Dependable Customer Indicator

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Abstract

One of the difficulties encountered by marketing practioners is to be able to determine how secure or dependable their customer base is. Single measures, such as customer service quality or satisfaction, are not in themselves strong predictors of retention intentions. A means of combining several measures of customer perspectives could provide a more comprehensive indicator of customer retention. This paper describes a study to provide an indicator of customer retention, or churn rate depending on the perspective. A sample of 187 customers was asked to provide their views and opinions about the bank they principally used for personal banking. In addition, the respondents were asked to rate how important to them the dimensions of a relationship with their bank were.

A Dependable Customer Indicator is developed that has a much stronger relationship with retention intentions than individual measures. Further, the distribution of the DCI provides richer data of retention intentions than any single measure.

Keywords: dependable customer indicator, customer churn rate, retention intentions

Introduction

In all forms of marketing practioners find themselves searching for information about customers (Malhotra, Hall, Shaw and Oppenheim, 2004). Inevitable this search leads to a market research study in which many questions are asked and answered. The task facing the marketer is then to produce meaningful ‘statistics’ about the organisations customers. Too frequently such statistics emerge as frequency information, such as 84% of males prefer beer more than cocktails. While such information is undoubtedly useful, it has limited meaning and practical application. One of the key issues that managers need to find out about is how secure is the customer base, that is what percentage of current customers will be retained in the future, and what percentage are at risk of switching (Bansal and Taylor, 1999). This research sought to identify a stronger predictor of customer retention intentions than previously available.

The premise of this study is that there would be significant benefit to marketers to have a measure or index computed from a number of multi-attribute constructs that would provide an indication of the complete spectrum of situations from definitely switch to definitely repurchase. This paper thus addresses the research question: **What constructs could be used to provide an index to show customers propensity to be retained, and how could such an index be represented and interpreted?**

The term Dependable Customer Indicator (DCI) has been used in this research to represent this index. The main task facing the developer of a DCI is to identify the constructs that would comprise the index, and the method of combining these construct scores to calculate the index. In each case the individual constructs would be measured by using a number of questions in a test instrument, so called multi-attribute

measures which are widely accepted in marketing research (Tabachnick and Fidell, 1996).

Retention intentions

One of the main difficulties in undertaking research on this topic is that it is difficult to observe or record the behaviour of large numbers of customers with respect to switching or retention. Thus, for this research the dependent construct was retention intentions. This tracking of customers is a difficulty encountered by many previous researchers. Further, there is limited research on switching in general (Keaveney, 1995; Bansal and Taylor, 1999). Retention intentions has, however, been found to be related to actual switching/retention behaviour (Bansal and Taylor, 1999; Dick and Basu, 1994; Fishbein and Ajzen, 1981; van den Putte, 1991).

The major consideration in identifying the DCI was to select the variables that were combined to comprise the index. A number of variables were reviewed in this context:
1) Customer satisfaction – the degree of customer satisfaction has been found to be positively related to retention intentions (for example, Olsen, 2002; Johnson and Gustafsson, 2000; Oliver, 1999);

2) Functional Customer Service Quality (FCSQ) – using the Grönroos model of CSQ comprising functional and technical components (Grönroos, 1990), the degree of functional customer service quality would be expected to be positively related to retention intentions (Veloutsou, Daskou and Daskou, 2004; Gotlieb, Grewal and Brown, 1994; Taylor and Baker, 1994; Olsen, 2002).

3) Technical Customer Service Quality (TCSQ) – the degree of technical customer service quality would be expected to be positively related to retention intentions (Bagozzi, 1992);

4) The strength of relationship perceived by the customer with the service provider would be expected to be positively related to retention intentions (Ward and Smith, 1998);

5) Attitudinal loyalty perceived by the customer with the service provider would be expected to be positively related to retention intentions (Fishbein and Ajzen, 1975; Taylor and Todd, 1995);

6) The corporate image of the service provider perceived by the customer would be expected to be positively related to retention intentions (Bansal and Taylor, 1999).

Thus, six independent variables were initially used to compute the DCI index for this study, but subject to them each adding to the significance of the hypothesised relationship of the DCI with retention intentions. A general research question was thus addressed:
R1 – What variables should be combined to compute a DCI?

The DCI was thus computed using 6 widely used variables that would be expected to be positively related on retention intentions. It is thus expected that the DCI would be positively related to retention intentions. Thus:

H1 – There is a positive relationship between the DCI and the retention intentions of customers.

Ward and Smith (1998) found that for some service products (doctor and hairdresser) the longer a customer had been a customer the more likely they would be retained. However, for other service products there was no such relationship (cinema, bank and electric company). Thus:
H2 - There is a positive relationship between the number of years as a customer and their retention intentions.

It would be expected that customers who have higher importance of relationship dimensions in their minds with service providers would be less likely to switch service providers, and to have higher retentions intentions (Ward and Smith, 1998). Thus:
H3 – There is a positive relationship between the importance of relationship dimensions perceived by the customer with the service provider and their retention intentions.

Following from H1, 2 and 3 above, a combination of DCI, number of years as a customer and relationship strength, as perceived by the customer, would be expected to be positively related to retentions intentions, and to have an enhanced predictive ability. Thus:
H4 - There is a positive relationship between the DCI, the number of years as a customer and strength of relationship perceived by the customer with the service provider and their retention intentions.

Method

An instrument was developed to gather data on the above variables. A single service product was used for the study to eliminate variability in respondents' minds concerning differences in perceptions between service products. For this study personal banking was chosen as the service product. The questions concerning the independent variables all used a seven point bi-polar semantic differential scale. In addition to the above, a set of relationship dimensions previously developed was included which rated how important such dimensions were to the customer (Ward and Smith, 1998). Retention intentions data was gathered also using a seven point bi-polar semantic differential scale regarding their retention intentions for the next 12 months, scaled from 'no intention to switch bank' to 'will certainly switch bank'. The instrument was pilot tested until all obvious difficulties for respondents had been eliminated prior to being administered to a random sample of 200 members of the general public in shopping malls in Queensland.

Results

Of the 200 completed surveys, 13 were rejected on inspection as having not been completed satisfactorily, giving a sample for analysis of 187 fully completed surveys. A factor analysis was undertaken on the six variables comprising the DCI to ensure that they all loaded adequately. A principal components factor analysis was used. Only one component emerged so it was not rotated. The procedure advocated by Pallant (2005) was followed. In the correlation matrix all correlations were above 0.30, the

Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was 0.88 (comfortably above the 0.6 benchmark) and the Bartlett's test of sphericity was significant at 0.000. In the final component matrix, the weightings varied between 0.59 and 0.90, thus all six variables were retained. Subsequent testing using weighted and unweighted versions of the DCI showed that the unweighted DCI was superior to the weighted version. Thus the simpler, unweighted DCI results were used throughout, and the DCI was the sum of the six variables (customer satisfaction, FCSQ, TCSQ, strength of relationship, corporate image and loyalty). Table 1 shows the means and standard deviations for the DCI and its six component variables, together with their R^2 values tested against retention intentions using linear regression.

Table 1 – Descriptives

Variables	Mean	Std. Deviation	Adjusted R^2 with retention intentions
DCI	33.50	8.12	0.37
FCSQ	4.46	1.55	0.24
Strength of relationship	5.03	1.27	0.23
Satisfaction	4.86	1.38	0.25
TCSQ	5.01	1.53	0.28
Corporate image	5.04	1.34	0.08
Loyalty	4.00	2.10	0.18

N=187, All significances were better than p<0.01

The result of R1 was thus that all six variables loaded significantly and were used unweighted to compute the DCI.

H1 was tested using a linear regression. Checks were made on the assumptions required for the test, and all were satisfactory. There was a strong statistically significant main effect (F=93.0, df=1:163, p=0.000), with a strong relationship between retention intentions and DCI given by a beta of 0.51, and an adjusted R^2 of 0.37. Table 1 shows that all of the six constituent variables of the DCI have significantly lower adjusted R^2 values with retention intentions than the DCI. Thus, H1 was supported.

H2 was also tested using a linear regression. The result was significant (F=14.6, df=1:165, p=0.000), with a weak relationship between years as a customer and retention intentions given by a beta of 0.29, and adjusted R2 of 0.08. Thus, H2 was supported, even though the relationship was very weak.

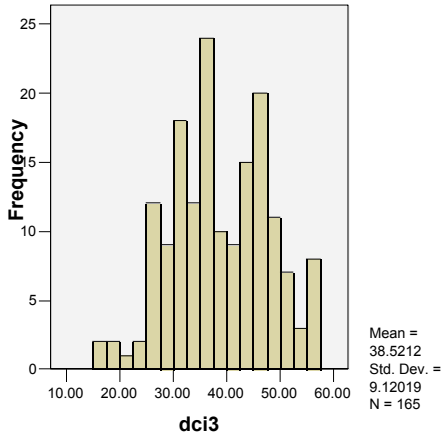
H3 was tested using a linear regression test. The result was significant (F=26.3, df=1:165, p=0.000), and a beta of 0.20, and an adjusted R^2 of 0.14. Thus H3 was supported as there was a weak relationship between the importance of relationship dimensions perceived by the customer and their retention intentions.

H4. The DCI, the number of years as a customer and importance of relationship dimensions were tested as independent variables in a linear regression with retention intentions as the dependent variable. A stepwise regression was used and all assumptions, including multicollinearity were satisfactory. All three independent variables were significant and the overall model fit was strong (F=36.7, df=3:160, p=0.000), a beta of 0.63, and adjusted R^2 was 0.42. The individual betas were

DCI=0.75: Years as a customer=0.17: and, Relationship dimensions=0.23). Thus H4 was supported.

The DCI was plotted as a histogram to show the distribution of scores, as shown in figure 1. This distribution shows two peaks at 35 and 45. The reasons for this are not apparent, so further investigation will be required. Such a figure is useful to show how the DCI is distributed and to identify possible areas for further research. From such a histogram groups of scores (perhaps based on z scores) could be established to indicate subjective degrees of dependability of customers continuing to repeat purchase.

Figure 1 – DCI histogram



Discussion

The results indicate that while the combination of number of years a customer, importance of relationship dimensions and DCI provide the most powerful predictor of retention intentions ($R^2 = 0.42$), the more parsimonious model of just the DCI as the predictor of retention intentions provides a more useful model for practioners. The relationship between DCI and retention intentions was quite strong ($R^2 = 0.37$), making this a very useful predictor. Further research using additional variables to further develop the DCI would clearly be advantageous.

The use of the DCI provides practioners and theorists alike with a new tool for predicting customer churn rates. Much further work is required to establish the 'best' set of variables for calculating the DCI for different products and services, and for calibrating the DCI curve using z scores, or perhaps percentiles, or another calibrator.

An acknowledged limitation of this study is the use of retention intentions instead of actual customer retention, or switching. In many situations businesses have no real idea how high their retention rate is, or how vulnerable customers may be to small improvements by a competitor. Thus, any indicator of this nature that is a step forward from previous predictors is welcome and can be used to advantage. These are, however, the very issues that need to be further investigated.

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