

Customer Satisfaction Factors and Its Relationship with Customer Loyalty in Semiconductor Industry

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ABSTRACT The objective of this research paper is to study the factors that influence customer satisfaction and the nature of relationship between the customer satisfaction and customer loyalty in the semiconductor industry. The research identified the following as the most essential elements that contribute to the customer satisfaction in this industry are cost of ownership, the quality of services, the aspect of delivery, and the quality and performance of product. As for the relationship between customer satisfaction and customer loyalty, the correlation analysis indicates that there is a positive and substantiated relationship between the two constructs. This implies that the higher the level of customer satisfaction, the greater the possibility of the customer becoming more loyal.

INTRODUCTION

According to Kotler (1997) in order to companies to survive in an increasingly competitive environment, they must be customer oriented. After underpinning the marketing concept the company must identify customers needs and satisfy them to improve the overall customer retention (Day, 1994). In this situation, customer satisfaction is considered as a necessary condition for customer retention and loyalty and therefore it helps in realising economic goals like turnover and revenue (Reichheld, 1996; Scheuing, 1995).

It is not surprising that companies spend substantial resources to measure and manage their customer satisfaction. However, in spite of 80 to 90 per cent of the customers stated that they are very much satisfied or satisfied with the company, a high degree of satisfaction customers break up relationships and switch brands. Even in industries that traditionally characterised by long term relationships – for example the banking industry – a decrease in loyalty can be noticed, although the vast majority of customer scores high in satisfaction survey (Zollner, 1995, p. 140). Thus, it could be

argued that the increasing emphasis placed on customer satisfaction could in part be attributed to overall decline in levels of customer loyalty or retention. This decline has been attributed to a wide number of factors which include for example greater choice and information available to customers, the “commoditization” of several products, and increase of foreign competition (Anderson and Fornell, 1994; Schriver, 1997).

However, there is some evidence to support the contention that customer satisfaction translates into higher than normal market share growth. Anderson and Fornell (1994) pointed out that customer loyalty is determined to a large extent by customer satisfaction. Another study by Fornell et al. (1996) also offered some evidence of the linkage between customer satisfaction and loyalty. Similarly, Grant (1998) in his report for the American Customer Satisfaction Index found that there is a positive correlation between customer satisfaction and stock market returns.

LITERATURE REVIEW

A Juran Institute study indicated that less than a third of top managers of US' largest corporations believe that their customer satisfaction efforts had provided any economic value to their firm (Passikoff, 1997). According to Jones and Sasser (1995), providing customers with outstanding value may be the only reliable way to achieve sustained customer satisfaction. The greater the satisfaction is with the supplier, the more loyal the buyers are apt to be (Biong, 1993).

Firms must realize that different actions are required to convert neutral customers to satisfied customers than to convert satisfied customers into completely satisfied customers. Kotler (1994) warns marketers to be concerned about customers being merely satisfied versus

completely satisfied, since "customers who are 'just satisfied' will still find it easy to switch suppliers when a better offer comes along." According to him, 44 percent of customers who reported "satisfaction" with a consumer packaged goods later switched brand. However, customer satisfaction is not a sufficient guarantee for customer loyalty (Stauss and Neuhaus, 1997). Gierl (1993) questioned customers who described themselves as basically brand loyalty but stated that they had changed their brand lately. The result showed that the vast majority of switches did not occur due to dissatisfaction but despite satisfaction. For example, concerning coffee, the ratio of satisfied but brand-switching customers was 59% and concerning perfumes was as high as 62%.

A study by Finkelman and Golan (1990) found that the loyalty relation of customers who are very satisfied with the service of their car dealers was only 40% (Ford) and 58% (Chrysler). Similarly, Reichheld and Aspinall (1994) observed that a US car producer was permanently losing market share in the early 1980s even though it always reached better satisfaction scores than its competitors. In this situation, about 90 percent of his customers who switched was satisfied or very much satisfied but had found even better alternative. In a study of the loyalty of retail banking depositors it was found that "completely satisfied" customers were nearly 42 per cent more likely to be loyal than merely "satisfied" customers (Jones and Sasser, 1995).

On the other hand, Rust and Williams (1994) found that greater customer satisfaction resulted in a greater intent to repurchase. LaBarbera and Mazursky (1983) found that satisfaction influences repurchase intentions. Dissatisfaction has been seen as a primary reason for customer defection or discontinuation of purchase. For example, Anton (1996) suggested that customers switch suppliers because they are not satisfied with the company's perceived value, relative to the competition. However, satisfaction in itself will not translate into loyalty (Jones and Sasser, 1995). Satisfaction will foster loyalty to the extent that is a prerequisite for maintaining a favourable relative attitude and for recommending and repurchasing from a store (Dick and Basu, 1994).

Customer satisfaction is considered to be one of the most important outcomes of all marketing activities in a market-oriented firm. The obvious need for satisfying the firm's customer is to

expand the business, to gain a higher market share, and to acquire repeat and referral business, all of which lead to improved profitability (Barsky, 1992). Study by Cronin and Taylor (1992) in service sectors such as banking, pest control, dry cleaning, and fast food, found that customer satisfaction has a significant effect on purchase intentions in all four sectors. Similarly, in the health-care sector, McAlexander et al. (1994) found that patient satisfaction and service quality have a significant effect on future purchase intentions in hospital industry. Getty and Thompson (1994) studied relationships between quality of lodging, satisfaction, and the resulting effect on customers' intentions to recommend the lodging to prospective customers. Their findings suggest that customers' intentions to recommend are a function of their perception of both their satisfaction and service quality with the lodging experience. Hence it was concluded that there is a positive relationship between customer satisfaction and customer loyalty.

Fornell (1992) argued that high customer satisfaction will result in increased loyalty for the firm and the customers will be less prone to overtures of the competition. However, the ability of customer satisfaction scores to predict such loyalty has not been adequately demonstrated (Higgins, 1997). Anderson et al. (1994) expressed the fear that if firms are not able to demonstrate a link between customer satisfaction and economic performance, then firms may abandon the focus on customer satisfaction measurement. There are some evidences to support the contention of customer satisfaction translations into higher than normal market share growth. Practitioners and researchers have not clearly identified a theoretical framework, identifying factors that could lead to the development of customer loyalty (Gremler and Brown, 1997). However, there is a consensus amongst practitioners and academics that customer satisfaction is prerequisite of loyalty (Gremler and Brown, 1997; Cronin and Taylor, 1992). The technical, economical and psychological factors that influence customers to switch suppliers are considered to be additional prerequisites of loyalty (Selnes, 1993; Gremler and Brown, 1997). According to Kandampully and Suhartanto (2000), a "loyal customer" is a customer who repurchases from the same service provider

whenever possible, and who continues to recommend or maintains a positive attitude towards the service provider.

Bloemer and Kasper (1995) distinguish between true and spurious brand loyalty. They suggest that "loyalty not only concerns the behaviour of repurchase but also takes into account the actual behaviour's antecedents. True loyalty is "biased (non-random) behavioural response (purchase) expressed over time with respect to one or more alternative brands which is a function of psychological processes resulting in brand commitment". Spurious loyalty on the other hand is repurchase due to inertia. Thus, while repurchasing itself is not loyalty it influences loyalty as an antecedent.

According to Dick and Basu (1994), there are four different classifications of loyalty which influence repurchase intention in different ways. Oliver (1997) suggested that customer loyalty is "a deeply held commitment to re-buy or re-patronise a preferred product or service consistently in the future. These are despite the situational influences and marketing efforts which have the potential to cause switching behaviour" and progresses in four phases, with each phase representing a greater degree of loyalty. Similar to Anand et al. (1998), Oliver (1997) posits that a series of cognitive processes precede affective decisions. This is a stronger form of loyalty in that in addition to cognition, loyalty is driven by prior attitude towards that stores and at the later stage by satisfaction. There are two dimensions to customer loyalty: behavioural and attitudinal. The behaviour dimension refers to the customer's behaviour on repeat purchases, indicating a preference for a brand or service over time (Bowen and Shoemaker, 1998). Attitudinal dimensions, on the other hand, refers to customer's intention to repurchase and recommend, which are good indicators of a loyal customer (Getfy and Thompson, 1994). A customer who has the intention to repurchase and recommend is very likely to remain with the company.

Based on the literature, there is no doubt that customer satisfaction and customer loyalty are one of the most talked about challenges in any organisation. The importance of customer satisfaction and customer loyalty can not be denied. Given the emphasis on customer satisfaction measurement in companies, doubt arises whether customer satisfaction will

translate to company economic success. Thus, this research aims to study the following:

- 1) The factors that might influence customer satisfaction in semiconductor industry.
- 2) The nature of relationship between customer satisfaction and customer loyalty.

RESEARCH METHOD

Sampling

The sample is derived from a target population consisting of all Ismecca's customers semiconductor industry located in Malaysia and Singapore. This is due to the reason that both countries contributed 52% of the total Ismecca group market share in Asia. Since it is usually not feasible to deal with the whole target population due to the cost involved, samples are taken only from the total of five major customers located in both countries. These five companies represent market share of 65% for total revenue in South Asia.

A total of 250 questionnaires were distributed to respondents from the five selected companies. Every company received 50 questionnaires, which were distributed to the relevant respondents who may influence the purchase decision. The categories of the respondents were the purchaser who buys the product, the equipment manager who evaluates the product, the operational manager who uses the product, and the director who approves the purchase.

In order to ensure maximum output during data collection, self administered technique was employed. In this instance, the questionnaires were sent to the respondents either through email survey or and drop-off method. For the email survey, the respondents were given one week to respond and for the drop-off method the representative picked up the completed questionnaires after five days. Follow up emails and telephone calls were used to remind the subjects after three days. This was to ensure a higher percentage of respond-rate so that the study could proceed smoothly in a shorter time frame.

The data collection procedure resulted in the final sample of 188 (75.2 %) from a total of 250 questionnaires distributed to selected companies for the study.

Measurement

In order to capture the most important factors influencing customer satisfaction and customer loyalty in the semiconductor industry, unstructured and informal telephone interviews were conducted. Since there was very limited study in semiconductor industry, the interview will provide more insight towards the important determinants that are relevant to the operational framework constructed for the industry. Based on these factors coupled with the related researches, a structured questionnaire was developed. Questionnaire consisted of two sections. Section 1 contained the variables identified from the literature reviews and interviews whereas section 2 included the demographic variables for determining association between variables with customer satisfaction and customer loyalty.

Section 1 contained 38 questions with variables related to customer satisfaction and customer loyalty. The questions are structured to measure the perception of the respondents in the most efficient way. Modified Likert-type scale was used for respondents to express their perception on each of the question in which 4-scales were used in order to force respondents to give their answers that reflect their perception most accurately to the research topic. No uncertain answers will be given in the 4-Likert-type scale.

Determinants of Customer Satisfaction

Product Quality: To maintain customer satisfaction and thereby long-run profitability, it is clear that companies should provide products of high quality. It is easy to understand that higher product performance can result in higher customer satisfaction (Shen et al., 2000). However, the relationship between customer satisfaction and product performance is more complicated.

Service Quality: Service quality is considered a critical determinant of competitiveness. It can help an organisation to differentiate itself from other organisations and gain competitive advantage. Superior service quality is a key to improved profitability (Ghobadian et al., 1994). The customer should determine what aspects of the service are the most beneficial rather than the service provider dictating these aspects (Babakus and Boller, 1992). Therefore, it is

necessary to discover the customer's real requirements.

Other Determinants: There is little research found for the delivery, system and cost of ownership dimensions of customer satisfaction. However, based on the customer's company policy and supplier measurement specification as stated in Quest for Gold (QG) and Vendor Performance System Manual (VPS), besides service quality and product quality, there are other important determinants of customer satisfaction. They also found that delivery, system and cost of ownership are relevant to semiconductor industry. QG is based upon the total quality methodologies outlined in the Malcolm Baldrige National Quality Award. On the other hand, VPS is a purchasing functional tool that meets the requirements of ISO9000 and being used to assess vendor performance. Basically, it is a system which encourages participation and involvement of buyer and vendor for continuous improvement in quality, logistics, technology and cost with mutual benefits.

FINDINGS

In order to measure the reliability of the instrument, reliability coefficient were calculated using Statistical Package for Social Science (SPSS) program.

Table 1 shows the results for Cronbach Alpha to test the internal consistency, based on the average inter-item correlation for five variables such as product quality (PQ), service quality (SQ), delivery (DL), cost of ownership (CO) and system (ST). The results indicate that the reliability coefficients values can be considered to be within the acceptable range (Sekaran, 2000) with the exception of ST, which registered alpha value of 0.4928. The value of 0.4928 indicates that the reliability of the measurement for ST is poor and further analysis and study should be conducted to improve the reliability and validity

Table 1: Reliability coefficient of the instrument for each factor

Instrument	Number of items	Reliability coefficient
Product Quality (PQ)	7	0.6494
Service Quality (SQ)	7	0.6865
Delivery (DL)	4	0.8311
Cost Of Ownership (CO)	6	0.7925
System (ST)	8	0.4928

of all items under ST.

The Pearson correlation coefficient (r) is appropriate for interval-scaled variables (Sekaran, 2000). Correlation coefficient ranges between -1 to $+1$ ($-1 < r < +1$). In this situation, the figure connotes strength while the sign signifies direction of the relationship. Guilford (1956) provides a guide in the interpretation of the strength of relationship between two variables, which is known as Guilford's rule of thumb.

Table 2 indicates that there is positive correlation between customer satisfaction and customer loyalty. However, there is no guarantee that customer satisfaction will definitely lead to customer loyalty. The important thing is that, the more the customer is satisfied, the more they may be loyal. In terms of the determinants of customer satisfaction in semiconductor industry, the factors determined in the study are good indicators for customer satisfaction with the exception of ST, which has a low " r " compared to other factors. Moreover, the value recorded shows that the correlation between CSAT and ST is not substantiated. Therefore, there is a possibility either to delete or modify the variable in the future study.

Besides Pearson Correlation, the regression analysis was also employed to determine how well the independent variables i.e. overall PQ,

Table 2: Correlation between Customer Satisfaction (CSAT) and other variables

Variables	r	Sig. (2 tailed)
Overall PQ	0.474**	0.000
Overall SQ	0.558**	0.000
Overall DL	0.539**	0.000
Overall CO	0.568**	0.000
Overall ST	-0.116	0.114
Customer Loyalty	0.704**	0.000

** Correlation is significant at 0.01 level (2 tailed)

overall SQ, overall DL, overall CO and overall ST predicts the dependent variable i.e. CSAT. When they are several explanatory variables present, multiple regression models can be used. When dealing with multiple regression, some researchers suggested an adjusted R^2 to be computed to reflect both the numbers of explanatory variables in the model and the sample size. This is especially necessary when comparing two or more regressions models that predict the same dependent variables but have different numbers of explanatory or predictor

variables (Levine, D.M. et al., 1999).

The results in Table 3 indicate that the best predictor for Customer Satisfaction (CSAT) is cost of ownership (overall CO). This observation correlates with the finding obtained in table 2 by using the Pearson correlation where highest correlation coefficient is recorded by overall CO. The result also shows that overall ST is not included in any of the model. The exclusion of 'overall ST' indicates that this variable is not a good predictor for customer satisfaction (CSAT) in the semiconductor industry. Again, the observation is consistent with the finding obtained above using Pearson Correlation analysis where the relationship between customer satisfaction and system is negligible.

Table 3: Linear regression model summary

Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	0.568 ^a	0.322	0.319	0.4043
2	0.683 ^b	0.467	0.461	0.3597
3	0.714 ^c	0.510	0.502	0.3458
4	0.740 ^d	0.547	0.537	0.3332

^a Predictors: (Constant), overall CO

^b Predictors: (Constant), overall CO, overall SQ

^c Predictors: (Constant), overall CO, overall SQ, overall PQ

^d Predictors: (Constant), overall CO, overall SQ, overall PQ, overall DL

DISCUSSION

In this competitive environment especially in the semiconductor industry, meeting customers' needs on time and at any time is a route to achieving and sustaining competitive advantage. Therefore knowing customers' needs and expectation are prerequisite to meeting their needs. Customer satisfaction study is one of the tools to assess if customers' needs and expectations are met.

Basically, the intention of the study is to explore the important determinants for customer satisfaction and the relationship between customer satisfaction and customer loyalty. In general, the respondents expressed that they are merely satisfied with overall company performance and the possibility for them to switch supplier is there. In fact, the tendency to switch is definite when there is a better alternative available. This finding must be viewed seriously and immediately by the

management. Immediate action must be in place to improve on the actual product quality, service quality, delivery, and cost of ownership, which are found to be among good predictors for customer satisfaction. Perhaps, special attention must be focused on the delivery aspect of the product offered since it is found that majority of the customers are not satisfied with the current product performance as seen by the recorded mean value of 1.88.

This study found positive and substantiated relationship among product quality, service quality, cost of ownership, and delivery and customer satisfaction. Based on the Pearson correlation coefficient 'r', the strength of correlation and relationship is in order of (1) Cost Of Ownership (Overall CO), (2) Service Quality (Overall SQ), (3) Delivery (Overall DL) and (4) Product Quality (Overall PQ). This is in accordance with the Guilford's rule of thumb (1956). Moreover, multiple regression analysis indicates that the best predictor for customer satisfaction is cost of ownership. However, system (overall ST) was found to be insignificant and has negligible relationship with customer satisfaction on both correlation analysis and linear regression analysis. The finding is further supported by the respondents' perception, whereby about 97.3% of respondents rank System the least important of all the factors. Therefore, we can conclude that the most essential elements that contribute to the customer satisfaction in semiconductor industry are cost of ownership, the quality of service, the aspect of delivery, and the quality and performance of product.

With regards to the relationship between customer satisfaction and customer loyalty, the correlation analysis indicates that there is positive and substantiated relationship between the two constructs. This implies that the higher the level of customer satisfaction the greater the possibility of the customer becoming more loyal. This finding correlates with the finding of Biong (1993) who posited that the greater the satisfaction with the supplier, the more loyal the buyers are apt to be. However, Stauss and Neuhaus (1997) argued that customer satisfaction is not a sufficient guarantee for customer loyalty. Thus, even though customer satisfaction was found to be an indicator of customer loyalty in the sense that the customers

will display more favourable attitude towards a particular supplier, it is not a guarantee for them to become loyal to the company especially in semiconductor industry.

In addition, Bruggemann (1996) stated that emotions, expectations and behavioral intentions are influenced by the individual aspiration level and demanding behavior. This means that the willingness of a customer to choose the specific supplier again are influenced by the extent to which the individual will heighten expectations and actively demand their fulfillment. Therefore, we can conclude that customer satisfaction alone does not lead to customer loyalty. Thus, organisation should not rely completely on the customer satisfaction measure alone for customer retention program. There are many other factors beside customer satisfaction measure that need to be taken care of, for example: new product innovation.

Managerial Implication

As already emphasized keeping customer happy is the underlying concept for a company success. The importance of customer satisfaction and customer loyalty can not be denied. The relationship between customer satisfaction and customer loyalty has also been proven in previous researches as well as in this study. However, the emphasis should also be given to the development of measuring model.

In order to manage well, managers need to ensure that the measurements accurately portray what management wants to measure. Effective management could be adversely affected by absence of a valid measurement instrument. The evidence of good validity and reliability associated with the four-scale measurement model suggests that the model in this study could be useful a customer satisfaction measurement tool in the future. Four-scale model, including the four customer satisfaction determinants (excluding the system) and related items can be used as a basis for internal performance and quality measurement and, externally for perceived and desired quality measurement. Constantly assessing customer satisfaction level externally, and striving for internal improvement will definitely bring the company-customer gap closer.

The customer satisfaction score obtained

from this study is definitely a triggering point for the company to ponder. Customer perception on a company should be viewed as a basis or starting point to develop a customer measuring system to systematically and periodically monitor customers' perception on the company before it is too late. Improvement and adjustment should be made in accordance to the finding. Merely claiming customer satisfaction will not get anywhere. Therefore, it is suggested that customer measurement system should be available in companies who want to be customer-oriented to remain competitive in the market (Kotler 1997).

Understanding customer needs and measuring the right thing is very important. Therefore determining important and relevant determinants of customer satisfaction is the first step to research. It is fortunate that in this study, most of the factors identified correlated positively to customer satisfaction. For future research, this measurement tool can be modified or extended to other aspects or into more details.

Limitation

The limitations drawn are based on the real situations that limit the study as a reliable and valid. It is found that customer satisfaction involves emotions, expectations as well as behavioural intention, which are highly personalised and subjective. It is measured by sample's perception rather than by more objective observational techniques. It is possible that an outside observer may have a different perception of the same situation.

This research was carried out in the semiconductor industry, therefore, some of the variables and factors identified in this study were based on primary information through interviews as well as based on Ismeca's customers' company policies and management systems of this industry. Moreover, the factors and variables used in this study are highly dependable on the Malaysia and Singapore market. As such the data collected may not be able to represent the whole semiconductor industry.

SUGGESTION FOR FURTHER RESEARCH

The service management literature suggests that profitability and growth are largely

determined by loyalty (Heskett et al., 1994), and behavioural loyalty itself is a direct result of customer satisfaction (Reicheld and Sasser, 1990; Zeithaml et al., 1990). A firm's market share comes from three sources. Firstly, those customers switching to the company from other firms; secondly, new customers to the market who choose the company for their initial purchase; and finally those customers retained by the company from the previous time period. Therefore, it is suggested that future study be conducted to look into the end result of the relationship between customer satisfaction and customer loyalty i.e. market share, business performance and the effect on internal customer productivity.

It is also suggested that further study be recommended to explore on doubts or findings that are found in this study. One of the examples is the items used to evaluate system (overall ST). In this situation, one might want to look into what is the actual factor that contribute to the low correlation coefficient value, as determined in the Pearson correlation result. In addition, the answer for the low reliability coefficient value found in the study should also be assessed. The future research might be able to provide a better instrument to test and evaluate the system variable.

REFERENCES

- Anand, P., M. Holbrook and D. Stephens. 1988. "The formation of affective judgements: the cognitive affective model versus the independence hypothesis", *Journal of Consumer Research*, 15: 386-91.
- Anderson, E.W. and C. Fornell. 1994. "A customer satisfaction research prospectus", in R.T. Rust, and R.L. Oliver (eds.) *Service Quality: New Directions in Theory and Practices*, pp.241-68.
- , — and D.R. Lehmann. 1994. "Customer satisfaction, market share and profitability", *Journal of Marketing*, 58 (3): 53-66.
- Annual Report 1999*. Switzerland: Ismeca Holding S.A. and Subsidiaries.
- Anton, J. 1996. *Customer Relationship Management: Making Hard Decision With Soft Numbers*. NJ: Prentice-Hall.
- Babakus, E. and G.W. Boller. 1992. "An empirical assessment of the SERVQUAL scale", *Journal of Business Research*, 24: 253-68.
- Barsky, J. 1992. "Customer satisfaction in the hotel industry: measurement and meaning", *Cornell H.R.A. Quarterly*, 7: 20-41.
- Biong, H. 1993. "Satisfaction and loyalty to suppliers within the grocery trade", *European Journal of Marketing*, 27 (7): 21-38.

- Bloemer, J.M.M. and H.D.P. Kasper. 1995. "The complex relationship between consumer satisfaction and brand loyalty", *Journal of Economic Psychology*, 16: 311-29.
- Bogdan, R.C. and S.K. Biklen. 1982. *Quality Research for Education: an introduction to Theory and Methods*. Boston: Allyn and Bacon Inc.
- Bowen, J. and S. Shoemaker. 1998. "Loyalty: a strategic commitment", *Cornell H.R.A. Quarterly*, 2: 12-25.
- Bruggemann, A. 1976. "Zur empirischen Untersuchung verschiedener Formen von Arbeitszufriedenheit", *Zeitschrift für Arbeitswissenschaft*, 30 (2): 71-4.
- Company Profile 2000. Switzerland: Ismeca Holding S.A. and Subsidiaries.
- Cronin, J.J. Jr and S.A. Taylor. 1992. "Measuring service quality: a re-examination and extension", *Journal of Marketing*, 56: 55-68.
- Day, G.S. 1994. "The capability of market-driven organisations", *Journal of Marketing*, 58 (4): 37-52.
- Dick, A.S. and K. Basu. 1994. "Customer loyalty: toward an integrated conceptual framework", *Journal of Academy of Marketing Science*, 22(2): 99-113.
- Finkelstein, D. and T. Goland. 1990. "How not to satisfy your customers", *The McKinsey Quarterly*, 4: 2-12.
- Fornell, C. 1992. "A national customer satisfaction barometer: the Swedish experience", *Journal of Marketing*, 56: 1-18.
- , M.D. Johnson, E.W. Anderson, J. Cha and B.E. Bryant. 1996. "The American customer satisfaction index: nature, purpose and findings", *Journal of Marketing*, 60: 7-18.
- Getty, J.M. and K.N. Thompson. 1994. "The relationship between quality, satisfaction, and recommending behaviour in lodging decision", *Journal of Hospitality & Leisure Marketing*, 2(3): 3-22.
- Ghabadian, A., S. Speller and M. Jines. 1994. "Service quality concepts and models", *International Journal of Quality & Reliability Management*, 11(9): 43-66.
- Gierl, H. 1993. "Zufriedene Kunden als Markennwechsler", *Absatzwirtschaft*, 36(2): 90-4.
- Grant, L. 1998. "Your customers are telling the truth", *Fortune*, February, pp.164-6.
- Gremler, D.D. and S.W. Brown. 1997. "Service loyalty: its nature, importance, and implications", *Advancing service quality: a global perspective*, in Edvardsson et al, (eds.) Quiz 5 Conference Proceedings, Sweden: University of Karlstad, pp. 171-81.
- Heskett, J.L. and T. Jones, G. Loveman, W.E. Sasser and L. Schlesinger. 1994b. "Service profit chain audit", *Harvard Business Review*, March/April, pp. 170-4.
- Higgins, K.T. 1997. "Coming of age", *Marketing News*, 31(22): 1.
- Infineon Technologies. 2000. *Vendor Performance System Manual*. Singapore: Infineon Technologies Asia Pacific.
- Jones, T.Q. and W.E. Sasser Jr. 1995. "Why satisfied customers defect", *Harvard Business Review*, 73(6): 88-99.
- Kandampully, J. and D. Suhartanto. 2000. "Customer Loyalty in the Hotel Industry: The Role of Customer Satisfaction and Image", *International Journal of Contemporary Hospitality Management*, 12(6): 346-351.
- Kotler, P.R. 1994. *Marketing Management: Analysis, Planning, Implementation, and Control*, 8th ed., Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- , 1997. *Marketing Management: Analysis, Planning, Implementation, and Control*, 9th ed., Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- LaBarbera, P.A. and D. Mazurky. 1983. "A longitudinal assessment of consumer satisfaction/ dissatisfaction: the dynamic aspect of the cognitive process", *Journal of Marketing Research*, 20: 393-404.
- Levine, D.M., and M.L. Berenson and D. Stephan. *Statistics for Managers*, 2nd Ed., Upper Saddle, New Jersey: Prentice-Hall.
- McAlexander, J.H., D.O. Kaldenberg, and H.F. Koenig. 1994. "Service quality measurement", *Journal of Health Care Marketing*, 14 (3): 34-40.
- National Semiconductor. 1995. *Suppliers Quest For Gold*. Ca: Headquarter National Semiconductor.
- Oliver, R.L. 1997. *Satisfaction: A Behavioral Perspective of the Consumer*. New York: McGraw-Hill.
- Passikoff, R. 1997. "The limits of customer satisfaction", *Brandweek*, 38 (9): 17.
- Reichheld, F.F. and K. Aspinall. 1994. "Building high-loyalty business systems", *Journal of Retailing Banking*, 15 (4): 21-9.
- , and W.E. Sasser. 1990. "Zero defections: quality comes to services", *Harvard Business Review*, September-October, pp. 105-11.
- , 1996. *The Loyalty Effect*. Boston, MA: Harvard Business School Press.
- Rust, R.T. and R.L. Oliver. 1994. "Service quality: insights and managerial implications from the frontier", in R.T. Rust and R.L. Oliver (eds.): *Service Quality: New Directions in Theory and Practice*, pp. 241-68.
- Scheuing, E.E. 1995. *Creating Customers for Life*. Boston, MA: Productivity Press.
- Schriver, S. 1997. "Customer loyalty: going, going...", *American Demographics*, 19(9): 20-3.
- Sekaran, U. 2000. *Research Methods for Business*. 3rd Ed., New York: John Wiley & Sons, Inc.
- Selnes, F. 1993. "An examination of the effect of product performance and brand reputation, satisfaction and loyalty", *European Journal of Marketing*, 27 (9): 19-35.
- Shen, X.X., K.C. Tan and M. Xie. 2000. "An integrated approach to innovative product development using Kano's model and QFD", *European Journal of Innovation Management*, 3 (2): 91-99.
- Stauss, B. and P. Neuhaus. 1997. "The qualitative satisfaction model", *International Journal of Service Industry Management*, 8(3): 236-49.
- Zeithaml, V. 1988. "Consumer perceptions of price, quality and value: a means-ends model and synthesis of evidence", *Journal of Marketing*, 52: 2-22.
- Zeithaml, V.A., L.L. Berry and A. Parasuraman. 1990.

- Bloemer, J.M.M. and H.D.P. Kasper. 1995. "The complex relationship between consumer satisfaction and brand loyalty", *Journal of Economic Psychology*, 16: 311-29.
- Bogdan, R.C. and S.K. Biklen. 1982. *Quality Research for Education: an introduction to Theory and Methods*. Boston: Allyn and Bacon Inc.
- Bowen, J. and S. Shoemaker. 1998. "Loyalty: a strategic commitment", *Cornell H.R.A. Quarterly*, 2: 12-25.
- Bruggemann, A. 1976. "Zur empirischen Untersuchung verschiedener Formen von Arbeitszufriedenheit", *Zeitschrift für Arbeitswissenschaft*, 30 (2): 71-4.
- Company Profile 2000. Switzerland: Ismecha Holding S.A. and Subsidiaries.
- Cronin, J.J. Jr and S.A. Taylor. 1992. "Measuring service quality: a re-examination and extension", *Journal of Marketing*, 56: 55-68.
- Day, G.S. 1994. "The capability of market-driven organisations", *Journal of Marketing*, 58 (4): 37-52.
- Dick, A.S. and K. Basu. 1994. "Customer loyalty: toward an integrated conceptual framework", *Journal of Academy of Marketing Science*, 22(2): 99-113.
- Finkelstein, D. and T. Goland. 1990. "How not to satisfy your customers", *The McKinsey Quarterly*, 4: 2-12.
- Fornell, C. 1992. "A national customer satisfaction barometer: the Swedish experience", *Journal of Marketing*, 56: 1-18.
- , M.D. Johnson, E.W. Anderson, J. Cha and B.E. Bryant. 1996. "The American customer satisfaction index: nature, purpose and findings", *Journal of Marketing*, 60: 7-18.
- Getty, J.M. and K.N. Thompson. 1994. "The relationship between quality, satisfaction, and recommending behaviour in lodging decision", *Journal of Hospitality & Leisure Marketing*, 2(3): 3-22.
- Ghabadian, A., S. Speller and M. Jines. 1994. "Service quality concepts and models", *International Journal of Quality & Reliability Management*, 11(9): 43-66.
- Gierl, H. 1993. "Zufriedene Kunden als Markennwechsler", *Absatzwirtschaft*, 36(2): 90-4.
- Grant, L. 1998. "Your customers are telling the truth", *Fortune*, February, pp.164-6.
- Gremler, D.D. and S.W. Brown. 1997. "Service loyalty: its nature, importance, and implications", *Advancing service quality: a global perspective*, in Edvardsson et al, (eds.) Quiz 5 Conference Processing, Sweden: University of Karlstad, pp. 171-81.
- Heskett, J.L. and T. Jones, G. Loveman, W.E. Sasser and L. Schlesinger. 1994b. "Service profit chain audit", *Harvard Business Review*, March/April, pp. 170-4.
- Higgins, K.T. 1997. "Coming of age", *Marketing News*, 31(22): 1.
- Infineon Technologies. 2000. *Vendor Performance System Manual*. Singapore: Infineon Technologies Asia Pacific.
- Jones, T.Q. and W.E. Sasser Jr. 1995. "Why satisfied customers defect", *Harvard Business Review*, 73(6): 88-99.
- Kandampully, J. and D. Suhartanto. 2000. "Customer Loyalty in the Hotel Industry: The Role of Customer Satisfaction and Image", *International Journal of Contemporary Hospitality Management*, 12(6): 346-351.
- Kotler, P.R. 1994. *Marketing Management: Analysis, Planning, Implementation, and Control*, 8th ed., Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- , 1997. *Marketing Management: Analysis, Planning, Implementation, and Control*, 9th ed., Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- LaBarbera, P.A. and D. Mazurky. 1983. "A longitudinal assessment of consumer satisfaction/dissatisfaction: the dynamic aspect of the cognitive process", *Journal of Marketing Research*, 20: 393-404.
- Levine, D.M., and M.L. Berenson and D. Stephan. *Statistics for Managers*, 2nd Ed., Upper Saddle, New Jersey: Prentice-Hall.
- McAlexander, J.H., D.O. Kaldenberg, and H.F. Koenig. 1994. "Service quality measurement", *Journal of Health Care Marketing*, 14 (3): 34-40.
- National Semiconductor. 1995. *Suppliers Quest For Gold*. Ca: Headquarter National Semiconductor.
- Oliver, R.L. 1997. *Satisfaction: A Behavioral Perspective of the Consumer*. New York: McGraw-Hill.
- Passikoff, R. 1997. "The limits of customer satisfaction", *Brandweek*, 38 (9): 17.
- Reichheld, F.F. and K. Aspinall. 1994. "Building high-loyalty business systems", *Journal of Retailing Banking*, 15 (4): 21-9.
- and W.E. Sasser. 1990. "Zero defections: quality comes to services", *Harvard Business Review*, September-October, pp. 105-11.
- , 1996. *The Loyalty Effect*. Boston, MA: Harvard Business School Press.
- Rust, R.T. and R.L. Oliver. 1994. "Service quality: insights and managerial implications from the frontier", in R.T. Rust and R.L. Oliver (eds.): *Service Quality: New Directions in Theory and Practice*, pp. 241-68.
- Scheuing, E.E. 1995. *Creating Customers for Life*. Boston, MA: Productivity Press.
- Schriver, S. 1997. "Customer loyalty: going, going...", *American Demographics*, 19(9): 20-3.
- Sekaran, U. 2000. *Research Methods for Business*. 3rd Ed., New York: John Wiley & Sons, Inc.
- Selnes, F. 1993. "An examination of the effect of product performance and brand reputation, satisfaction and loyalty", *European Journal of Marketing*, 27 (9): 19-35.
- Shen, X.X., K.C. Tan and M. Xie. 2000. "An integrated approach to innovative product development using Kano's model and QFD", *European Journal of Innovation Management*, 3 (2): 91-99.
- Stauss, B. and P. Neuhaus. 1997. "The qualitative satisfaction model", *International Journal of Service Industry Management*, 8(3): 236-49.
- Zeithaml, V. 1988. "Consumer perceptions of price, quality and value: a means-ends model and synthesis of evidence", *Journal of Marketing*, 52: 2-22.
- Zeithaml, V.A., L.L. Berry and A. Parasuraman. 1990.