Annoteringer

Eksempler på en kortfattet kode, brugt i lær-at-læse-akademiske-artikler-videoen https://youtu.be/OYZj-8zPRkk

P = pointe

M = model

MT = metode

D = datagrundlag

A = antagelse (hypotese)

H = hypotesetest

K = konklusion



Customer satisfaction and customer loyalty as predictors of future business potential

Jacob Eskildsen* and Kai Kristensen

Department of Marketing & Statistics and Centre for Corporate Performance, School of Business, University of Aarhus, Denmark

This paper analyses the relationship between customer satisfaction, customer loyalty and the future business potential of existing customers. The data for the analysis come from the Danish Customer Satisfaction Index 2006. Here a total of approximately 2000 private customers evaluated their preferred property insurance provider. Based on theoretical considerations, six assumptions are developed and tested.

Keywords: EPSI rating; customer satisfaction and loyalty

Introduction

The popularity of customer satisfaction measurements in general and the EPSI Rating framework in particular has grown considerably over the last few years and more and more companies are using this sort of information in their strategic planning process.

The primary result of interest for businesses is the level of the seven indices in the EPSI Rating framework and we know quite a lot about the behaviour of the EPSI Rating framework with respect to the index values (Fornell, 1992; Fornell et al., 1996; Eskildsen et al., 1999, 2003; Kristensen et al., 2001; Selivanova et al., 2002; Juhl et al., 2002; Kristensen & Westlund, 2003) as well as the structure of the framework (Eskildsen et al., 2004).

Quite a lot of research has been done on the relationship between customer satisfaction and loyalty, retention and economic performance (Kristensen & Martensen, 1996; Rucci et al., 1998; Duboff & Heaton, 1999; Edvardsson et al., 2000; Bernhardt et al., 2000) but we know very little about how well customer satisfaction and customer loyalty fare as predictors of future business among existing customers.

The aim of this paper is therefore to analyse the relationship between customer satisfaction, customer loyalty and the future business potential of existing customers. The data for the analysis come from the Danish Customer Satisfaction Index 2006. Here, a total of approximately 2000 private customers evaluated their preferred property insurance provider.

The analysis will reveal whether or not customer satisfaction and/or customer loyalty can be used to predict the future business potential of existing customers, what are the main drivers of future business potential of existing customers, and whether or not there is any impact of demographics, such as company size, and age and gender of the respondent.

EPSI Rating

In 1989, Sweden became the first country in the world to establish a uniform, cross-company and cross-industry methodology for measuring customer satisfaction and customer loyalty. This national measurement instrument for customer satisfaction and customer loyalty is called the Swedish Customer Satisfaction Barometer (SCSB).

SCSB was adopted and adapted for use in the American Customer Satisfaction Index (ACSI) in 1994 and the successful experiences of the Swedish and American customer satisfaction indices inspired moves towards establishing a uniform methodology for measuring customer satisfaction and customer loyalty in Europe.

Based on the recommendations from a feasibility study (see Sofres, 1996) and by the work provided by the ECSI Technical Committee (see European Consumer Satisfaction Index, 1998) the EPSI Rating framework for measuring customer satisfaction and customer loyalty was designed. A pilot study was conducted in 1999 and measurements have so far been implemented in a small set of industries in a sample of European countries. The EPSI rating is a trademark of, and managed by, the European Foundation for Quality Management (EFQM), the European Organization for Quality (EOQ), and the academic network International Foundation for Customer Focus (IFCF) (Kristensen & Westlund, 2003). The EPSI Rating framework is shown in Figure 1.

The EPSI Rating framework is a structural equation model. The model stipulates that perceived value, customer satisfaction and customer loyalty are driven by company image, customer expectations, product quality and service quality. Each of these seven variables is seen as a latent, i.e. non-observable, variable. Each of the latent variables is operationalised

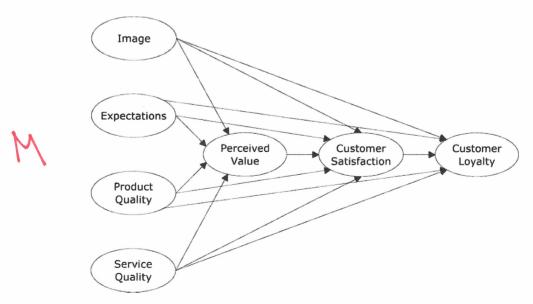


Figure 1. The EPSI Rating framework.

by a set of measurement variables. The use of multiple indicators for each latent variable increases the precision of the estimate, compared with an approach where one uses a single indicator (Oshagbemi, 1999).

A major advantage of the EPSI Rating framework is the use of generic questions, which are sufficiently flexible to be applied across a wide variety of products, services, and public sector services, such as education, healthcare, etc. Data are collected through telephone interviews with about 250 customers, from a national representative sample, who are recent buyers and/or users of specific products and services. The EPSI Rating framework is estimated using Partial Least Squares (PLS), which is also the case for both the Swedish and the American customer satisfaction indices.

The effects of customer satisfaction and customer loyalty

Many studies have focused on the relationship between customer satisfaction, customer satisfaction and repurchase intentions (Hellier et al., 2003; Butcher et al., 2002; Gountas & Gountas, 2007; Zboja & Voorhees, 2006; Yi & La, 2004; Kristensen et al., 2006). The general consensus in the literature is that satisfied customers are more likely to repurchase, and that this has a profound effect on the financial performance of a company is evident from several linkage studies that have been performed (Rucci et al., 1998; Bernhardt et al., 2000; Eskildsen et al., 2003; Kristensen et al., 2006).

Fewer studies, however, have focused on whether or not satisfied customers are more likely to increase their repurchases at the expense of the offerings of competing companies.

The first assumption to be tested in the following is therefore:



A₁: Full-service customers are more satisfied.

It is well-know that stated loyalty is a better predictor of actual loyalty than satisfaction (Mittal & Walfried, 1998; Mittal & Kamakura, 2001) but this is not necessarily the same for the future business potential of customers. If customers are to increase their repurchases at the expense of the offerings of competing companies, they have already decided to repurchase and are therefore loyal. The only question is whether or not the company has satisfied the customer in such a way that he or she will choose the company's offerings over that of the competitors.

This implies that satisfaction is a better predictor for future business potential than loyalty, and the second assumption to be tested is therefore:



 A_2 : Satisfaction is a better predictor for future business potential than loyalty.

If we take one step further back in the causal chain from future business potential to satisfaction, the EPSI Rating framework includes the following four exogenous concepts that explain satisfaction:

- Image
- Expectations
- Product quality
- Service quality

Previous studies have shown that the importance of these drivers varies from industry to industry (Johnson et al., 2001; Eskildsen et al., 2004) but which ones are most important in relation to future business potential?

It has previously been shown that both product quality and service quality are important for customers in relation to customer loyalty and repurchase intentions (Mittal & Walfried, 1998; Eskildsen et al., 2004) and that their importance differs from industry to industry. But this is not necessarily the same for the future business potential of customers in relation to increased repurchases at the expense of the offerings of competing companies.

If a customer chooses to repurchase, the quality of products and services is at least at a minimum acceptance level because otherwise the customer would not repurchase. If customers are to increase their repurchases at the expense of the offerings of competing companies, customers must expect to gain something from their action. These expectations can either be related to the tangible product and service elements of the company's offerings or with more intangible qualities associated with the company - i.e. image.

The third assumption to be tested in the following is therefore:

 A_3 : Image and expectations are the main drivers for full-service status.

Closely related with the third assumption is whether or not the importance of image and expectations is uniform for all types of companies. Previous research has shown that the size of the company plays a role in the customers' formation of preferences (Eskildsen et al., 2007) and it would therefore seem fair to assume that the size of the company also plays a role in determining the importance of image and expectations in relation to the future business potential of customers.

The fourth assumption to be tested in the following is therefore:

 A_4 : The importance of image and expectations depend on company size.

Apart from the size of the company, demographics may influence the future business potential of customers in relation to increased repurchases at the expense of the offerings of competing companies.

Previous research has pointed out that older customers are generally more satisfied than younger customers (Mittal & Kamakura, 2001), which might imply that older customers also have a higher tendency towards increasing repurchases at the expense of the offerings of competing companies.

The fifth assumption to be tested in the following is therefore:

 \bigwedge 5 A₅: Older customers have a higher tendency to full-service status.

The previously cited research also showed that women are generally more satisfied than men (Mittal & Kamakura, 2001) which might imply that women also have a higher tendency towards increasing repurchases at the expense of the offerings of competing companies.

The sixth assumption to be tested in the following is therefore:



 A_6 : Women tend to have a higher tendency to full-service status.

In the following, the data material and the methodology applied will be described before the empirical test of the above assumptions is presented.

Methodology and data

As mentioned previously, the EPSI Rating framework is a structural equation model with seven latent variables. Each of the latent variables is operationalised by a set of measurement variables. Research has shown that the use of multiple indicators for each latent variable increases the precision of the estimate, compared with an approach where one uses a single indicator (Oshagbemi, 1999). A major advantage of the EPSI Rating framework is the use of generic questions, which are sufficiently flexible to be applied across a wide variety of products, services and public sector services, such as education, healthcare, etc.

The EPSI Rating framework is estimated using Partial Least Squares (PLS), which is also the case for both the Swedish and the American customer satisfaction indices. PLS is the preferred technique since the focus of the EPSI Rating framework is on predicting customer satisfaction and loyalty; a purpose for which PLS is superior to other structural equation modelling techniques (Jöreskog & Wold, 1982). Furthermore PLS is a very robust technique since it is not sensitive to skewed distributions and multicollinearity, as other structural equation modelling techniques tend to be (Cassel et al., 1999; Kristensen & Eskildsen, 2005). The PLS model consists of three parts: inner relations, outer relations, and weight relations (Wold, 1980; Fornell & Cha, 1994). The inner relations depict the relations between the latent variables as shown in equation (1).

$$\eta = \mathbf{B}\eta + \Gamma \xi + \zeta \tag{1}$$

In the inner relations, η is a vector of the latent endogenous variables and **B** is the corresponding coefficient matrix (Fornell & Cha, 1994). ξ is a vector of the latent exogenous variables, Γ the corresponding coefficient matrix and, finally, an error term, ζ , is included.

The second part of the model is the outer relations (Fornell & Cha, 1994). This part of the model defines the relationship between the latent variables and the manifest variables and, in contrast to LISREL, these can both be reflective and formative by nature (Jöreskog & Wold, 1982). Since the EPSI Rating framework is based on reflective outer relations, only this situation is mentioned in the following. The general formula for reflective outer relations is shown in equation (2).

$$y = \Lambda_y \eta + \epsilon_y$$

$$x = \Lambda_x \xi + \epsilon_x$$
(2)

Here, y is a vector of the observed indicators of η and x is a vector of the observed indicators of ξ . $\Lambda_{\mathbf{v}}$ and $\Lambda_{\mathbf{x}}$ are matrices that contain the λ_i coefficients that link the latent and the manifest variables together and δ and ϵ are the error of measurement for x and y, respectively (Fornell & Cha, 1994). The weight relations are the final part of the PLS model. In PLS, each case value of the latent variables can be estimated through the weight relations shown in equation (3) as linear aggregates of their empirical indicators.

$$\begin{split} \hat{\eta} &= \omega_{\eta} y \\ \hat{\xi} &= \omega_{\xi} x \end{split} \tag{3} \label{eq:3}$$

Another reason why PLS has been preferred over LISREL is the ability to calculate case values for the latent variables. In LISREL, case values cannot be calculated without factor indeterminancy, which means that they should be used with caution (Bollen, 1989). This is not a problem in PLS estimation.

D

The data used in this analysis are from the Danish Customer Satisfaction Index 2006. The analysis focuses on insurance companies, with a total of eight companies (including one 'other' category). For each company, 250 responses have been collected including an evaluation of whether or not the customer has full-service status. All questionnaire items have been evaluated by the customers on a 10-point rating scale, which has subsequently been rescaled to 0-100 to ease the interpretation of the results.

Empirical results

The data material contains a question in which the respondent explains the degree to which she is using suppliers other than her main insurance company. We see the relationships of this question with satisfaction, and the satisfaction drivers, as good indicators of the possibility a company has with a given customer to increase the amount of activity. If, for example, there is a positive relationship between satisfaction and the probability of being a full-service customer, it is likely that increasing satisfaction will lead to increasing sales.

In the following, we will analyse this relationship in more detail in order to test the set of hypotheses set up in the previous sections.

A simple plot of the amount of activity that a customer has with companies other than the main supplier demonstrates that there is indeed a relationship between being a full-service customer and customer satisfaction. The overall relationship is demonstrated in Figure 2.

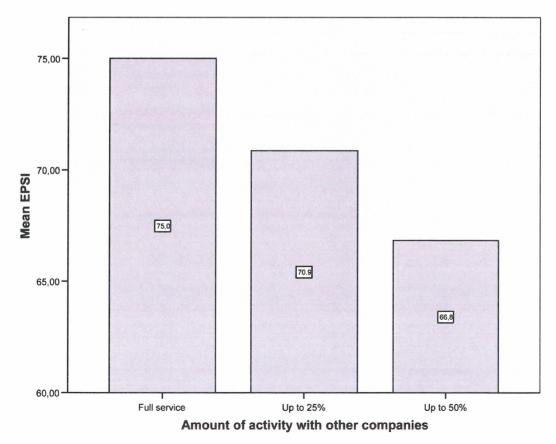


Figure 2. Relationship between satisfaction and customer relation.

It appears from the figure that there is a clear relationship between the closeness of a customer relationship and customer satisfaction. The closer the relationship the higher the satisfaction.

This means that our first hypothesis 'A₁: Full-service customers are more satisfied than non full-service customers' is clearly supported. In fact, there is a satisfaction difference of approximately 12% between customers who spend more than 25% with other suppliers and full-service customers.

In order to analyse the relationship in more detail, we group the activity variable into two levels: full service (100%) and non-full service (less than 100%). This is done in order to reduce misclassification within the two groups 'Up to 25%' and 'Up to 50%'. Furthermore, we introduce a number of demographic variables to supplement the EPSI Rating when explaining the relationship.

Our method of analysis will be a binary logistic regression where the log odds of being a fullservice customer are explained by EPSI Rating and gender, age and education. The results are given in Table 1.

It appears from Table 1 that EPSI, as expected, is highly significant. The higher the EPSI, the higher the probability of being a full-service customer. It also appears that both gender and education are significant at the 5% level, while age is significant at the 10% level. Concerning gender we see that females have a higher probability of being a full-service customer than males. Furthermore, we see that customers with high school as their highest education have a significantly higher probability than customers with a college or university education. Finally, we see that customers belonging to the age group '56+' have a significantly higher probability than all other age groups, apart from age group 'Up to 25'. This means that the effect of age follows the well known J-shape from customer satisfaction theory.

These findings clearly support another two of our previous hypotheses: 'A₆: Women tend to have a higher tendency of full-service status' and 'A₅: Older customers have a higher tendency of full-service status'. We did not include education among our set of hypothesis, but the findings concerning this variable do not come as a surprise. We know from a lot of previous studies that, for example, customers with a university degree have a different customer satisfaction profile than other customers. In Figure 3, various probability functions are shown for different genders and age groups. In all cases 'Higher education' is the excluded group.

Table 1. Log-odds of full-service explained by EPSI and demographics.

	Coefficient	Significance	Exp(B)	
GENDER Female	0.253	0.049	1.288	
EDUCATION		0.016		
Basic	0.283	0.169	1.328	
High school	0.578	0.033	1.783	
Commercial	-0.146	0.297	0.864	
AGE GROUP		0.064		
Up to 25	-0.167	0.740	0.846	
26-35	-0.531	0.006	0.588	
36-45	-0.353	0.037	0.702	
46-55	-0.334	0.050	0.716	
EPSI	0.014	0.000	1.014	
Constant	0.784	0.007	2.191	

Note: Excluded groups are: Gender: 'male'; Education: 'higher'; Age: '56+'.

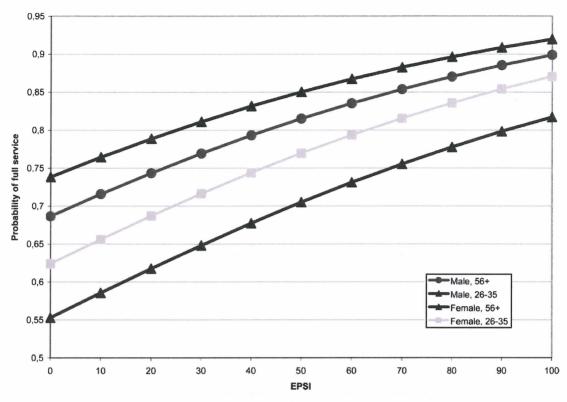


Figure 3. Probability of full service as a function of EPSI.

In order to test the hypothesis 'A₂: Satisfaction is a better predictor for future business potential than loyalty' we continue to use a binary logistic regression model, but in this case we substitute EPSI by Loyalty as a predictor, in combination with demographics. The results of this are found in Table 2.

Compared with the results of Table 1, we see that we have practically the same conclusions for gender, education and age, but we also see that the coefficient of loyalty is lower than the

Table 2. Log-odds of full-service explained by loyalty and demographics.

	Coefficient	Significance	Exp(B)
GENDER	0.274	0.033	1.316
Female			
EDUCATION		0.016	
Basic	0.294	0.153	1.342
High school	0.588	0.030	1.800
Commercial	-0.138	0.324	0.871
AGE GROUP		0.043	
Up to 25	-0.213	0.671	0.808
26-35	-0.550	0.004	0.577
36-45	-0.383	0.023	0.682
46-55	-0.359	0.035	0.699
Loyalty	0.008	0.001	1.008
Constant	1.241	0.000	3.460

Note: Excluded groups are: Gender: 'male'; Education: 'higher'; Age: '56+'.

	Image	Expectations
Small company	0.004	0.015
	(p = 0.577)	(p = 0.018)
Large company	0.016	0.001
	(p = 0.013)	(p = 0.864)

Table 3. Coefficients and significance levels for Image and Expectations.

coefficient of EPSI, indicating a smaller effect on the probability of full service. The same conclusion is obtained if we instead include EPSI and loyalty in the same model and then apply a stepwise procedure. Hence, we find that our hypothesis is accepted.

In order to test hypothesis 'A₃: Image and expectations are the main drivers for full-service status' we substitute the EPSI drivers, Image, Expectations, Product Quality, and Service Quality into the binary logistic regression model. We will not give the detailed results here but just report that both Product Quality and Service Quality become insignificant with p-values of 0.227 and 0.133 respectively. The corresponding p-values of Image and Expectations are 0.029 and 0.057 respectively. After removal of Product Quality and Service Quality from the equation, the p-values of Image and Expectations become equal to 0.008 and 0.055 respectively. Based on this, we accept our hypothesis that Image and Expectations are the main drivers of full-service status.

Our final hypothesis is 'A₄: The importance of image and expectations depends on company size'.

In order to test this, we split the data into two unique groups: a large group consisting of companies with individual market shares above 10% and a small group with individual market shares below 5%.

The results for Image and Expectations of the binary logistic regression are given in Table 3. The number in bold is the coefficient and the number in parenthesis is the significance level.

It appears from the table that the effect of Image and Expectations is clearly dependent on the size of the company. For small companies, Expectations are highly significant while Image is insignificant. For large companies we see the opposite. In this case, Image is highly significant while Expectations are insignificant. This means that hypothesis A₄ is supported by the data. For small companies, only Expectations play a role when it comes to being a full-service customer, while for large companies only Image plays a role.

Conclusion

The aim of this paper has been to analyse the relationship between customer satisfaction, customer loyalty and the future business potential of existing customers. The data used in the analysis came from the Danish Customer Satisfaction Index 2006. Here, a total of approximately 2000 private customers evaluated their preferred property insurance provider.

The analysis resulted in the following findings:

- Full-service customers are more satisfied.
- Satisfaction is a better predictor for future business potential than loyalty.
- Image and Expectations are the main drivers for full-service status.



- The importance of Image and Expectations depend on company size.
- Older customers have a higher tendency of full-service status.
- Women tend to have a higher tendency of full-service status.

The analysis presented in this paper is based on cross-sectional data. Future research will focus on the longitudinal aspects of customer satisfaction and full-service status in order to achieve a better understanding of the relationship.

References

- Bernhardt, K.L., Donthu, N., & Kennett, P.A. (2000). A longitudinal analysis of satisfaction and profitability. *Journal of Business Research*, 47(2), 161–171.
- Bollen, K.A. (1989). Structural equations with latent variables. New York: John Wiley & Sons Inc.
- Butcher, K., Sparks, B., & O'Callaghan, F. (2002). Effect of social influence on repurchase intentions. *Journal of Services Marketing*, 16(6), 503-514.
- Cassel, C., Hackl, P., & Westlund, A.H. (1999). Robustness of partial least-squares method for estimating latent variable quality structures. *Journal of Applied Statistics*, 26(4), 435–446.
- Duboff, R., & Heaton, C. (1999). Employee loyalty a link to valuable growth. Strategy & Leadership, 27(1), 8-13.
- ECSI Technical Committee (1998). European Consumer Satisfaction Index: Foundation and structure for harmonized national pilot projects. Report. October.
- Edvardsson, B., Johnson, M.D., Gustafsson, A., & Strandvik, T. (2000). The effects of satisfaction and loyalty on profits and growth: Products versus services. *Total Quality Management*, 11(7), 917–927.
- Eskildsen, J.K., Martensen, A., Grønholdt, L., & Kristensen, K. (1999). Benchmarking student satisfaction in higher education based on the ECSI methodology. In C. Baccaroni (Ed.), *TQM for Higher Education Institutions II*. Italy: Verona.
- Eskildsen, J.K., Kristensen, K., & Westlund, A.H. (2003). The predictive power of intangibles. *Measuring Business Excellence*, 7(2), 46-54.
- Eskildsen, J.K., Kristensen, K., Juhl, H.J., & Østergaard, P. (2004). The drivers of customer satisfaction & loyalty. *Total Quality Management & Business Excellence*, 15(5&6), 859-868.
- Eskildsen, J.K., Kristensen, K., & Steensen, E. (2007). Market structure, market strategy and customer satisfaction. Sixth MAAOE International Conference: New perspectives on the theories and practices of Organizational Excellence. Versailles.
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing*, 56(1), 6–21.
- Fornell, C., & Cha, J. (1994). Partial least squares. In R.P. Bagozzi (Ed.), Advanced methods of marketing research (pp. 52-78). Cambridge, MA: Blackwell.
- Fornell, C., Johnson, M.D., Anderson, E.W., Cha, J., & Bryant, B.E. (1996). The American customer satisfaction index: Nature, purpose and findings. *Journal of Marketing*, 60(4), 7–18.
- Gountas, J., & Gountas, S. (2007). Personality orientations, emotional states, customer satisfaction, and intention to repurchase. *Journal of Business Research*, 60(1), 72–75.
- Hellier, P.H., Geursen, G.M., Carr, R.A., & Rickard, J.A. (2003). Customer repurchase intention a general structural equation model. *European Journal of Marketing*, *37*(11–12), 1762–1800.
- Johnson, M.D., Gustafsson, A., Andreassen, T.W., Lervik, L., & Cha, J. (2001). The evolution and future of national customer satisfaction index models. *Journal of Economic Psychology*, 22(2), 217–245.
- Jöreskog, K.G., & Wold, H. (1982). The ML and PLS techniques for modelling with latent variables. In K.G. Jöreskog & H. Wold (Eds.), *Systems under indirect observations* (pp. 263–270). New York: North-Holland.
- Juhl, H.J., Kristensen, K., & Østergaard, P. (2002). Customer satisfaction in European food retailing. *Journal of Retailing and Consumer Services*, 9(6), 327–334.
- Kristensen, K., & Eskildsen, J.K. (2005). PLS structural equation modelling for customer satisfaction measurement: Some empirical and theoretical results. In F.W. Bliemel, A. Eggert, G. Fassott, & J. Henseler (Eds.), *Handbuch PLS-Pfadmodellierung-Methode*, *Anwendung, Praxisbeispiele* (pp. 117–134). Schäffer-Poeschel.
- Kristensen, K., & Martensen, A. (1996). Linking satisfaction to loyalty and performance. ESOMAR Publication Series, 204, 159–169.

- Kristensen, K., & Westlund, A.H. (2003). Valid and reliable measurements for sustainable non-financial reporting. Total Quality Management, 14(2), 161–170.
- Kristensen, K., Eskildsen, J.K., & Juhl, H.J. (2001). Benchmarking as a strategic tool. In M. Christensen (Ed.), Benchmarking across boundaries. Jurist og Økonomforbundets forlag: Copenhagen (in Danish).
- Kristensen, K., Mørch, L., & Sørensen, H. (2006). Relationship between performance measures and financial results in a large Nordic bank. Fifth International Conference on Performance Measurement and Management, London.
- Mittal, V., & Kamakura, W.A. (2001). Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics. Journal of Marketing Research, 38(1), 131-143.
- Mittal, B., & Walfried, M.L. (1998). Why do customers switch? The dynamics of satisfaction versus loyalty. Journal of Services Marketing, 12(3), 177–194.
- Oshagbemi, T. (1999). Overall job satisfaction: How good are single versus multiple-item measures? Journal of Managerial Psychology, 14(5), 388-403:
- Rucci, A.J., Kirn, S.P., & Quinn, R.T. (1998). The employee-customer-profit chain at Sears. Harvard Business Review, 76(1), 83-97.
- Selivanova, I., Hallissey, A., Letsios, A., & Eklöf, J. (2002). The EPSI Rating initiative. European Quality, 9(2), 10-25. Sofres, (1996). European Customer Satisfaction Index. Feasability study – Final report, .
- Wold, H. (1980). Model construction and evaluation when theoretical knowledge is scarce: Theory and application of partial least squares. In J. Kmenta & J.B. Ramsey (Eds.), Evaluation of econometric models (pp. 47-74). New
- Yi, Y., & La, S. (2004). What influences the relationship between customer satisfaction and repurchase intention? Investigating the effects of adjusted expectations and customer loyalty. Psychology & Marketing, 21(5), 351-373.
- Zboja, J.J., & Voorhees, C.M. (2006). The impact of brand trust and satisfaction on retailer repurchase intentions. Journal of Services Marketing, 20(5), 381-390.