

## The owners of new passenger vehicles: some empirical findings on post-purchase patronage regarding servicing and repairs

C.Boshoff\*

Department of Business Economics, Vista University, Private Bag X613, Port Elizabeth, 6000 Republic of South Africa

P.J. du Plessis

School of Business Leadership, University of South Africa, P.O. Box 392, Pretoria, 0001 Republic of South Africa

Accepted 6 February 1989

Despite concern among motor vehicle manufacturers about the relationship between their franchised dealers and new vehicle owners regarding servicing/repairs, very little empirical research has been done to investigate the post-purchase perceptions of new vehicle owners. Research studies conducted in America found that the expiry of the warranty on a new motor vehicle resulted in a major shift away from franchised dealers for servicing/repairs once the warranty had expired and that the older the vehicle became, the higher the probability that it would not be serviced by a franchised dealer. Information gathered from a random sample of new vehicle owners suggests that these conclusions also hold true for the South African situation, despite a high degree of satisfaction expressed with under-warranty servicing.

Nieteenstaande kommer by motorvervaardigers oor die verhouding tussen hul agentskaphouers en nuwe-voertuigeienaars wat herstel- en versieningsdienste aan betref, is min empiriese navorsing nog gedoen om die na-aankoop persepsies van nuwe-voertuigeienaars te ondersoek. Navorsing wat in Amerika gedoen is, het bevind dat 'n aansienlike aantal nuwe-voertuigeienaars nie langer die agentskaphouer ondersteun nie en dat hoe ouer 'n voertuig is, hoe minder is die kans dat 'n agentskaphouer wel versienings- en herstelwerk aan die voertuig sal doen. Inligting bekom van 'n ewekansige steekproef nuwe-voertuigeienaars dui daarop dat hierdie afleidings ook in die Suid-Afrikaanse situasie geld, nieeenstaande 'n hoë mate van tevredenheid met dienslewering terwyl die voertuig nog onder waarborg is.

\* To whom correspondence should be addressed

### Introduction

Automobile repair services is a topic that has received a fair amount of attention in marketing research literature. Biehal (1983: 82-91), for instance, investigated consumers' prior experiences and perceptions in auto repair choice, whereas Martilla & James (1977: 77-79) used motor repair service customers to illustrate a technique for measuring attribute importance and performance in evaluating the elements of a marketing programme. In earlier years, Richardson & Fogg (1970), Crandall (1970) and Pashigian (1961) analysed the automobile repair market in terms of patronage and market share. They concluded:

- that a high percentage of new vehicle owners shift their patronage to so-called independent workshops for servicing/repairs once the warranty has expired, and
- that the older the vehicle is, the higher the probability that it will not be serviced/repared by a franchised dealer, but rather by a so-called independent workshop<sup>1</sup>.

However, these studies have been mainly of American origin. South African research on the topic has been limited. The only attention it has received generally has been as part of consumer buying behaviour studies where its importance as evaluation criterion in the decision to buy a particular passenger vehicle, has been evaluated (Rousseau, 1977; Du Plessis, 1986). In one of the few attempts to study motor repair services *per se*, a comparison was made between the perceptions of the

customers of franchised dealers and those of the customers of independent workshops with regard to the various elements of a repair service (Boshoff, 1986: 196-201).

Despite the fact that two leading South African manufacturers estimate the retention rate of their repair service customers after the expiry of the warranty on new vehicles at below 30% (Boshoff, 1986: 196), no research in South Africa has been done to investigate the post-purchase perceptions and patronage behaviour of the owners of new passenger vehicles.

### Objectives

This study investigated the following with regard to the owners of new passenger vehicles:

- whether a franchised dealer of the manufacturer of the vehicle is patronized for servicing/repairs while the vehicle is under warranty;
- whether owners of new passenger vehicles are satisfied with the service received from these dealers; and
- the extent to which patronage for servicing/repair is shifted away from dealerships of the manufacturer once the warranty has expired.

An attempt was further made to establish whether the theory suggested (Pashigian, 1961) that the age of a vehicle has an inverse relationship to the probability of servicing/repairs at a franchised dealer, holds true. The relationship between satisfaction with service received

from franchised dealers and (i) the model of the vehicle and (ii) the price of the vehicle was also investigated.

### Methodology

Questionnaires were mailed to a stratified random sample of 3 000 owners of new vehicles. Address lists of consumers who bought a new passenger vehicle during 1985 and 1986 from six of the seven motor vehicle manufacturers still active in the South African motor vehicle market, served as sampling frame. The sample was stratified according to the market share of each manufacturer in 1986, after the one manufacturer who did not wish to participate was excluded. The actual market share in 1986, adjusted market share, stratified sample size, actual number of responses per manufacturer, and percentage response rate per manufacturer are shown in Table 1. These reveal a relatively high response rate from owners of Volkswagen products and a relatively low response rate from Nissan owners. However, these variances are not considered to be of such a magnitude that it would have a negative influence on the validity of results obtained.

The demographic characteristics of the respondent group is illustrated in Table 2. These reveal that 657 usable questionnaires were received, representing a response rate of 21,9%. The majority of respondents (78,8%) were male, reported on vehicles in the R10 000–R19 999 price range (58,8%), and the warranty of the vehicles of 63,6% of respondents had expired. The age distribution of respondents is fairly even throughout the various categories.

### Results

It is often assumed that owners of new passenger vehicles comply with the stipulation of the warranty that all servicing/repairs should be conducted by a franchised dealer of the manufacturer. This has not been

**Table 1** Response rate per manufacturer

Manufacturer	1986 Market share (%)	Adjusted market share <sup>1</sup>	Sample	Responses	
				(n)	% of sample
Toyota	26,01	29,76	893	159	24,4
Samcor	20,70	23,68	710	130	20,0
Volkswagen	17,38	19,87	596	247	37,9
Mercedes Benz	11,16	–	–	–	–
Delta	8,00	9,15	275	46	7,1
Nissan	7,82	8,94	268	16	2,5
BMW	7,52	8,60	258	53	8,1
Other	1,41	–	–	–	–
	100,0	100,0	3000	651 <sup>2</sup>	100,0

<sup>1</sup> Mercedes Benz was not prepared to participate in the study while manufacturers who were no longer active in the South African market were excluded.

<sup>2</sup> Six respondents did not indicate the manufacturer of their vehicle.

**Table 2** Demographic characteristics of respondent group

Sex		
Male	518	78,8
Female	137	20,9
No response	2	0,3
	657	100,0
Price range		
<10 000	23	3,5
10 000 – 19 999	386	58,8
20 000 – 29 999	174	26,5
30 000+	70	10,7
No response	4	0,6
	657	100,1
Warranty expired		
Yes	418	63,6
No	239	36,4
	657	100,0
Age		
<20	5	0,8
20 – 29	102	15,5
30 – 39	177	26,9
40 – 49	156	23,7
50 – 59	111	16,9
60+	105	16,0
No response	1	0,2
	657	100,0

**Table 3** Institutions patronized while vehicle under warranty

Institution	Number	% of total
Dealership of manufacturer	623	94,8
Dealership of competing manufacturer	2	0,3
Independent workshop	15	2,3
Do own servicing/repairs	8	1,2
'Backyard mechanic'	2	0,3
No specific dealer/garage	1	0,2
No response	6	0,9
	657	100,0

empirically tested in South Africa before, but Table 3 shows that it is indeed the case.

According to Table 3, 94,8% of respondents patronize a franchised dealer of the manufacturer for servicing/repairs while the vehicle is under warranty.

The satisfaction of consumers who patronize(d) the franchised dealers of manufacturers was also measured. Table 4 shows that 80,6% of those new vehicle owners who patronize(d) franchised dealers while the vehicle is/was under warranty are/were satisfied with the service received.

Richardson & Fogg (1970: 216) found that in the

**Table 4** Satisfaction levels of respondents who patronize(d) franchised dealers of manufacturers

Satisfaction level	Number	% of total
Satisfied	502	80,6
Indifferent	51	8,2
Dissatisfied	67	10,8
No response	3	0,5
	623 <sup>1</sup>	100,1

<sup>1</sup> Only the satisfaction levels of respondents who patronize(d) franchised dealers are reported

**Table 5** Institution patronized during period one year after expiry of warranty

Institution	Number	% of total
Dealership of manufacturer	304	72,7
Dealership of competing manufacturer	4	1,0
Independent workshop	42	10,0
Do own services/repairs	41	9,8
Backyard mechanic	11	2,6
No specific dealer/garage	4	1,0
Haven't decided yet	9	2,2
No response	3	0,7
Total	418	100,0

United States of America a sizeable proportion of car owners shift their service business to non-dealer service organizations once the warranty period expires. An attempt was made to establish if the same applies to South African new vehicle owners. The results appear in Table 5.

Table 5 reveals that 72,7% of the 418 respondents whose warranty have expired still use a franchised dealer of the manufacturer during the first year after expiry. Compared with Table 3 it represents a decline of 22,1% which is significant at the 0,05 level of confidence (see Table 8).

To further investigate the patronage behaviour of the owners of new passenger vehicles immediately after the

**Table 6** Institution to be patronized after expiry of warranty

Institution	Number	% of total
Dealership of manufacturer	170	71,1
Dealership of competing manufacturer	2	0,8
Independent workshop	29	12,1
Do own services/repairs	22	9,2
Backyard mechanic	4	1,7
No specific dealer/garage	2	0,8
Haven't decided yet	10	4,2
Total	239	100,0

expiry of the warranty, respondents whose warranty have not yet expired, were asked which institution they intend to patronize after expiry (Table 6).

Table 6 reveals that 71,1% of respondents intend to patronize a franchised dealer of the manufacturer after expiry of warranty, which seems to confirm the findings revealed in Table 5.

Pashigian (1961: 245-249) found that the probability that a car will be serviced by a franchised dealer decreases as the age of the car increases. An attempt was made to establish if this finding holds true in the South African situation. As the selection of a representative sample of vehicle owners whose vehicles were of varying ages was impossible, all respondents were asked what their intentions regarding patronizing would be when the warranty on the vehicle had expired, in the case, firstly, of vehicles less than five years old and, secondly of vehicles more than five years old. Although this method of information gathering might not be completely sound scientifically, studies where future purchasing intentions were studied have been reported (Wise & Cox, 1980; Humphreys & Kasulis, 1981) and it does give some indication of consumer perception and possible patronage behaviour<sup>2</sup>. Results of responses are shown in Table 7.

Table 7 shows that of the 642 respondents who indicated that they would still possess their vehicles when they were less than five years old, 64,8% intend to patronize a franchise dealer during this period. Table 7 also reveals that of the 390 respondents who hope to still possess their vehicles when they are more than five years old, only 50,3% indicated that they would patronize a

**Table 7** Institution to be patronized during future time periods<sup>1</sup>

Institutions	Time period			
	Vehicle < 5 years old		Vehicle 5+ years old	
	(n)	% of (n)	(n)	% of (n)
Dealership of manufacturer	416	64,8	196	50,3
Dealership of competing manufacturer	9	1,4	2	0,5
Independent workshop	72	11,2	51	13,1
Do own servicing repairs	70	10,9	51	13,1
Backyard mechanic	19	3,0	15	3,9
No specific dealer/garage	8	1,3	5	1,3
Haven't decided yet	26	4,1	49	12,6
Other	2	0,3	1	0,3
No response	20	3,1	20	5,1
Total	642 <sup>2</sup>	100,1	390 <sup>3</sup>	100,2

<sup>1</sup> All respondents included, warranty expired and warranty not expired.

<sup>2</sup> 642 of the 657 respondents indicated that they will still possess the vehicle when it is less than five years old.

<sup>3</sup> 390 of the 657 respondents indicated that they will still possess the vehicle when it is more than five years old.

**Table 8** Actual and intended patronage of franchised dealers at various vehicle ages

Age of vehicle	Percentage	Difference
Under warranty (Table 3)	94,8	22,1 <sup>a</sup>
First year after warranty — actual (Table 5)	72,7	7,9
Vehicle < 5 years old (Table 7)	64,8	14,5 <sup>a</sup>
Vehicle 5+ years old (Table 7)	50,3	

<sup>a</sup> Significant at  $p < 0,05$

franchised dealer of the manufacturer.

Using Tables 3, 5 and 7 as basis, a possible pattern of actual and expected (intended) patronage of franchised dealers at various age categories has been constructed and is reflected in Table 8.

Table 8 shows a decline from 94,8% of respondents who patronize a franchised dealer while their vehicle is under warranty to 50,3% who intend to patronize a franchised dealer of the same manufacturer when the vehicle is more than five years old.

The trends detected by Richardson & Fogg (1970), Crandall (1970) and Pashigian (1961), *viz.* that warranty expiry results in a major shift away from franchised dealers for service and repair work and that the older the vehicle becomes the greater the probability that it will not be serviced by a franchised dealer, thus seem to hold true for the South African situation.

An attempt was made to establish whether the decline (difference) between the four time periods was significant. As the two groups compared (those who patronize a franchised dealer and those who do not) are related, a conservative test for differences in proportions was conducted. Confidence intervals at the 0,05 level were calculated for both proportions. As no overlapping was found the 22,1% decline after expiry of warranty (Table 8) and the 14,5% decline between the ages less than five years old and more than five years, could be described as significant (Table 8).

The study also investigated the relationship between satisfaction with service received while the vehicle was under warranty and (i) the model of the vehicle and (ii) the price of the vehicle.

No relationship was found between satisfaction with service and the model of the vehicle owned at the 0,05 level of confidence ( $\chi^2 = 6,57$ ;  $df = 10$ ). The same holds true regarding the price of the vehicle owned ( $\chi^2 = 4,99$ ;  $df = 6$ ). No motor manufacturer thus appear to deliver a superior repair service while newly sold vehicles are under warranty.

### Summary of findings

The findings of this study are:

- the owners of new passenger vehicles patronize a franchised dealer of the manufacturer of their vehicle for servicing/repairs while the vehicle is under warranty;

- the owners of new passenger vehicles are generally satisfied with the service received from franchised dealers of the manufacturer while the vehicle is under warranty;
- a significant number of new vehicle owners shift their patronage for servicing/repairs away from a dealership of the manufacturer once the warranty has expired;
- a decreasing number of owners of new passenger vehicles intend patronizing a franchised dealer of the manufacturer as the age of the vehicle increases;
- there is no relationship between satisfaction with the service received while the vehicle is/was under warranty and (i) the price and (ii) the model of the vehicle.

### Limitations of the study

A limitation of this study is that the researchers, endeavouring to investigate the patronage behaviour of new vehicle owners, required respondents to provide information on intended, future behaviour. Although studies focusing on purchase intentions have been reported (Wise & Cox, 1980; Humphreys & Kasulis, 1981), this approach may not be scientifically sound and results obtained must be interpreted in the light hereof.

### Implications

It is apparent that a definite shift in patronage with regard to servicing/repairs occurs as the age of a vehicle increases. It has also been established that the shift is particularly severe immediately after the expiry of the warranty.

However, it appears as if the shift is not quite of the same magnitude as suggested by two leading manufacturers (Boshoff, 1986: 196). A possible reason may be that the technology used in modern passenger vehicles is of such a nature that consumers may increasingly insist on the more specialized service only franchised dealers can offer.

Of particular concern to motor manufacturers should be the contrast between the high level of satisfaction among respondents regarding servicing/repairs while the vehicle is under warranty, with the indication by almost half of those who hope to still own the vehicle when it is more than five years old, that they will no longer be patronizing a franchised dealer at that stage. Possible reasons for this decision warrant attention during future research.

### Notes

1. Throughout this article, patronage refers to servicing/repairs and dealer or dealership to a franchised dealer of a motor vehicle manufacturer. Franchised dealers are the only firms permitted to market new vehicles.
2. Intentions to use attorney advertising have been used as a surrogate for actual use. The authors stated that the cost of obtaining a sample of actual users would be prohibitive. See Humphreys & Kasulis, 1981.

**References**

- Boshoff, C. 1986. Importance-performance analysis: A comparative study of motor repair service customers. *S. Afr. J. Bus. Mgmt.*, vol.17, 196-201.
- Biehal, G.J. 1983. Consumers' prior experiences and perceptions in auto repair choice. *J. Market*, vol. 40, Summer, 82-91.
- Crandall, R.W. 1970. The decline of the franchised dealer in the automobile repair market. *J. Bus.*, vol. 43, January, 19-30.
- Du Plessis, P.J. 1986. *Verbruikersgedrag by die aankoop van 'n motorvoertuig*. Unpublished DBL Dissertation. Pretoria: University of South Africa.
- Humphreys, M.A. & Kasulis, J.J. 1981. Attorney Advertising. *J. Advert. Res.*, vol. 21(6), December, 31-37.
- Martilla, J.A. & James, J.C. 1977. Importance-performance analysis. *J. Market.*, January, 77-79.
- Pashigan, B.P. 1961. *The distribution of automobiles: An economic analysis of the franchise system*. New York: Prentice-Hall.
- Richardson, L. & Fogg, D.N. 1970. Service patronage patterns and new product warranties: A study of automobiles. *J. Bus. Res.*, July, 213-217.
- Rousseau, G.G. 1977. 'n Bemerkingsnavorsingsondersoek na die koopmotiewe van motoreienaars in die Suid-Afrikaanse motorhandel. *Humanitas*, R.S.A., vol. 4-2.
- Wise, G.L. & Cox, M.L. 1980. A Longitudinal analysis of new car purchase patterns and intentions (1977-1979) as affected by differing degrees of energy uncertainty. In: *Developments in Marketing Science*, vol. III, edited by Venkatakrisna, V.B. 1980. Proceedings of the Fourth Annual Conference of the Academy of Marketing Science. Dallas, Texas (April 30 - May 3). pp 1-4.