 = 33,94$								
CFI	=	0.98	df = 13								
RMR	=	0.073	$\chi^2/df = 2,61$								
2. Detail criteria											
Construct	Indicator	Indicator Reliability		Convergent Validity				Discriminant Validity			
				Mean recorded Variance		Construct Reliability					
		$\rho_x > 0.4$ $\rho_y > 0.4$		$\rho_v > 0.5$		$\rho_c > 0.6$		$\rho_v > R^2_{ij}$			
$\xi$	x <sub>1</sub>	0.64	0.58	0.83	0.58>0.2116						
	x <sub>2</sub>	0.07									
	x <sub>3</sub>	0.85									
	x <sub>4</sub>	0.76									
$\eta$	y <sub>1</sub>	0.39	0.46	0.72	0.46>0.2116						
	y <sub>2</sub>	0.69									
	y <sub>3</sub>	0.31									

<b>Table A-3: Global and detail criteria for the model "Brand loyalty, store loyalty and performance I"</b>					
<b>1. Global criteria</b>					
GFI = 0.88			22 (t) < 55 (t*)		
AGFI = 0.79			$\chi^2 = 69,92$		
CFI = 0.92			df = 33		
RMR = 0.106			$\chi^2/df = 2,12$		
<b>2. Detail criteria</b>					
Con-struct	Indi-cator	Indicator Reliability	Convergent Validity		Discriminant Validity
			Mean recorded Variance	Construct Reliability	
		$\rho_x > 0.4$ $\rho_y > 0.4$	$\rho_v > 0.5$	$\rho_c > 0.6$	$\rho_v > R^2_{ij}$
$\xi$	x <sub>1</sub>	0.70	0.52	0.80	0.52>0.1156
	x <sub>2</sub>	0.11			
	x <sub>3</sub>	0.82			
	x <sub>4</sub>	0.46			
$\eta_1$	y <sub>1</sub>	0.49	0.51	0.75	0.51>0.1156
	y <sub>2</sub>	0.81			
	y <sub>3</sub>	0.24			
$\eta_2$	y <sub>4</sub>	0.69	0.85	0.94	0.85>0.0361
	y <sub>5</sub>	0.99			
	y <sub>6</sub>	0.86			

<b>Table A-4: Global and detail criteria for the model "Brand loyalty, store loyalty and performance II"</b>					
<b>1. Global criteria</b>					
GFI = 0.88			23 (t) < 55 (t*)		
AGFI = 0.80			$\chi^2 = 65,14$		
CFI = 0.93			df = 32		
RMR = 0.083			$\chi^2/df = 2,04$		
<b>2. Detail criteria</b>					
Construct	Indi-cator	Indicator Reliability	Convergent Validity		Discriminant Validity
			Mean recorded Variance	Construct Reliability	
		$\rho_x > 0.4$ $\rho_y > 0.4$	$\rho_v > 0.5$	$\rho_c > 0.6$	$\rho_v > R^2_{ij}$
$\xi$	x <sub>1</sub>	0.71	0.53	0.80	0.52>0.1156
	x <sub>2</sub>	0.11			
	x <sub>3</sub>	0.82			
	x <sub>4</sub>	0.46			
$\eta_1$	y <sub>1</sub>	0.49	0.52	0.75	0.51>0.1156
	y <sub>2</sub>	0.83			
	y <sub>3</sub>	0.23			
$\eta_2$	y <sub>4</sub>	0.69	0.85	0.94	0.85>0.0361
	y <sub>5</sub>	0.99			
	y <sub>6</sub>	0.86			



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