EXPLAINING BRAND LOYALTY, DEALER SALES LOYALTY AND DEALER AFTER-SALES LOYALTY: THE INFLUENCE OF SATISFACTION WITH THE CAR, SATISFACTION WITH THE SALES SERVICE AND SATISFACTION WITH THE AFTER-SALES SERVICE

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ABSTRACT

Building on previous research concerning brand and dealer loyalty, this study combines three satisfaction variables - satisfaction with the car, satisfaction with the sales service provided by the dealer, and satisfaction with the after-sales service of the dealer- with the three corresponding loyalty concepts. We examine whether the relationship between satisfaction and loyalty exists, which kind of satisfaction influences which kind of loyalty and how the different types of loyalty influence each other. From our study, it can be concluded that satisfaction is an important determinant of loyalty. In general one may say that the corresponding types of satisfaction (brand, sales and after-sales) predominantly determine different types of loyalty (brand, sales and after-sales). Furthermore, the different types of loyalty seem to be interdependent.

INTRODUCTION

In times of severe competition and rising customer expectations, firms are more than ever interested in keeping customers instead of attracting new ones (Heskett et al, 1994). Customer satisfaction becomes the main goal for many organizations, implicitly supposing a direct link to the final objectives like customer loyalty and profitability (Heskett et al., 1997). However, the proposed relationship between customer satisfaction and loyalty is far from obvious and still requires additional insights.

Building on previous research concerning brand and dealer loyalty (Bloemer and Lemmink, 1992), this study combines three satisfaction variables - satisfaction with the car, satisfaction with the sales service provided by the dealer, and satisfaction with the after-sales service of the dealer- with the three corresponding loyalty concepts. We examine whether the relationship between satisfaction and loyalty exists, which kind of satisfaction influences which kind of loyalty and how the different types of loyalty influence each other. It was expected that the direct influence of each type of satisfaction on the corresponding type of loyalty would be most important (e.g. satisfaction with the car leads to brand loyalty), but that also cross-relationships could be found. Furthermore, brand loyalty, dealer sales loyalty and dealer after-sales loyalty was supposed to have a recursive relationship: dealer sales loyalty and dealer after-sales loyalty determines brand loyalty and not the other way around.

First, we present a restricted review of the literature concerning consumer satisfaction and loyalty. Secondly, we formulate our hypotheses and introduce an initial model. The research design is discussed in the next part. For both brands included in the study, we provide analyses and develop an adapted model. Finally, we conclude with managerial implications, limitations and suggestions for further research.

BACKGROUND AND REVIEW OF LITERATURE

Nowadays, the literature contains many studies about brand loyalty and repeat purchasing behavior, but the customer antecedents that determine such behavior are rarely discussed. Only by means of these antecedents, one can distinguish brand loyalty from mere repeat purchasing. A review (Bloemer et al. 1990) reveals only a few satisfaction-loyalty studies. Newman & Werbel (1973) indicate that brand loyalty appears to vary directly with the satisfaction with the old brand, but a closer look learns that the correlation is not perfect. Not all satisfied customers will be brand loyal, while not every customer who is not fully satisfied will be non-loyal. Similar results are reported by LaBarbera & Mazursky (1983), Bearden & Teel (1983), Garfein (1987), Kasper (1988), Woodside et al (1989) and Oliver & Swan (1989). A

nationwide Swedish study (Fornell, 1992; Anderson et al, 1994) even found very low correlation's between customer satisfaction and loyalty for businesses like telecommunication, mail and insurances.

As indicated by Bloemer & Kasper (1995), most of the mentioned studies did not take into account the difference between repeat purchasing behavior and brand loyalty on the one hand and spurious and true brand loyalty on the other hand. When repeat purchasing behavior is studied, the focus is solely on behavior. When brand loyalty is studied the focus should be not only on the behavior but it should be as well on the attitudinal part of that behavior. Moreover, when brand loyalty is studied a distinction should be made between true and spurious brand loyalty. True brand loyalty is the repurchase of a brand based on commitment, whereas spurious brand loyalty is the repurchase of a brand not based on commitment but instead on inertia. In our research, we focus on the degree of true brand loyalty, assuming that there is a continuum between spurious and true brand loyalty based on the degree on commitment involved, and taking into account both the behavioral and the attitudinal part of loyalty.

The inter-relationship between brand loyalty and store loyalty has been the subject of a number of studies, from which it can be concluded that store loyalty is an intervening variable between satisfaction with the brand and brand loyalty (e.g. Cunningham 1956, 1961; Carman 1970; Tranberg & Hansen 1986, Bloemer et al. 1990; Bloemer and Lemmink 1992).

MODEL AND HYPOTHESES

We expand the simple model of Bloemer & Lemmink (1992) that investigated the relations between 4 constructs: satisfaction with product, satisfaction with service (sales and after-sales), (intended) brand loyalty and (intended) dealer loyalty. Our study relates satisfaction with the car (SC), satisfaction with the sales service of the dealer (SS) and satisfaction with the after-sales service (SA) to brand loyalty (BL), dealer sales loyalty (DSL) and dealer after-sales loyalty (DAL). The distinction between the sales and after-sales loyalty is important from the individual dealer's point of view. First of all, the stream of revenues created by maintenance and repair is quite different from the profit on a one-time sale. Furthermore, a customer may have different perceptions of the sales service of the dealer (information exchange, negotiations, respectation of delivery time) and the after-sales service (repairs, payment facilities, reachability).

It might be expected that satisfaction with the car is a major positive determinant of brand loyalty. Because customers are likely to impute the satisfaction with the car to the brand. In analogy, we expect that satisfaction with the sales service is a major positive determinant of dealer sales loyalty, and that satisfaction with the after-sales service is a major positive determinant of dealer after-sales loyalty. Furthermore, interrelations between the satisfaction and the loyalty concepts might exist. For instance, satisfaction with the sales service of the dealer is likely to enhance consumer commitment towards the brand, and thus brand loyalty.

Additionally, we assume a direct positive link between dealer sales loyalty and dealer after-sales loyalty. Customers who are loyal to the dealer's after-sales service, will continue to stay in regular contact (preventive check-ups, maintenance and repair require at least bringing and picking up the car). When these customers decide to buy a new car, they are likely to consider the offer of their current dealer. Moreover, in the Dutch automobile industry it is normal practice for dealers to represent one brand only. Therefore, the customer who is loyal to the sales service of the dealer is expected to be brand loyal as well.

By the same rationale, we assume a direct positive link between dealer after-sales loyalty and brand loyalty. Since the Dutch dealer specializes in one brand, customers who want to stay loyal to the after-sales service are likely to buy the same brand of car.

Furthermore, based on the literature from the store loyalty domain, we expect that dealer sales loyalty has a direct positive link to brand loyalty. The rationale here is that especially in the Dutch automobile industry those who are loyal to their dealer are in fact, almost always, loyal to their brand also.

Moreover, based on Bloemer and Lemmink (1992), and the literature on store loyalty we expect dealer after-sales loyalty and dealer sales

loyalty to be intervening variables in the relationship between the different satisfaction concepts and brand loyalty. This means that we suppose that store loyalty leads to brand loyalty and not the other way around.

Based on the above argumentation, we formulate the following hypotheses:

H1 - Satisfaction with the car is compared with dealer sales satisfaction and dealer after-sales satisfaction the most important positive determinant of brand loyalty.

H2 - Satisfaction with the sales service is compared with car satisfaction and dealer after-sales satisfaction the most important positive determinant of dealer sales loyalty.

H3 - Satisfaction with the after-sales service is compared with car satisfactions and dealer sales satisfaction the most important positive determinant of dealer after-sales loyalty.

H4 - Dealer sales loyalty and dealer after-sales loyalty are intervening variables between satisfaction with the car, satisfaction with the sales service, satisfaction with the after-sales service and brand loyalty.

H5 - Dealer after-sales loyalty is an intervening variable between satisfaction with the sales service, satisfaction with the after-sales service and dealer sales loyalty.

Figure 1 presents the resulting model.

RESEARCH DESIGN

The respondents in the empirical part of the study are customers of different automobile dealers (n= 407) of two related German brands in the Netherlands. These two brands belong to the same holding, and are therefore sold by the same dealer. However, brand B is generally regarded as more exclusive and expensive than brand A. The market shares of both brands differ remarkably: brand B has a smaller share than brand A. Because the respondents had to express their feelings about the sales service, the car had to be bought less than two years ago. Furthermore, the respondents had to have some experience with the after-sales service, which let us to impose a minimum of a one-year ownership. Previous research (Bloemer & Lemmink, 1992) found significant differences between new and used cars and between automobiles for private and for business use concerning the relationship between satisfaction and loyalty. In order to keep our study transparent, we concentrated on the new car for private use. In fact, the population for our study consists of Dutch customers, who bought a new car for private use from an official dealer of one of the two German brands between 1 and 2 years before the study. The RAI Datacentrum, where all the cars and their owners of the Netherlands are registrated, provided the necessary name and address data which enabled us to draw a random sample and reach the respondents.

In 1994, 1000 owners of each brand were contacted and asked to complete a mail questionnaire. The response rate was 30.8% (615/2000). Several respondents however did not qualify to the selection criteria mentioned earlier. Moreover, because aspects of sales service were taken into account, only respondents that had 'almost always' or 'always' used the after-sales service provided by the dealer that had sold the car, were included in the analysis. Four hundred and seven out of the 615 respondents (205 and 202 for brand A and brand B respectively), constituted the final research set.

We operationalized the loyalty variables of our model as the combination of a behavioral and an attitudinal component (Jacoby & Chesnut, 1978) in accordance to the definition of Bloemer and Kasper (1995).

Brand loyalty (BL) is measured as the likelihood of repeat purchase of the brand times the degree of brand commitment. The repeat purchase measure ranged from zero (no chance at all) to ten (absolutely certain). Brand commitment is measured with a 4-item validated Likert-type 4-point scale (see Appendix).

Dealer sales loyalty (DSL) is measured as the likelihood of repeat dealer sales times the degree of dealer sales commitment. The repeat purchase measure ranged from zero (no chance at all) to ten (absolutely certain). Dealer sales commitment is measured with a 4-item validated Likert-type 4-point scale (see Appendix).

Figure 1
Model of the Relationships Between Satisfaction and Loyalty

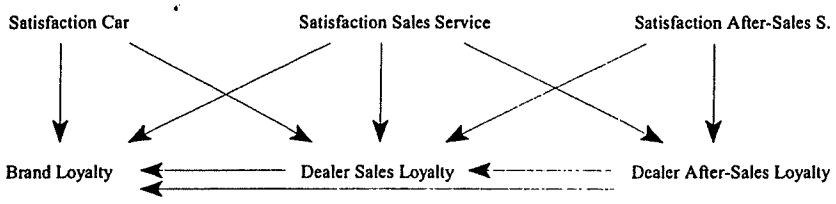


Table 1
Initial Analysis of the Variables (NS=Not Significant)
Bivariate Correlation Analysis Between Age and Loyalty Constructs

		BRAND A			BRAND B			
		Mean	Variance	N	Mean	Variance	N	Significance of difference
Satisfaction with the Car	(0 - 100 %)	91,55	93,90	200	89,90	155,04	202	NS
Likelihood of Repeat Purchase Brand	(0 - 10)	8,522	2,651	201	7,932	3,848	205	(P < 0,001)
Brand Commitment	(4 - 16)	13,39	4,39	202	13,02	5,50	205	NS
Brand Loyalty	(0 - 160)	115,44	969,67	201	105,64	1356,12	205	(P < 0,05)
Satisfaction with Sales Service	(0 - 100 %)	90,60	111,07	196	89,35	145,53	199	NS
Likelihood of Repeat Dealer	(3 - 10)	8,171	3,466	199	7,760	4,485	200	(P < 0,05)
Dealer Commitment Sales	(4 - 16)	12,74	5,63	202	12,57	5,31	205	NS
Dealer Sales Loyalty	(0 - 160)	105,95	1203,29	199	99,69	1335,21	200	NS
Satisfaction with After-Sales Service	(0 - 100%)	89,75	123,67	197	88,91	153,67	200	NS
Likelihood of Repeat After- Sales	(0 - 10)	9,565	0,870	200	9,525	1,541	204	NS
Dealer Commitment After-Sales	(3 - 12)	9,50	3,46	202	9,33	3,59	205	NS
Dealer After-Sales Loyalty	(0 - 120)	91,54	481,49	200	89,24	518,75	204	NS

Bivariate Correlation Analysis Between Age and Loyalty Constructs

	Brand Loyalty	Dealer Sales Loyalty	Dealer After-Sales Loyalty	Brand Loyalty	Dealer Sales Loyalty	Dealer After-Sales Loyalty
AGE	0,1614 (NS)	0,2640 (P < 0,001)	0,1598 (NS)	0,0489 (NS)	0,0424 (NS)	0,0214 (NS)

Dealer after-sales loyalty (DAL) is measured as the likelihood of repeat after-sales times the degree of dealer after-sales commitment. The repeat purchase measure ranged from zero (no chance at all) to ten (absolutely certain). Dealer after-sales commitment is measured with a 4-item validated Likert-type 4-point scale (see Appendix).

All respondents were asked what they would do in the future. In other words, only intentions are taken into account. Furthermore, the time perspective is not defined by the questions.

Satisfaction with the car (SC); satisfaction with the sales service (SS) and satisfaction with the after-sales service (SA): are measured with open-ended questions asking for the percentage of satisfaction for each.

INITIAL ANALYSIS

The initial analysis is presented in Table 1, which shows the means, variances, the significance of the difference between the scores for brand A

and brand B. It should be noticed that there is hardly any significant difference in the average scores for both brands. Exceptions are likelihood of repeat dealer sales, likelihood of repeat purchase brand and brand loyalty. Brand A shows higher scores than brand B for each of these variables.

ANALYSES FOR BRAND A

Table 2 contains an overview of the correlation coefficients between the satisfaction and the loyalty measures for brand A.

Table 2
Correlation Coefficients for Brand A Between Satisfaction Measures and Loyalty Measures

	SC	SS	SA	DSL	DAL
BL	0.51*	ns	ns	0.49*	0.26*
DSL	0.38*	0.41*	0.37*	-	0.40*
DAL	0.27*	0.30*	0.41*	0.40*	-

* Correlation coefficients significant at $P < 0.001$

High positive correlations exist for the direct links between each type of satisfaction and the corresponding type of loyalty. Also cross-relationships are demonstrated, like the positive relation between satisfaction with the after-sales service (SA) and dealer sales loyalty (DSL). Furthermore, interdependence between the different types of loyalty could be expected because of the high correlation coefficients.

In order to gain additional insight into the net contribution of the satisfaction measures with respect to the loyalty measures, we computed partial correlation coefficients (Table 3).

From Table 3 it can be seen that there is a significant positive partial correlation between the satisfaction with the car and brand loyalty. However, there is also a significant positive correlation between satisfaction with the car and both dealer sales loyalty and dealer after-sales loyalty. Nevertheless, these results are in agreement with our first hypothesis that the most important determinant of brand loyalty is the satisfaction with the car. The first hypothesis can be accepted. The same reasoning can be applied for satisfaction with the sales service and satisfaction with the after-sales service in relation to sales loyalty and after-sales loyalty respectively. Therefore, also hypotheses 2 and 3 can be confirmed.

Table 3
Partial Correlation Coefficients Between Loyalty Measures and Satisfaction Measures (Controlled for the Other Satisfaction Measures)

	SC	SS	SA
BL	0.52	-0.00	-0.11
DSL	0.26	0.23	0.07
DAL	0.11	0.06	0.25

In order to draw more definite conclusions, the general model as presented in Figure 1 with different proposed restrictions, will be tested.

General model

$$BL = ß11 + ß12\ DSL + ß13\ DAL + ß14\ SC + ß15\ SS + ß16\ SA + \epsilon 1$$

$$DSL = ß21 + ß22\ BL + ß23\ DAL + ß24\ SC + ß25\ SS + ß26\ SA + \epsilon 2$$

$$DAL = ß31 + ß32\ BL + ß33\ DSL + ß34\ SC + ß35\ SS + ß36\ SA + \epsilon 3$$

Model restriction number	Estimation method	Restrictions
1 DSL & DAL are mediating variables	Recursive system OLS	ß22,ß23 = 0 ß33 = 0
2 DAL does not explain BL SS & SA do not explain BL SA does not explain DSL mutual dependence between BL and DSL	Two-stage-least squares	ß13 = 0 ß15,ß16 = 0 ß26 = 0
3 SA does not explain DSL SS does not explain DAL BL does not explain DAL mutual dependence between DSL and DAL	Two-stage-least squares	ß26 = 0 ß35 = 0 ß32 = 0

As mentioned above, the first model we test presumes that dealer sales loyalty and dealer after-sales loyalty are seen as mediating concepts between the satisfaction measures and brand loyalty and that dealer after-sales loyalty is a mediating variable between satisfaction with the sales, after-sales service and dealer sales loyalty. This leads to the following restricted model formulation (model 1A):

Model 1A

BL = f (SC, SS, SA, DSL, DAL)
DSL = f (SC, SS, SA, DAL)
DAL = f (SC, SS, SA)

The results of the path analysis, on the basis of this model, are presented in Table 4.

Most of our earlier conclusions can be confirmed by this analysis. Satisfaction with the car is the most important determinant of brand loyalty, satisfaction with the sales service is the most important determinant of dealer sales loyalty and satisfaction with the after-sales service is the most important determinant of after-sales service. Furthermore, significant positive relationships are found between dealer sales loyalty and brand loyalty on the one hand and dealer after-sales loyalty and dealer sales loyalty on the other hand. However, the direction of the relationship between these concepts is not yet determined upon. The possibility of mutual dependence will be examined by means of the two-stage-least square method. The correlation between dealer after-sales loyalty and brand loyalty is not significant and will be therefore be discarded in further discussion.

Although the foregoing analysis did provide more insight into the data, the possible mutual relationships between the loyalty variables was not yet taken into account. In order to do so we may estimate the following models:

BL = f (SC, SS, SA, DSL, DAL)
DSL = f (SC, SS, SA, BL, DAL)
DAL = f (SC, SS, SA, BL, DSL)

However, this set of equations is over-identified (Johnston 1972, Naert & Leeflang 1978), hence the parameters could not be estimated. Because our previous analysis showed that satisfaction with the sales service, satisfaction with the after-sales service and dealer after-sales loyalty do not have a significant impact on brand loyalty and that the influence of satisfaction with the after-sales service on dealer sales loyalty is not-significant, we formulate an alternative model, which tests the interdependence between brand loyalty and dealer sales loyalty:

Model 2A

BL = f (SC, DSL)
DSL = f (SC, SS, BL, DAL)

Table 5 shows the estimated parameters for this model.

It can be concluded that satisfaction with the car has a positive impact on brand loyalty and that satisfaction with the sales service positively influences dealer sales loyalty. Moreover, brand loyalty and dealer sales loyalty is obviously mutually dependent, as indicated by the almost similar beta coefficients. Therefore, hypothesis 4 can not be confirmed: dealer sales loyalty and dealer after-sales loyalty are not intervening variables between the satisfaction concepts and

Table 4
Beta Coefficients for Model 1A Based on Regression Analysis

	SC	SS	SA	DSL	DAL	R^2
BL	0.44*	ns	ns	0.41	ns	0.42
DSL	0.23*	0.25*	ns	-	0.26*	0.30
DAL	ns	ns	0.32*	-	-	0.10

* Coefficients significant at $P < 0.001$

Table 5
Two-Stage-Least-Square Analysis of Model 2 A; Beta Coefficients

	SC	SS	BL	DSL	DAL	R^2
BL	0.38*	-	-	0.35*	-	0.38
DSL	ns	0.31*	0.40*	-	0.19*	0.43

* Coefficients significant at $P < 0.001$

Table 6
Two-Stage-Least-Square Analysis of Model 3 A; Beta Coefficients

	SC	SS	SA	DSL	DAL	R^2
DSL	0.23*	0.26*	-	-	0.26*	0.30
DAL	-	-	0.30*	0.29*	-	0.23

* Coefficients significant at $P < 0.001$

Figure 2
Final Mode Brand A

brand loyalty. However, brand loyalty and dealer sales loyalty are mutually dependent. These findings are in contrast with the conclusions of Bloemer & Lemmink (1992), who reported a one-directional impact of dealer (sales) loyalty on brand loyalty.

As noted above, we also have to test the possible mutual dependence between dealer sales

loyalty and dealer after-sales loyalty. On the basis of previous findings, the following restricted model is estimated:

Model 3A

DSL = f (SC, SS, DAL)
DAL = f (SA, DSL)

Table 6 shows the estimated parameters for this model.

Again, the mutual dependence of two loyalty measures is demonstrated in Table 6. Hypothesis 5 can not be confirmed. Dealer after-sales loyalty is not an intervening variable between satisfaction with the sales service, satisfaction with the after-sales service and dealer sales loyalty.

Our final model for brand A can be formulated as follows:

$$BL = ß11 + ß12\ DSL + ß13\ SC + \epsilon 1$$
$$DSL = ß21 + ß22\ BL + ß23\ DAL + ß24\ SS + \epsilon 2$$
$$DAL = ß31 + ß32\ DSL + ß33\ SA + \epsilon 3$$

This model is also depicted in Figure 2.

In summary, hypotheses 1, 2, and 3 can be confirmed: a direct link between each satisfaction concept and the corresponding loyalty concept appears to exist. Satisfaction with the car is the most important determinant of brand loyalty, satisfaction with the sales service is the most important positive determinant of dealer sales loyalty, and satisfaction with the after-sales service is the most important positive determinant of dealer after-sales loyalty. The mutual dependence between the loyalty constructs however, resulted in a rejection of hypotheses 4 and 5, which specified a non-recursive relationship between the different types of loyalty.

ANALYSES FOR BRAND B

The analysis for brand B, generally regarded as the more exclusive brand, shows different results.

First of all, all correlation coefficients are significant in the analysis for brand B (Table 7). In contrast to the findings for brand A, also satisfaction with the sales service and satisfaction with the after-sales service seem to have a positive impact on brand loyalty. The direct positive influences of satisfaction with the car on brand loyalty and of satisfaction with the sales service on dealer sales loyalty, show almost similar coefficients as the ones found for brand A. However, satisfaction with the after-sales service does not yet seem to be the most important determinant of dealer after-sales loyalty. Furthermore, the correlation coefficients between the different types of loyalty for brand B are even higher than those found for brand A.

The partial correlation coefficients between the different variables for brand B are shown in Table 8.

Table 7
Correlation Coefficients for Brand B Between Satisfaction Measures and Loyalty Measures

	SC	SS	SA	DSL	DAL
BL	0.52*	0.29*	0.29*	0.71*	0.44*
DSL	0.40*	0.40*	0.33*	-	0.50*
DAL	0.29*	0.23*	0.23*	0.50*	-

* Correlation Coefficients significant at $P < 0.001$

Table 8
Partial Correlation Coefficients Between Loyalty Measures and Satisfaction Measures (Controlled for the Other Satisfaction Measures)

	SC	SS	SA
BL	0.43	0.07	-0.01
DSL	0.26	0.21	-0.00
DAL	0.20	0.06	0.03

In correspondence with Table 3, there is a significant positive partial correlation between the satisfaction with the car and brand loyalty. There also is a significant positive partial correlation between satisfaction with the car and both dealer sales loyalties as dealer after-sales loyalty. A

significant positive link between satisfaction with the sales service and the dealer sales loyalty is also demonstrated. Based on Table 8, hypotheses 1 and 2 can be confirmed for brand B, whereas hypothesis 3 has to be rejected.

Next, model 1B is tested for brand B. The results are presented in Table 9.

Model 1B

BL = f (SC, SS, SA, DSL, DAL)
DSL = f (SC, SS, SA, DAL)
DAL = f (SC, SS, SA)

The most striking difference with the coefficients for brand B in Table 9, is the non-significance of the influence of satisfaction with the after-sales service on dealer after-sales loyalty.

Again here, the dependence between the loyalty constructs is examined by means of the two-stage-least square method. Based on the previous results, we formulate the following model:

Model 2B

BL = f (SC, DSL)
DSL = f (SC, SS, BL, DAL)

Table 10 shows the results of the analysis of model 2B.

In accordance to our previous findings, hypotheses 1 and 2 can be confirmed for brand A: satisfaction with the car has a positive impact on brand loyalty and satisfaction with the sales service positively influences dealer sales loyalty. Interestingly, the influence of satisfaction with the car on dealer sales loyalty seems to disappear when the mutual dependence between brand loyalty and dealer sales loyalty is incorporated. Cross-relationships between satisfaction and loyalty concepts are felt through the strong mutual relationship between brand loyalty and dealer sales loyalty. Hypothesis 4 can therefore not be confirmed.

By analogy with the analysis of brand A, we also examine the mutual dependence of dealer sales loyalty and dealer after sales loyalty for brand B. Because of the non-significance of satisfaction with the after-sales service and dealer after-sales loyalty, the formulation of Model 3B will differ from that of Model 3A:

Model 3B

DSL = f (SC, SS, DAL)
DAL = f (SC, DSL)

The results of the analysis of model 3B are provided in Table 11.

As is the case for brand A, hypothesis 5 can neither be confirmed for brand B (the mutual dependence of the loyalty measures is shown by their beta coefficients, which are in line with one another).

In summary, the analysis for brand B demonstrates differences as compared to with the findings for brand A. Although hypotheses 1 and 2 stand the test, hypothesis 3 can not be confirmed. Satisfaction with the after-sales service does not appear to have a significant positive impact on dealer after-sales loyalty. These findings enforce our doubt about an "obvious" relation between satisfaction and loyalty in all cases. Concerning the mutual dependence between the loyalty constructs, we may conclude for brand B as well as for brand A that hypothesis 4 and 5 has to be rejected. There is supposed to be a recursive relationship between the loyalty constructs. Our final model for brand B can be formulated as follows:

$$BL = ß11 + ß12\ DSL + ß13\ SC + \epsilon 1$$
$$DSL = ß21 + ß22\ BL + ß23\ DAL + ß24\ SS + \epsilon 2$$
$$DAL = ß31 + ß32\ DSL + \epsilon 3$$

This model is depicted in Figure 3.

CONCLUSION AND MANAGERIAL IMPLICATIONS

We presented a model with respect to the relations between three satisfaction constructs and three loyalty constructs and tested it with data collected for two data sets: brand A and brand B. From this study, we can conclude that satisfaction is an important determinant of loyalty. In general, one may say that the corresponding types of satisfaction (brand, sales and after-sales)

Table 9
Beta Coefficients for Model 1B Based on Regression Analysis

	SC	SS	SA	DSL	DAL	R^2
BL	0.31*	ns	ns	0.58*	ns	0.58
DSL	0.19*	0.23*	ns	-	0.40*	0.36
DAL	0.23*	ns	ns	-	-	0.10

* Coefficients significant at $P < 0.001$

Table 10
Two-Stage-Least-Square Analysis Model 2B; Beta Coefficients

	SC	SS	BL	DSL	DAL	R^2
BL	0.28*	-	-	0.59*	-	0.56*
DSL	ns	0.21*	0.58*	-	0.19*	0.57*

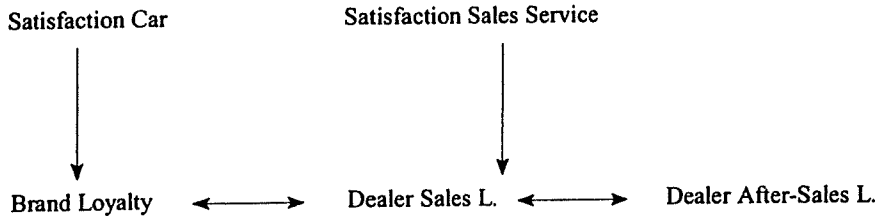
* Coefficients significant at $P < 0.001$

Table 11
Two-Stage-Least-Square Analysis of Model 3 B; Beta Coefficients

	SC	SS	DSL	DAL	R^2
DSL	0.21*	0.23*	-	0.37*	0.36
DAL	ns	-	0.45*	-	0.23

* Coefficients significant at $P < 0.001$

Figure 3
Final Model Brand B



predominantly determine different types of loyalty (brand, sales and after-sales). Furthermore, it can be concluded that the different types of loyalty are interdependent. Specifically, for brand A, hypotheses 1, 2 and 3 were confirmed: a direct link between each satisfaction measure and each loyalty measure appears to exist. The mutual dependence between the loyalty constructs

however, resulted in a rejection of hypotheses 4 and 5, which specified a non-recursive relationship between brand-, sales- and after-sales loyalty. In the case of the more exclusive brand B, the positive relation between satisfaction with the after-sales service and dealer after-sales loyalty could not be confirmed. In addition to hypotheses 4 and 5, who were also not confirmed, also hypothesis 3 has to be rejected too. For both brand A and brand B we proposed adopted models which are in line with the findings of our research.

A possible explanation for the different findings for brand A and brand B, can be found in the exclusive image of brand B. We might argue that the customers of brand B have a stronger bond with their brand and their dealer. In other words, these customers may perceive a stronger connection between their personal values/way of living and their ownership of the car. Therefore, it does not matter that much whether they are extremely satisfied or just satisfied on average with the after-sales service.

An alternative interpretation could be the following: brand B is also a popular car for companies to lease. These users of the car are employees who do not normally have to pay for or experience the after-sale service. Therefore dealer after-sales loyalty might not be significantly influenced by the after-sales satisfaction. Further research is needed to examine these interpretations.

Various general implications of this study can be formulated for both the car manufacturer and the dealer. The analysis of the generalized data lead us to advise the manufacturer to (1) strictly monitor the quality of the physical product in order to gain high customer satisfaction, which has a positive impact on brand loyalty for both brands included in our study, (2) ensure that excellent sales service is provided by the dealer, because of its positive influence on brand loyalty via the mutual dependence with dealer sales loyalty; and (3) ensure excellent after-sales service, especially for brands like brand B, for which the respondents used their evaluation of the after-sales-service in their dealer loyalty decision (which has an indirect impact on brand loyalty via dealer sales loyalty).

From the dealer's point of view, our analysis can help to decide on the focus in service and communication to owners of brand A and brand B. This leads to specific implications of the study. Because dealer after-sales loyalty seems to be linked rather to dealer sales loyalty than to satisfaction with the after-sales service for brand B, it could be rewarding to develop a personal relation with the customer. The dealer could give him/her special attention, inform him/her about new models that are (going to be) introduced and enforce the exclusive and high-quality perception of the brand and its dealer network. The importance of contact personnel in creating the customer feeling that he/she is special, should not be underestimated. Although a qualitative after-sales service is still important, special efforts to increase customer satisfaction with this service will not be very effective in raising dealer loyalty. In contrast, owners of brand A are more likely to evaluate the after-sales service thoroughly. In this case, the dealer would be rewarded in terms of loyalty for delighting the customer with excellent maintenance and repair service. Dealer personnel that are perceived by customer as excellent service providers, are likely to enhance dealer after-sales and dealer sales loyalty. In general the results of our study lead us to advise to the dealer to (1) provide optimal service (sales and after-sales) in order to assure dealer loyalty, (2) in line with the previous point: insist on the support of the manufacturer to help to provide perfect service (3) guarantee an excellent quality product in order to gain dealer loyalty through brand loyalty; and (4) not to underestimate the importance of the contact personnel in creating loyalty via their behavior and their way of rendering various services.

Limitations

First, the most important limitations of this study concern the brand included and the sample that took part in this study. It should be mentioned that the context of car distribution in the Netherlands, due to exclusiveness, is quite unique. Second, the sample is somewhat biased towards loyal behavior, because consumers are chosen only in so far as they have been servicing their car from the dealer they have bought it from. This might have reduced the variability in dealer (after-)sales loyalty and the generalizability of our findings. Third, all our measures are paper and pencil

measures and we lack measures of actual repeat buying behavior. Moreover the time frame is important here. Does the consumer intend to buy another car next month, next year or in another five to ten years. Fourth, the proximity of the questions might have led to cognitive consistency patterns and other demand characteristics or response biases. It could be expected that this favored the applicability of our model.

Suggestions For Further Research

A number of questions remains open from this study and needs to be addressed in further research. One further question concerns the reasons for the differences we found between the two brands. More detailed inquiry into the differences between a low priced and a premium priced brand is needed. Furthermore, in future research, samples should no longer be limited to customers who patronize the same dealer as they bought their car from. This study should be repeated in other market settings where one dealer is not restricted to selling brands from only one manufacturer. Of course, actual buying behavior of customers on a longitudinal basis should be taken into account. In addition, attention should be paid to the competitive actions of car dealers and manufacturers of other brands. Finally, the product sample needs to be expanded to low involvement products.

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APPENDIX

Brand commitment (dealer sales commitment en dealer after-sales commitment) were measured with the following 4 items:

- When another brand of car is on sale, I will purchase it, rather than my preferred car brand.
- If my preferred car brand were not available right away, it would make little difference to me if I had to choose another brand.
- If my preferred car brand is not available, I will buy another favorite brand.
- If I have to make a choice for a particular car brand before actually making the purchase, I might easily change my intended choice upon receiving discrepant information.

By substituting the words car brand of brand of car, comparable questions can be formulated for the dealer sales service and the dealer after-sales service.

The unweighted items were combined in a score per respondent. The minimum being 4 and the maximum score being 16 on the 4-point Likert scale. Cronbach's alpha for the was .79 for the car version and .81 for the dealer sales version and .73 for the dealer after-sales version.

Validity of the scales was established in an earlier study (Bloemer, 1993). In this study content, construct and discriminant validity was extensively examined. From that study it can be concluded that the scale developed there and used here measuring commitment is valid.

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