

Boshoff, C.

Article

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South African Journal of Business Management

Provided in Cooperation with:

University of Stellenbosch Business School (USB), Bellville, South Africa

Suggested Citation: Boshoff, C. (1986) : Importance-performance analysis: A comparative study of motor repair service customers, South African Journal of Business Management, ISSN 2078-5976, African Online Scientific Information Systems (AOSIS), Cape Town, Vol. 17, Iss. 4, pp. 196-201,
<https://doi.org/10.4102/sajbm.v17i4.1056>

This Version is available at:

<https://hdl.handle.net/10419/217943>

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Importance-performance analysis: A comparative study of motor repair service customers

C. Boshoff

Department of Business Economics, Vista University, Port Elizabeth

At least two American studies have found that a high percentage of new car owners do not return to the dealership they purchased their vehicle from for servicing/repairs after the initial warranty had expired. Patronage seems to have shifted to the so-called independent workshops. It appears as if the same trend prevails in South Africa and should be a source of concern to vehicle manufacturers. The study described in this article attempted to identify possible reasons for this shift in patronage and also to establish whether market requirements in general are being satisfied by these institutions. The results obtained indicate that independent workshops perform certain attributes of a motor repair service that are important to consumers markedly better than franchised dealerships do. It was further established that neither institution currently fully satisfies market requirements.

S. Afr. J. Bus. Mgmt. 1986, 17: 196 – 201

Ten minste twee Amerikaanse studies het bevind dat 'n hoë persentasie van nuwe voertuigeienaars nie na die agentskap waar hulle hul voertuig aanvanklik gekoop het terugkeer vir herstel- en versieningsdienste nadat die waarborgperiode op die voertuig verstryk het nie. Ondersteuning verskuif skynbaar na die sogenaamde onafhanklike diensstasie. Die vermoede bestaan dat dieselfde neiging ook in Suid-Afrika voorkom en behoort 'n bron van kommer vir motorvervaardigers te wees. Die ondersoek waarvan hierdie artikel verslag lewer was gemik daarop om moontlike redes vir die verskuiwing te identifiseer en ook om te bepaal of beide instellings tans daarin slaag om markbehoefes te bevredig. Die verkreeë resultate dui daarop dat onafhanklike diensstasies sekere aspekte van 'n motorhersteldiens wat vir verbruikers belangrik is merkbaar beter verrig as agentskaphouers. Verder is bevind dat nie een van die instellings tans werklik daarin slaag om markbehoefes te bevredig nie.

S.-Afr. Tydskr. Bedryfsl. 1986, 17: 196 – 201

C. Boshoff

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

Accepted August 1986

Introduction

At least two American studies have found that a high percentage of new car owners do not return to the dealership they purchased their vehicle from for servicing/repairs after the initial warranty had expired. Patronage seems to have shifted to the so-called independent workshops. (Richardson & Fogg, 1970:217; Crandall, 1970:19). The continuation of this trend in later years has been confirmed by Moyer & Whitmore (1976:37) and in South Africa by Pretorius (1973: 28). Further possible evidence thereof is that at least two South African manufacturers estimate their customer retention rate after the expiry of the warranty on new vehicles, at below 30%¹. This situation is a source of concern throughout the industry².

In this study the objective will be to compare the perceptions of customers of franchised motor dealerships and independent repair workshops regarding certain attributes of a motor repair service. This will be done to determine whether independent workshops perform certain attributes of a motor repair service that are important to consumers better than franchised dealerships do. If found to be true, this could elucidate possible reasons for the low retention rate of franchised dealerships. An attempt will also be made to establish whether both institutions succeed in satisfying market requirements with regard to specific attributes.

Methodology

An importance-performance analysis as suggested by Martilla & James (1977) was used to determine the perceptions of respondents regarding 21 attributes of a motor repair service. Respondents were asked two questions regarding each attribute namely:

- How important is this attribute? — measuring market requirements.
- How well does the workshop which repairs your vehicle, perform the attribute? — measuring current attempts to satisfy market requirements.

Twelve of the 14 attributes identified by Martilla & James (1977) were used whereas a further eight were identified and added after a focus group session with vehicle owners and consultations with managers in the motor industry. The complete list of attributes used in the study appears in Table 2.

The data collection instruments used were two four-point scales. Importance could be rated on a four-point scale: extremely important (value 4), important (value 3), slightly important (value 2), and not important (value 1). Performance could also be rated on a four-point scale: excellent (4), good

Table 1 Size and composition of the respondent group

Elements of respondent group	Sample size	Number of responses	Responses as percentage of	
			Total number of responses	Total sample size
Customers of franchised dealerships	330	185	55,9	28,03
Customers of independent workshops	330	146	44,1	22,12
Total	660	331	100%	50,15%

(3), fair (2) and poor (1). A 'no basis for judgement' category was also provided. A mean rating for each attribute was then calculated.

The research utilized a mail questionnaire. The sample consisted of two groups of randomly selected respondents: customers of franchised dealerships and customers of independent workshops. Three hundred and thirty questionnaires were mailed to each group. Three hundred and thirty-one of the 660 questionnaires were returned in usable form after one telephonic follow-up, for a response rate of 50,15%.

The size and composition of the respondent group is shown in Table 1.

With regard to reporting response rates, Berdie & Anderson (1976:72-73) argued that studies using mail questionnaires as research method, should give an indication of the response rate per item on the questionnaire. This will allow the reader to decide whether data obtained are generalizable to the

population represented by the sample studied.

All the questions in the section of the questionnaire measuring the importance of 21 attributes of a motor repair service, were answered. The section measuring performance, however, allowed for a 'no basis for judgement' alternative as an answer. These responses were awarded a value of zero and excluded from the computation of mean values. As the excessive use of this alternative could have an influence on the reliability of the mean values of certain attributes, the item response rate per respondent group is shown in Table 2.

Table 2 shows a relatively low response rate (answers marked 'no basis for judgement') on three items by customers of franchised dealerships. These are the availability of substitute transport (73,5%), the sending out of regular reminder or maintenance notices (72,4%), and being informed in time if the vehicle repaired must stay overnight (74,6%). Even lower response rates were recorded for customers of independent workshops regarding location close to work (74,7%) availability of substitute transport (61,6%) and the sending out of regular reminder or maintenance notices (58,9%).

Empirical investigation and analysis

A comparison of importance ratings

In Table 3 a comparison is made between the importance ratings of both respondent groups in an attempt to determine whether significant differences regarding the importance of certain attributes do exist.

From Table 3 it would appear as though the needs and requirements of both respondent groups are largely similar, as the importance ratings of individual attributes by both groups do not differ significantly ($P < 0,05$). The only exceptions are the greater need of customers of franchised dealerships regarding the availability of spare parts and their need to be

Table 2 Item response rate per respondent group

Attribute number ^a	Attributes in order of appearance on questionnaire	Respondent groups							
		Customers of franchised dealerships				Customers of independent workshops			
		Importance evaluation		Performance evaluation		Importance evaluation		Performance evaluation	
		Number of responses	% of total	Number of responses	% of total	Number of responses	% of total	Number of responses	% of total
1.	Job done right the first time	185	100	183	98,9	146	100	146	100
2.	Fast response to complaints	185	100	182	98,4	146	100	144	98,6
3.	Able to do any job needed	185	100	176	95,1	146	100	140	95,9
4.	Service available when needed	185	100	184	99,5	146	100	144	98,6
5.	Courteous and friendly service	185	100	185	100	146	100	146	100
6.	Vehicle ready when promised	185	100	185	100	146	100	146	100
7.	Perform only necessary work	185	100	172	93,0	146	100	139	95,2
8.	Reasonable prices	185	100	173	93,5	146	100	138	94,5
9.	Honesty — work indicated as completed, completed	185	100	178	96,2	146	100	144	98,6
10.	Conveniently close to home	185	100	158	85,4	146	100	140	95,9
11.	Conveniently close to work	185	100	158	85,4	146	100	109	74,7
12.	Substitute transport available	185	100	136	73,5	146	100	90	61,6
13.	Regular reminder/maintenance notices	185	100	134	72,4	146	100	86	58,9
14.	Accurate quotations	185	100	142	76,8	146	100	129	88,4
15.	Fast service on minor repairs	185	100	171	92,4	146	100	141	96,6
16.	Availability of spare parts	185	100	171	92,4	146	100	145	99,3
17.	Clean, attractive waiting rooms	185	100	165	89,2	146	100	112	76,7
18.	Clear signs e.g. reception, parking	185	100	176	95,1	146	100	126	86,3
19.	Informed in time of overnight stay	185	100	138	74,6	146	100	130	89,0
20.	Availability of informative account	185	100	178	96,2	146	100	144	98,6
21.	Personal contact with mechanic	185	100	151	81,6	146	100	137	93,8

^aEach attribute will consistently be associated with this number.

properly informed by means of clear signs where reception is, where to park, where to pay accounts, etc. However, a Hotellings square test was conducted which revealed that this

was not the case. Customers of independent workshops do differ, compared to customers of franchised dealerships, in their evaluation of the importance of these attributes as a

Table 3 Importance ratings of attributes: Both respondent groups

Attribute number	Attribute	Importance ratings		
		Franchised dealership customers (A)	Independent workshop customers (B)	Differences ^b (A - B) (C)
1	Job done right the first time	3,92	3,88	+0,04
2	Fast response to complaints	3,54	3,60	-0,06
3	Able to do any job needed	3,35	3,19	+0,16
4	Service available when needed	3,37	3,35	+0,02
5	Courteous and friendly service	3,28	3,29	-0,01
6	Vehicle ready when promised	3,57	3,58	-0,01
7	Perform only necessary work	3,21	3,42	-0,21
8	Reasonable prices	3,54	3,64	-0,10
9	Honesty — work indicated as completed must be completed	3,95	3,88	+0,07
10	Conveniently close to home	2,01	2,26	-0,25
11	Conveniently close to work	2,30	2,03	+0,27
12	Availability of substitute transport	2,48	2,27	+0,21
13	Regular reminder/maintenance notices	2,05	1,86	+0,19
14	Accurate quotations	3,40	3,40	0,00
15	Fast service on minor repairs	3,30	3,19	+0,11
16	Availability of spare parts	3,58	3,37	+0,21 ^a
17	Clean attractive waiting room	2,56	2,41	+0,15
18	Clear signs e.g. reception, parking etc.	2,70	2,40	+0,30 ^a
19	Informed in time of overnight stay	3,60	3,44	+0,16
20	Availability of informative account	3,58	3,58	0,00
21	Personal contact with mechanic	2,92	3,00	-0,08

^aSignificant at $P < 0,05$.

^bA positive coefficient in column C indicates that the importance rating of franchised dealership customers exceed the importance rating of customers of independent workshops regarding that particular attribute, and vice versa.

Table 4 Performance ratings of attributes: Both respondent groups

Attribute number	Attribute	Performance ratings		
		Franchised dealership customers (A)	Independent workshop customers (B)	Differences ^b (A - B) (C)
1	Job done right the first time	2,36	2,86	-0,50 ^a
2	Fast response to complaints	2,63	3,04	-0,41 ^a
3	Able to do any job needed	2,81	2,81	0,00
4	Service available when needed	2,83	2,98	-0,15
5	Courteous and friendly service	3,02	3,35	-0,33 ^a
6	Vehicle ready when promised	2,63	2,97	-0,34 ^a
7	Perform only necessary work	2,84	3,06	-0,22
8	Reasonable prices	2,13	2,61	-0,48 ^a
9	Honesty — work indicated as completed must be completed	2,50	2,86	-0,36 ^a
10	Conveniently close to home	1,93	2,86	-0,93 ^a
11	Conveniently close to work	2,22	2,40	-0,18
12	Availability of substitute transport	1,87	1,72	+0,15
13	Regular reminder/maintenance notices	1,71	1,36	+0,35
14	Accurate quotations	2,47	2,71	-0,24
15	Fast service on minor repairs	2,62	3,09	-0,47 ^a
16	Availability of spare parts	2,70	2,52	+0,18
17	Clean attractive waiting room	2,68	2,40	+0,28
18	Clear signs e.g. reception, parking etc.	2,73	2,44	+0,29 ^a
19	Informed in time of overnight stay	2,46	2,95	-0,49 ^a
20	Availability of informative account	2,91	3,10	-0,19
21	Personal contact with mechanic	2,17	3,26	-1,09 ^a

^aSignificant at $P < 0,05$.

^bA positive coefficient in column C indicates that the performance rating of franchised dealership customers exceed the performance rating of customers of independent workshops regarding that particular attribute, and vice versa.

whole, although this is not the case with the majority of individual attributes.

A comparison of performance ratings

The performance ratings of both respondent groups, per attribute, are shown in Table 4.

It is apparent from Table 4 that the performance ratings (mean values) of independent workshops by their customers exceed the performance ratings of franchised dealerships by their customers regarding 15 attributes. Of these differences, 10 are significant at the $P < 0,05$ level. They are:

1. Job done right the first time.
2. Fast response to complaints.
5. Courteous and friendly service.
6. Vehicle ready when promised.
8. Reasonable prices.
9. Honesty — work indicated as completed must be completed.
10. Conveniently close to home.
15. Fast service on minor repairs.
19. Informed in time of overnight stay.
21. Personal contact with mechanic.

Of these 10 attributes all, except 'conveniently close to home' (10), are regarded as important (rated at a mean value of three or more)³ by customers of independent workshops. The importance ratings of customers of franchised dealerships were largely similar except for the attribute 'personal contact with mechanic', which was rated slightly lower at a mean value of 2,92 but is also regarded as important for purposes of this study (see Table 3).

Table 4 also shows that the performance ratings of franchised dealerships by their customers exceed the performance ratings of independent workshops by their customers regarding five attributes. However, only the difference regarding the attribute 'clear signs e.g. reception, parking etc.' is significant

at the $P < 0,05$ level, and is not regarded as important by either respondent group (see Table 3).

To summarize, independent workshops outperform franchised dealerships to a significant degree regarding nine important attributes of a motor repair service. Franchised dealerships, on the other hand outperform independent workshops regarding one attribute, which is not regarded as important by either respondent group.

Importance-performance ratings: customers of franchised dealerships

The importance and performance ratings of customers of franchised dealerships are shown in Table 5. Ranking is in descending order of importance.

Table 5 reveals that of the 15 attributes most important to customers of franchised dealerships, importance ratings exceed performance ratings to a significant degree in all instances. On the other hand performance exceed importance for only two attributes but neither are regarded as important (mean values of three and higher are regarded as important), nor are the differences significant at the $P < 0,05$ level. This would seem to indicate that franchised dealerships do not satisfy the needs and requirements of customers regarding important attributes of a repair service.

Importance-performance ratings: customers of independent workshops

Importance-performance ratings of customers of independent workshops are shown in Table 6. Ranking is in descending order according to mean importance values.

Table 6 reveals that of the 15 attributes most important to customers of independent workshops, importance ratings exceed performance ratings to a significant degree in 12 cases. Performance exceeds importance for only five attributes of which only one is significant at the $P < 0,05$ level. This would

Table 5 Importance and performance ratings of attributes: Customers of franchised dealerships

Ranking	Attribute number	Attribute	Mean importance	Mean performance	Difference ^b
			rating (A)	rating (B)	(B) - (A) (C)
1	9	Honesty — work indicated as completed must be completed	3,95	2,46	-1,49 ^a
2	1	Job done right the first time	3,92	2,36	-1,56 ^a
3	19	Informed in time of overnight stay	3,60	2,46	-1,14 ^a
4	16	Availability of spare parts	3,58	2,70	-0,88 ^a
5	20	Availability of an informative account	3,58	2,91	-0,67 ^a
6	6	Vehicle ready when promised	3,57	2,63	-0,94 ^a
7	8	Reasonable prices	3,54	2,13	-1,41 ^a
8	2	Fast response to complaints	3,53	2,63	-0,90 ^a
9	14	Accurate quotations	3,40	2,47	-0,93 ^a
10	4	Service available when needed	3,37	2,83	-0,54 ^a
11	3	Able to do any job needed	3,35	2,81	-0,54 ^a
12	15	Fast service on minor repairs	3,30	2,62	-0,68 ^a
13	5	Courteous and friendly service	3,28	3,02	-0,26 ^a
14	7	Perform only necessary work	3,21	2,84	-0,37 ^a
15	21	Personal contact with mechanic	2,92	2,17	-0,75 ^a
16	18	Clear signs indicating reception, parking, etc.	2,70	2,73	+0,03
17	17	Clean and attractive waiting room	2,56	2,68	+0,12
18	12	Availability of substitute transport	2,48	1,87	-0,61 ^a
19	11	Conveniently close to work	2,30	2,22	-0,08
20	13	Regular reminder/maintenance notices	2,05	1,71	-0,34 ^a
21	10	Conveniently close to home	2,01	1,93	-0,08

^aSignificant at $P < 0,05$.

^bA negative coefficient in column C indicates that the importance rating exceed the performance rating regarding that particular attribute. and vice versa.

Table 6 Importance and performance ratings of attributes: Customers of independent workshops

Ranking	Attribute number	Attribute	Mean	Mean	Difference ^b
			importance rating (A)	performance rating (B)	(B) - (A) (C)
1	9	Honesty — work indicated as completed must be completed	3,95	3,06	-0,89 ^a
2	1	Job done right the first time	3,88	2,86	-1,02 ^a
3	8	Reasonable prices	3,64	2,61	-1,03 ^a
4	2	Fast response to complaints	3,60	3,04	-0,56 ^a
5	20	Availability of an informative account	3,58	3,10	-0,48 ^a
6	6	Vehicle ready when promised	3,58	2,97	-0,61 ^a
7	19	Informed in time of overnight stay	3,44	2,95	-0,49 ^a
8	7	Perform only necessary work	3,42	3,06	-0,36 ^a
9	14	Accurate quotations	3,40	2,71	-0,69 ^a
10	16	Availability of spare parts	3,37	2,52	-0,85 ^a
11	4	Service available when needed	3,35	2,98	-0,37 ^a
12	5	Courteous and friendly service	3,29	3,35	+0,06
13	3	Able to do any job needed	3,19	2,81	-0,38 ^a
14	15	Fast service on minor repairs	3,19	3,09	-0,10
15	21	Personal contact with mechanic	3,00	3,26	+0,26
16	17	Clean and attractive waiting rooms	2,41	2,40	-0,01
17	18	Clear signs indicating reception, parking, etc.	2,40	2,44	+0,04
18	12	Availability of substitute transport	2,27	1,72	-0,55 ^a
19	10	Conveniently close to home	2,26	2,86	+0,60 ^{ac}
20	11	Conveniently close to work	2,03	2,40	+0,37
21	13	Regular reminder/maintenance notices	1,86	1,36	-0,50 ^a

^aSignificant at $P < 0,05$.

^bA negative coefficient in column C indicates that the importance rating exceed the performance rating regarding that particular attribute, and vice versa.

^cThe only instance where performance exceed importance and the difference is significant at the $P < 0,05$ level.

seem to indicate that independent workshops also do not fully satisfy the requirements of their customers.

Advantages of an importance-performance analysis

An importance-performance analysis is a useful technique for evaluating the elements of a marketing programme. A feature thereof is that results can be graphically displayed on a two-dimensional grid, which facilitates the interpretation of information (Martilla & James, 1977). Using a multi-dimensional scaling technique the information contained in Tables 5 and 6 regarding both respondent groups can be plotted as shown in Figures 1 and 2 respectively. Although the positioning of the axes and the naming of quadrants are based on subjective judgement it does give a clear indication of the attributes on which management will have to concentrate its efforts.

Figure 1 identifies the attributes that require the attention of the management of franchised dealerships, namely those located in the top, left quadrant. They are:

1. Job done right the first time.
8. Reasonable prices.
9. Honesty — work that is said to be completed, must be completed.
19. Informing customers in good time if vehicle must stay overnight.
14. Accurate quotations.
21. Personal contact between customer and mechanic who is responsible for repairing his vehicle.

Compared to Figure 1, Figure 2 shows the degree to which independent workshops are more successful with regard to satisfying the requirements of their customers. They have, for

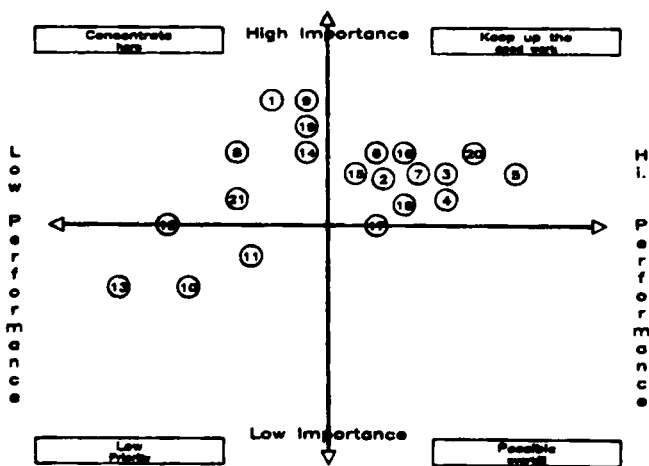


Figure 1 Importance-performance grid: Customers of franchised dealerships.

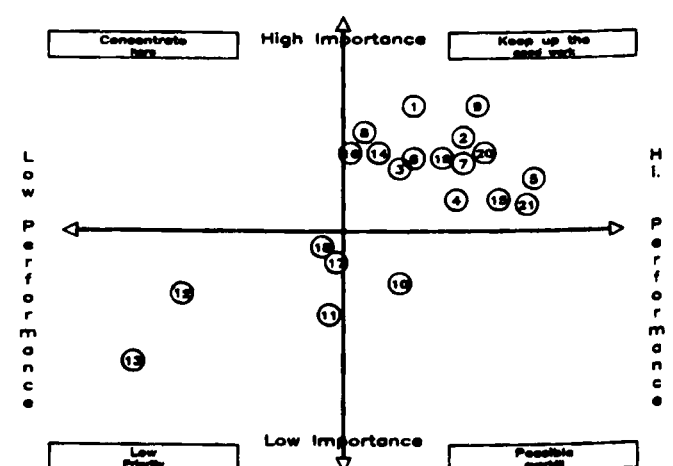


Figure 2 Importance-performance grid: Customers of independent workshops.

instance 15 attributes in the quadrant termed 'Keep up the good work', compared to the 11 of franchised dealerships. Furthermore, franchised dealerships have six attributes in the quadrant termed 'Concentrate here' compared to the independent workshops, who have none.

Managerial implications

Although these findings are the result of an isolated study the managerial grid can be used, by the management of franchised dealerships in particular, to identify attributes whose performance should be improved. It also identifies attributes that may be consuming too many resources.

Possible limitations

Reliability is limited by sample size in any research that does not measure the entire population (Richardson & Fogg: 217). As the sample was drawn from one geographical area only, certain methodological questions could be raised. Two further limitations are the possibility that only dissatisfied consumers in the sample responded and the low response rates of certain questions (see Table 2). Furthermore, the possibility exists that important attributes of a motor repair service were omitted.

Summary of findings

The most important finding of this study is that independent workshops perform certain important attributes of a motor repair service better than franchised dealerships do.

These attributes are:

personal contact with mechanic;
job done right the first time;
informed in time if vehicle must stay overnight;
reasonable pricing;

fast service on minor repairs;
fast response to complaints;
honesty — work indicated as completed, must be completed;
vehicle ready when promised; and
courteous and friendly service.

It was also established that neither franchised dealerships nor independent workshops fully satisfy market requirements, although the latter's performance appears to be superior.

Notes

1. Confidential discussions with the Marketing Directors of two motor manufacturers.
2. Same sources as in note 1.
3. An attribute rated important on the questionnaire was assigned a value of three.

References

- Berdie, D.R. & Anderson, J.F. 1976. Mail Questionnaire Response Rates: Updating Outmoded Thinking. *J. Mark.*, vol. 40, January, 71–80.
- Crandall, R.W. 1970. The Decline of the Franchised Dealer in the Automobile Repair Market. *J. Bus.*, vol. 43, January, 19–30.
- Martilla, J.A. & James, J.C. 1977. Importance-Performance Analysis. *J. Mark.*, January, 77–79.
- Moyer, M.S. & Whitmore, N.M. 1976. An Appraisal of the Marketing Channels for Automobiles. *J. Mark.*, vol. 40, July, 35–40.
- Pretorius, S.G. 1973. 'n Bedryfsekonomiese Studie van die Motorhandel in Bloemfontein, met spesiale verwysing na Agentskaphouers. Unpublished M.Com. dissertation, University of the Orange Free State, Bloemfontein, 1973, 143 p.
- Richardson, L. & Fogg, D.N. 1970. Service Patronage Patterns and new Product Warranties: A Pilot Study of Automobiles. *J. Bus. Res.*, July, 213–217.