
What drives customer loyalty: An analysis from the telecommunications industry

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Abstract In today's globalised and borderless market, quality and productivity are essential for the survival and growth of any organisation. Both these factors depend mainly on the attraction and retention of customers. Thus the customer is the main focus for any successful business. Business success depends on organisations understanding and meeting customers' needs and demands. Earlier researchers have argued that a high degree of customer satisfaction does not always translate into loyalty. This study analyses the factors that contribute to customer satisfaction, particularly in the service sector. It focuses on the Digital line II Service offered by Telekom Malaysia Berhad (TMB) – the main telecommunications service provider in Malaysia. The SERVQUAL tools advocated by Parasuraman and others are used to measure the current level of service quality and satisfaction in the Digital line II Service by using a 16-item testing toll. The study reveals that there is a significant relationship between customer satisfaction and the implementation of service quality. The findings also suggest that the reliability dimension of SERVQUAL consists of three elements, namely a fault-reporting centre, response time and restoration time which have a strong correlation with customer satisfaction. The findings also confirm that a high level of customer satisfaction is not translated into customer loyalty. Empirical testing (independent *t*-test, analysis of variance and correlation coefficient), however, identifies the four service quality factors that are significantly correlated with customer loyalty.

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INTRODUCTION

In the emerging scenario of a globalised economy, the Government of Malaysia has embarked upon a privatisation programme. The main objective is to make the operation and development of

the privatised organisations more effective and competitive. The Department of Telecommunications, Malaysia (Jabatan Telekom Malaysia, JTM) was the first government body to experiment with privatisation. On 1st January, 1987 JTM

was privatised and a new company was formed: Telekom Malaysia (TM). This new company did not just take over the functions of JTM, new responsibilities were also entrusted to it.

Since privatisation, TM has striven to become a world-class telecommunications service provider. Many quality management programmes have been introduced and practised company-wide. To start with, in 1991 TM introduced the Quality Control Circle unit (QCC) to identify and recommend remedial action for any gaps that existed in TM's daily interaction with customers. Recognising that customers are a company's most important asset, in 1994 TM instituted Total Customer Satisfaction (TCS) which is targeted directly at its customers. In order to integrate the quality concept into customer services the 'customer service excellence' programme is implemented throughout the organisation.

As a step towards the achievement of Malaysia's Vision 2020, the government initiated the Multimedia Super Corridor (MSC) programme. This is a programme to which information technology has a vital contribution to make for economic growth. Thus service quality in the information technology industry, and more particularly the telecom industry, is of great significance.

LITERATURE REVIEW

SERVQUAL is the most comprehensive and frequently cited tool for measuring and managing service quality. It was devised by three well-known figures in service marketing, Parasuraman, Zeithaml and Berry. The service quality measurement methodology was first introduced in 1985 and subsequently improved upon in a series of publications.¹⁻⁵

Parasuraman *et al.*'s model suggests that

the differences between customers' expectations about the performance of a general class of service providers and their assessment of the actual performance of a specific firm in that class results in perceptions of quality. This is also widely known as gap analysis. To measure a customer's appraisal of excellence in a service experience they developed a 22-item survey instrument based on their previously-defined categories of service quality. Further research into the identification of latent service quality constructs (using factor analysis) led to the identification of five service quality dimensions.

Parasuraman *et al.*'s 1988 model of service quality was considered the best evaluative tool for the comparison of service excellence by the customer.^{6,7} Bitner *et al.*, however, proposed an alternative method and defined service quality as the customer's overall impression of the relative inferiority/superiority of an organisation and its service offerings. In most service organisations, impressions of quality are formed during the interaction between the customer and the firm's contact personnel. Thus, service quality is highly dependent on employees' performance during service transactions. According to Bitner *et al.* the empirical results from both service quality and service satisfaction affirm that customer-employee interactions are interdependent and the human element in the service transaction is also important.⁸ This has been further supported by close examination of the scale items for each service quality dimension which reveals that a majority of the service quality items relate directly to the human interaction element of service delivery. Thus, while providing a service firms should give priority to human values in developing a better service strategy — doing something extra and doing it

imaginatively are key elements in the transaction. Managing the first and the last four minutes of the transaction in an impressive manner is another area of concern. In addition, the studies showed that customers are prepared to pay more for excellent service so price is not the most important factor.

Most studies have attempted to provide a 'generalisable' measure of service quality across industry.⁹⁻¹³ They have also argued that service quality could be used to determine the level of customer satisfaction. By using the expectation model of SERVQUAL, they found that the delighted customers of health care services are those whose expectations have been exceeded. Antreas, while studying the Greek banking sector, found that service provider perceptions about customer satisfaction are a function of perceived service quality.¹⁴ Looking at a low-contact service, ie car servicing, Mittal and Lassar found that there was a relationship between customer satisfaction and service quality.¹⁵ Similarly, Elnan and Andersen proved a positive relationship between service quality and customer satisfaction in the bus industry in Norway.¹⁶ Fornell *et al.* argued that perceived quality, which had been explained as the served market's evaluation of recent consumption experienced, would have a direct and positive impact on overall customer satisfaction.¹⁷ In their development of the American Customer Satisfaction Index (ACSI) they concluded that overall customer satisfaction, especially for ACSI, has three antecedents, ie perceived service quality, perceived value and customer expectation.

Reviews of satisfaction literature document the dramatic increase in consumer satisfaction and dissatisfaction (CS/D). LaTour and Peat have played a leading role in tying CS/D theory to

social science research.¹⁸ Several models have been proposed, out of which body of theoretical and empirical research has come the widely accepted confirmation/disconfirmation paradigm whereby CS/D is viewed as resulting from a type of comparison process. Prior to purchase and use of a brand, the consumer forms certain expectations of its performance in a particular use situation. These expectations are predictions of the nature and level of performance the user will receive. After using the brand, the customer compares the perceived actual performance with the expected performance. Confirmation results when the two performances match. A mismatch will cause a positive or negative disconfirmation. In turn confirmation/disconfirmation leads to an emotional reaction called satisfaction/dissatisfaction.¹⁷ Numerous theoretical structures have been proposed to examine the antecedents of satisfaction and develop meaningful measures of the construct. Four psychological theories may be considered most important in predicting the effects of product evaluation and customer satisfaction. They are: cognitive dissonance (assimilation); contrast; generalised negativity; and assimilation contrasts.¹⁹

In a somewhat different direction, social equity has been used to explain the antecedent of CS/D. A customer evaluates the benefits received from a brand in relation to its cost (price and effort) and then compares this ratio with the corresponding cost/benefit ratio realised by some other relevant person (eg the seller, a friend). The basis for comparison becomes the degree of equity which customers perceive between what they achieve and what the other person achieves.²⁰

There are a few comments to make about the relationship between CS/D and outcomes. An important implication for producers or service providers of

frequently bought goods/services is that they must continually provide more benefits to keep their brands in the forefront of customers' minds. If companies do not strive constantly for exceptional performance, positive satisfaction with the brand will slowly decay through the brand's repeated use or through the introduction of similar brands. In short, the brand or product-type norm can become so similar to the focal brand that the zone of indifference shifts to include it within its range. Consequently, the customer will eventually have either a neutral or no emotional response to the evaluation of focal brand performance.²¹

Finally, Oliver suggests an integrated model of customer satisfaction which deals well with more general attitude.²² Specifically, satisfaction appears to mediate changes between pre-exposure and post-exposure attitudinal components. The nature of the mediatorial process is predicted by Helson's adoption level theory (according to which pre-exposure cognition serves as the customer's adoption level). A cognitive comparison between the adaptation level and actual experience determines the manner in which subsequent evaluations will deviate from the adaption level. The evaluation then becomes a revised adaption level, used in future product performance evaluations.

Service quality has become a principal competitive weapon in the service industry. Services by definition are intangible and are also not easily duplicated. Quality on the other hand, is differentiable and stems from customers' expectations. It is, therefore, necessary to identify and prioritise customers' expectations of service quality and incorporate these expectations into a service process for improving quality.

According to Pilzer, however, the new law in modern business is no longer to

'find a need and fill it, but rather to imagine a need and create it'.²³ This is how today's business environment works. In a highly competitive business world, firms cannot compete on yesterday's standards and expect to be the winners today. This is because technological changes are rapid, common and discontinuous, leading to relatively short product life spans. It is very important for a firm to be innovative and create different standards of products or services to meet future demand. This concept is important in providing the edge in business superiority and is likely to increase customer loyalty. 'Loyalty' refers to the strength of a customer's intent to purchase again goods or services from a supplier with whom they are satisfied.²⁴ There are other terms used to illustrate the meaning of loyalty, eg relationship marketing, frequency marketing, one-to-one marketing and customercentric marketing. These are similar to loyalty because their main objective is to improve customer retention and maximise market share.

In relationship marketing for example, it has been suggested that firms' business strategies must concentrate on attraction and retention rather than, as is traditional in sales-oriented companies, transactions.²⁵ Relationship marketing emphasises building and maintaining long-term profitable relationships with customers and other stakeholders by creating superior value and satisfaction. Many studies have shown that the best salespeople are those who are highly motivated and who are customer-problem solvers and relationship builders.²⁶ According to Parasuraman *et al.* market leadership through customer loyalty can be achieved if a firm's employees play a major role in creating and maintaining trust and the relationship between the firm and its customers.²⁷

Customers may be loyal because of high switching barriers or a lack of real

alternatives. Satisfied customers may not be loyal, but the probability of them defending the relationship if they are satisfied is greater. The market trend has proved that most exit barriers are limited with regards to durability. Companies tend to consider customer satisfaction the only viable strategy for keeping existing customers. Bolton and Drew have found a positive correlation between customer satisfaction and loyalty.²⁸ It is interesting to note that customers' behavioural intentions have often been used as surrogate indicators of the loyalty construct. Fornell measured loyalty with items that capture repeat purchase intention and the price differential as the factor prompting loyal customers to switch.²⁹

Based on the authors' review of the literature with regard to the concepts of service quality, customer satisfaction and loyalty, the following hypotheses were formulated and will be tested by the application of appropriate statistical tools:

- H1:** overall quality of service exerts a strong influence on the overall level of customer satisfaction for Digital line II in Telekom Malaysia Berhad
- H2:** a high level of customer satisfaction will result in customer loyalty for Digital line II in Telekom Malaysia Berhad
- H3:** a high level of overall service quality will result in customer loyalty for Digital line II in Telekom Malaysia Berhad.

RESEARCH METHODS

Sampling

The study population was Digital line II subscribers in Malaysia. Digital line II is a version of digital leased line offered by Telekom Malaysia (TMB) since 1994. The current trend shows that there are

two main subscribers to Digital line II, ie corporate and business customers (CBCs) and major business customers (MBCs). CBCs contribute over RM1m in revenue to TMB while MBCs' revenue contributions are between RM100,000 and RM1m. At December, 1998, there were about 284 CBCs and 416 MBCs using the service with the total number of 4,092 circuits. In selecting the survey sample, the stratified random sample of probability sampling was adopted. The interview method of data collection was used in order to ensure more reliable results and to ensure that the sample was representative of Digital line II customers.

The selection criteria were based on external customers (ie customers other than government and subsidiary company subscribers), type of industry, location and number of lines leased from TM. Using these criteria 245 respondents were selected for either personal interview, telephone interview or a mail survey. These interviews and the survey resulted in 150 questionnaires usable for data analysis.

Measurement

Using the structured questionnaire, the study measured the service quality (SQ), customer satisfaction (CS) and customer loyalty (CL). To ensure the content validity of these measures, a thorough review of the relevant literature was undertaken and the following points were identified:

- service quality: the original SERVQUAL construct provided by Parasuraman was used during the pilot study. After the initial analysis, it was found that only 16 items seemed to be strongly related to Digital line II service quality aspects. This is in line with Carman whose initial assessment

Table 1: Rotated component matrix for SQ variable

SQ Items	Components			
	1	2	3	4
SQ1 (Getting product information)	0.183	0.728	0.045	0.079
SQ2 (Outlet services)	0.236	0.886	0.134	-0.021
SQ3 (Advice and consultation)	0.235	0.740	0.115	0.146
SQ4 (Professionalism)	0.226	0.860	0.157	0.042
SQ5 (Product knowledge)	0.182	0.884	0.058	-0.012
SQ6 (Understanding business needs)	0.941	0.246	0.159	0.074
SQ7 (Channel of ordering)	0.802	0.274	0.130	0.092
SQ8 (Status order's feedback)	0.895	0.188	0.138	0.051
SQ9 (Delivered specifications)	0.824	0.245	0.112	0.023
SQ10 (Delivery time)	0.923	0.170	0.098	0.018
SQ11 (Operating hours)	0.801	0.197	0.304	0.071
SQ12 (Timeliness of billing)	0.143	0.083	0.173	0.889
SQ13 (Accuracy of billing)	-0.003	0.055	0.308	0.848
SQ14 (Fault reporting centre)	0.235	0.130	0.859	0.247
SQ15 (Response time)	0.177	0.165	0.922	0.159
SQ16 (Restoration time)	0.214	0.113	0.930	0.186
Eigen Values	7.446	2.250	2.127	1.051
% variance	46.540	15.665	13.291	6.569
Cumulative %	46.540	62.206	75.497	82.066

of the scale resulted in his using a subset of the original SERVQUAL construct.³⁰ All 16 items measured customers' perceptions of the performance of Digital line II service quality on a five-point Likert scale ranging from '1 = strongly disagree' to '5 = strongly agree' where a rating of 3 indicates customers who 'feel neutral'. The initial result for inter-item reliability was tested using Cronbach Alpha. $\alpha = 0.893$ indicates that all the factors in the variable (SQ) form a single, strongly cohesive and conceptual construct and it is within the acceptable range of $\alpha = 0.7$ ³¹

— customer satisfaction and customer loyalty were measured by single item scales.³² These single item scales were used to gather the general opinion of the individual constructs of satisfaction and loyalty.

Analysis and discussion

The analysis was conducted in three stages. The first stage identified the factors contributing to service quality. The

second stage used regression analysis on the factor scores to identify the association of service quality elements with customer satisfaction. The third level of analysis was carried out to find out the association between customer loyalty and customer satisfaction. The following discussion provides an overview of the data analysis and its marketing implications.

FACTOR ANALYSIS

Table 1 demonstrates the result of the factor analysis for the 16 service quality items for Digital line II. The result shows the grouping of the criteria into four factors according to their factor loading. The factor loading indicates the correlation between the factors and the original criteria. Based on the above results, the following four groups of service quality factors were identified:

— competence: factor 1 hinges mainly on competence which include items such as the relationship of sales personnel and communication

Table 2 : Regression results of customer satisfaction on four service quality factors

No.	Variable	Standardised β co-efficient
	Constant	1.355
1	SQ6 (Understanding business needs)	0.208
2	SQ11 (Operating hours)	0.198
3	SQ15 (Response time)	0.195
4	SQ14 (Fault reporting centre)	0.197

F-value: 36.25 (not significant at 5% level)

materials that have a direct influence on customers' buying decisions. The criteria that fall under this category include SQ1, SQ2, SQ3, SQ4 and SQ5

- assurance: factor 2 depends on skill, knowledge and courtesy of employees and their ability to convey trust and confidence among customers. The items that fall under this dimension are SQ6, SQ7, SQ8, SQ9, SQ10 and SQ11
- tangibility: factor 3 refers to the physical items of services that include SQ12 and SQ13
- reliability: factor 4 stands for the ability to perform the promised service dependably and accurately. The three items that fall under this dimension are SQ14, SQ15 and SQ16.

To summarise, it was found that service quality can be classified under four factors, ie competence, assurance, tangibility and reliability. Although the SERVQUAL study by Parasuraman identified five dimensions — tangibles, reliability, responsiveness, assurance and empathy — there are a number of studies which have found that the final number of dimensions for SERVQUAL is not five, even with the retention of the original 22-items of SERVQUAL in their studies. For example, Headley and Miller, in their study on medical services, found six dimensions of SERVQUAL.³³

Similarly, in a dental service setting,

Clow *et al.* identified seven dimensions³⁴ even though they used Parasuraman's original SERVQUAL items and the seven-point Likert response scale.

HYPOTHESIS TESTING AND DISCUSSION

The hypothesis testing was done by using the Spearman Rho (R_s) correlation coefficient and the regression analysis using the enter method. The analysis was done to find out whether the overall quality of service exerts a strong influence on the overall level of customer satisfaction, particularly for the Digital line II service offered by TM. The data analysis was carried out using SPSS (Version 9) software.

In analysing the results for Spearman Rho (R_s) correlation coefficient, all the service quality (SQ) items were calculated. The result for the correlation coefficient between overall service quality and overall customer satisfaction shows the hypothesised positive signs of $R_s = 0.516$. This indicates that a relationship between overall service quality and overall customer satisfaction does exist.

The regression model is used to show that $R^2 = 0.518$, ie 51.8 per cent of the observed variability in customer satisfaction is explained by the 16 service quality items under study. Accordingly, H1 is substantiated. This is in line with the study by Fornell *et al.*, in which they concluded that service quality has a

Table 3: Factors influencing customer loyalty

Factors	Loyal	N	μ	t-value	R-value
SQ7	Yes	98	3.85	1.995 ^a	0.162 ^b
	No	52	3.46		
SQ11	Yes	98	3.38	2.332 ^a	0.188 ^b
	No	52	2.90		
SQ14	Yes	98	3.46	2.855 ^a	0.229 ^c
	No	52	2.77		
SQ15	Yes	98	3.28	3.237 ^a	0.257 ^c
	No	52	2.52		
SQ16	Yes	98	3.28	3.446 ^a	0.273 ^c
	No	52	2.46		

^aThe t-value is significant at the 0.05 level

^bCorrelation is significant at the 0.05 level (2-tailed)

^cCorrelation is significant at the 0.01 level (2-tailed)

positive and direct effect on the overall level of customer satisfaction.³⁵ Similarly, studies by Antreas,³⁶ Mittal and Lassar,³⁷ and Elnan and Andersen³⁸ support the finding of the present study.

Even though the above analysis indicates that the relationship between customer satisfaction and service quality does exist, the question of which service quality item has the stronger influence on customer satisfaction remains unanswered. Thus, the multiple regression ‘stepwise method’ was utilised to find out which of the 16 service quality items (independent variables) can be considered the main predictor of customer satisfaction. The regression analysis shows that only four service quality items were identified as good predictors of customer satisfaction. They are SQ6 (understanding business needs), SQ11 (outlet services), SQ14 (fault reporting centre) and SQ15 (response time).

In addition, the results of analysis of variance (ANOVA) with an F -value = 36.25 (greater than 2.37 for $n_1 = 4, n_2 = \infty$) indicates that there is a relationship between the dependent variable (CS) and the four independent variables (service quality factors). In other words, since the observed significance level is less than 0.0005, the null hypothesis that there is no linear

relationship between customer satisfaction and the four identified factors can be rejected at 95 per cent confidence interval. Thus, the result indicates that the four service quality items are the main factors that might affect customer satisfaction of Digital line II service customers.

Furthermore, the regression equation shows that if no initiatives are taken to increase the level of the identified variables (ie SQ6, SQ11, SQ14 and SQ15) the level of customer satisfaction will decrease. In addition, TM must put more effort into understanding customers’ needs since SQ6 (understanding business needs) has a higher coefficient beta of 0.208 when compared to the other variables. The analysis further highlights the two vital dimensions of service quality that could increase the level of customer satisfaction, ie assurance and reliability. In this situation, SQ6, SQ11 (assurance) and SQ14, SQ15 (reliability) were identified as important determinants for customer satisfaction. Thus it can be inferred that the assurance and reliability dimensions of service quality have a stronger influence on customer satisfaction level for the Digital line II service in Malaysia.

The next level of analysis was carried out to find out the relationship between customer loyalty and service

quality satisfaction. Even though the above analysis indicates that there is a relationship between customer satisfaction and service quality, the customer loyalty–service quality satisfaction relationship can be analysed using correlation analysis. The correlation coefficient between customer satisfaction and customer loyalty is found to be not significant at the 0.05 level (2-tailed) where the coefficient value is $R_s = 0.129$. Thus H2, that states a high level of customer satisfaction will result in customer loyalty, is not substantiated. This is in line with the study by Mittal and Lassar in which they argued that a high degree of customer satisfaction does not always translate into loyalty. They found that even if a customer had reported a high level of satisfaction, they still possessed a predisposition to switch service supplier.³⁹ Similarly, Elnan and Andersen, in their study of the bus industry in Norway, proved that the relationship between customer satisfaction and customer loyalty is not significant.⁴⁰

On analysing the SQ variable, however, the Spearman Correlation analysis shows that correlation between SQ and customer loyalty is not significant at 0.05 level (2-tailed) with the coefficient value of $R_s = 0.217$. Moreover, the analysis of variance (ANOVA) shows that SQ variable is significantly related to customer loyalty with F -value = 7.291. Similarly, the result for independent t -test indicates that SQ variable is significantly related to customer loyalty with t -value = 2.700. Therefore, H3, that a high level of overall service quality will result in customer loyalty, is supported. The analysis indicates that focusing on the service quality aspect of the digital leased line service will result in

customer loyalty, particularly in the telecommunications industry in Malaysia.

Since it has been shown that service quality is correlated with customer loyalty, the current study tries to find out the possible relationship between customer loyalty and independent service quality items. Table 3 shows the result of t -test and correlation between customer loyalty and all service quality factors (independent variables). The ANOVA indicates that from the total of 16 service quality items tested only five were found to be significantly related to customer loyalty. The five factors are SQ7, SQ11, SQ14, SQ15 and SQ16. The F -value for all these factors are between $F = 3.980$ (SQ7) and $F = 11.877$ (SQ16). The t -test result indicates that the perception between the two test groups (loyal and not loyal) are found to be significantly different at the 0.05 level.

Thus, the results attest that in order to build customer loyalty for its Digital line II service TM has to concentrate more on the reliability dimension of service quality which includes fault reporting centre (SQ14), response time (SQ15) and restoration time (SQ16).

CONCLUSION

In sum, the perceived service quality performance evaluation was identified as the direct outcome of consumers' experiences. These outcomes of recent consumption will have a direct and positive impact on overall customer satisfaction. Furthermore, four independent service quality factors have been identified as the main predictors of customer satisfaction, ie understanding business needs, operating hours, fault reporting centre and response time.

Although most empirical studies have found a positive relationship between customer satisfaction and customer

loyalty, the present study has not. The results of independent *t*-test and correlation coefficient in the study show that there is no significant difference between the 'loyal' and 'not loyal' customers with regards to their perception of overall satisfaction. The results further indicate that a high degree of customer satisfaction does not always translate into loyalty.

The analysis establishes that if telecommunications companies want to boost customer loyalty, especially for digital leased line services, they must consider an improvement in the five identified variables. This is because all the factors (ie channel of ordering, operating hours, fault reporting centre, response time and restoration time) indicate high correlation with customer loyalty as compared to other variables. In addition, improvement of overall service quality will also have some positive impact on customer loyalty.

This study was completed with a moderate sample size because there were only 700 Digital line II subscribers as of December, 1998. The results of this study cannot be generalised because of its limited scope. In view, however, of the fact that TM controls 98 per cent of the market for digital leased line services, the results can be generalised for the particular market. To conclude, the results will serve as a useful guideline for any telecommunication service provider which intends to offer similar services to their customers. The study results could also be used as a benchmark, especially for companies that have already launched their digital leased line service to customers.

Future research to analyse the relationship between customer satisfaction and service quality within the telecommunications industry in Malaysia as a whole is required to confirm the results of the current investigation.

Further researchers are encouraged to take into consideration all the services offered in the telecommunications market and expand their scope to include all major telecommunication service providers in Malaysia. Research is also needed to assess the implementation of service quality on customer satisfaction level across the various industries in Malaysia.

References

- 1 Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1985) 'A conceptual model of service quality and its implication for future research', *Journal of Marketing*, Vol. 49, pp. 41–50.
- 2 Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1988) 'SERVQUAL: A multi-item scale for measuring customer perceptions of service quality', *Journal of Retailing*, Vol. 64, Spring, pp. 12–40.
- 3 Parasuraman, A., Berry, L. L. and Zeithaml, V. (1991) 'Refinement and assessment of the SERVQUAL', *Journal of Retailing*, Vol. 67, No. 4, pp. 420–449.
- 4 Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1988) 'Communication and control: Process in the delivery of service quality', *Journal of Marketing*, Vol. 52, pp. 35–48.
- 5 Zeithaml, V. A. (1988) 'Consumer perceptions of price, quality and value: A mean-end model and synthesis evidence', *Journal of Marketing*, Vol. 52, pp. 2–22.
- 6 Oliver, R. L. (1993) 'A conceptual model of service quality and service satisfaction: Compatible goals, different concepts', *Advances in Service Marketing Management*, Vol. 2.
- 7 Cronin, J. J. Jr. and Taylor, S. A. (1992) 'Measuring service quality: A reexamination and extension', *Journal of Marketing*, Vol. 56, pp. 55–68.
- 8 Britner, M. J., Booms, B. H. and Tetreault, M. S. (1990) 'The service encounter: Diagnosing favorable and unfavorable incidents', *Journal of Marketing*, Vol. 54, pp. 71–84.
- 9 Carman, J. M. (1990) 'Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions', *Journal of Retailing*, Vol. 66, No. 1, pp. 33–55.
- 10 Finn, D. W. and Lamb, C. W. (1991) 'An evaluation of the SERVQUAL scale in retail setting, in Solomon, R. H. (ed.), 'Advances in consumer research', Vol. 18, Association of Consumer Research, Provo, UT.
- 11 Babakus, E. and Boller, G. W. (1992) 'An empirical assessment of the SERVQUAL scale', *Journal of Business Research*, Vol. 24, pp. 253–268.
- 12 Taylor, S. A. and Cronin, J. J. (1994) 'Modelling patient satisfaction and service quality', *Journal of*

- Health Care Marketing*, Vol. 14, No. 1, pp. 34–44.
- 13 Clow, K. E., Fischer, A. K. and O'Bryan, D. (1995) 'Patient expectations of dental services', *Journal of Health Care Marketing*, Vol. 15, No. 3, pp. 23–31.
 - 14 Antreas, D. A. (1997) 'Another look into the agenda of customer satisfaction', *International Journal of Bank Marketing*, Vol. 15, No. 7, pp. 264–278.
 - 15 Mittal, B. and Lassar, W. M. (1998) 'Why do customers switch?', *The Journal of Service Marketing*, Vol. 12, No. 3, pp. 177–194.
 - 16 Elnan, H. and Andersen, O. (1999) 'Measuring and monitoring service quality in the bus industry', Proceedings of the 3rd Asian Academy of Management Conference, Universiti Sains Malaysia, Malaysia, pp. 385–392.
 - 17 Fornell, C., Johnson, M. D., Anderson, E. W., Cha J. and Bryant, B. E. (1996) 'The American Customer Satisfaction Index: Nature, purpose and findings', *Journal of Marketing*, Vol. 60, Oct., pp. 7–18.
 - 18 LaTour, S. A. and Peat, N. C. (1979) 'Conceptual and methodological issues in consumer satisfaction research', *Advances in Consumer Research*, Vol. 6, MI Association for Consumer Research, pp. 431–437.
 - 19 Anderson, R. E. (1973) 'Consumer dissatisfaction: The effect of disconfirmed expectancy of perceived product performance', *Journal of Marketing Research*, Vol. X, Feb., pp. 38–44.
 - 20 Swan, J. E. and Mercer, A. A. (1998) 'Consumer satisfaction as a function of equity and disconfirmation', in 'Concept and theory in consumer satisfaction and complaining', Proceedings of the Sixth Annual Conference on Consumer Satisfaction and Dissatisfaction, Day, R. L. and Hunt, H. K. (eds.), Bloomington School of Business, Indiana University.
 - 21 Oliver, R. L. (1979) 'An opponent process model of consumer satisfaction/dissatisfaction dynamics,' Proceedings of the Division 23 program, 87 the Annual Convention of the American Psychological Association, Ross, I. (ed.) pp. 81–82.
 - 22 Oliver, R. (1980) 'A cognitive model of antecedents and consequences of satisfaction decisions', *Journal of Marketing Research*, Vol. 17, Nov., pp. 460–469.
 - 23 Pilzer, P. Z. (1990) 'Unlimited wealth, the theory and practice of economic alchemy', Crown Publisher, New York.
 - 24 Soderlund, M. (1998) 'Customer satisfaction and its consequences on customer behaviour revisited', *International Journal of Service Industry Management*, Vol. 9, No. 2, pp. 169–188.
 - 25 Berry, L. L. (1995) 'Relationship marketing of services — growing interest, emerging perspective', *Journal of Academy Marketing Science*, Fall, pp. 236–237.
 - 26 Brewer, G. (1994) 'Mind reading: What drives top salespeople to greatness', *Sales and Marketing Management*, May, pp. 82–88.
 - 27 Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1991) 'Understanding customer expectations of service', *Sloan Management Review*, Spring, pp. 39–48.
 - 28 Bolton, R. N. and Drew, J. H. (1991) 'A multistage model of customers' assessments of service quality and value', *Journal of Consumer Research*, Vol. 17, pp. 375–384.
 - 29 Fornell *et al.* (1996) *op. cit.*
 - 30 Carman (1990) *op. cit.*
 - 31 Nunnally, J. C. (1978) 'Psychometric theory', McGraw Hill Book Co., New York.
 - 32 Mittal and Lassar, W. M. (1998) *op. cit.*
 - 33 Headley, D. E. and Miller, S. J. (1993) 'Measuring service quality and its relationship to future consumer behaviour', *Journal of Health Care Marketing*, Vol. 13, No. 4, pp. 32–41.
 - 34 Clow, K. E., Fisher, A. K. and O'Bryan, D. (1995) 'Patient expectations of dental services', *Journal of Healthcare Marketing*, Vol. 15, No. 3, pp. 23–31.
 - 35 Fornell *et al.* (1996) *op. cit.*, pp. 7–18.
 - 36 Antreas (1997) *op. cit.*, pp. 264–278.
 - 37 Mittal and Lassar (1998) *op. cit.*, pp. 177–194.
 - 38 Elnan and Andersen (1999) *op. cit.*, pp. 385–392.
 - 39 Mittal and Lassar (1998) *op. cit.*
 - 40 Elnan and Anderson (1999) *op. cit.*, p. 392.