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BEST STUDENT PAPER

Some moderating effects on the service quality-customer retention link

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Keywords *Service quality, Pricing, Consumer attitudes, Customer loyalty*

Abstract *This paper presents a holistic model of customer retention incorporating service quality perceptions, price perceptions, customer indifference and inertia. Data from a large-scale postal survey of telephone users in England showed that perceptions of service quality have a direct linear relationship with customer retention even in mass services with low customer contact. Price perceptions and customer indifference too were found to have a direct linear effect on retention. Furthermore, it was also seen how both price perceptions and customer indifference moderated the relationship between service quality perceptions and customer retention. A linear relationship between inertia and customer retention was not found. Furthermore, there was evidence to indicate that inertia was a relatively unstable condition and that reliance by service providers on inertia to retain customers could indeed be a risky strategy.*

Introduction

The aim of this paper is to develop a holistic model of customer retention, with specific emphasis on the repurchase intentions dimension, incorporating service quality and price perceptions, customer indifference and inertia. The holistic approach in the study reported here is distinct from most past studies on this topic that focussed on a single determinant of customer retention, namely service characteristics. The hypothesised relationships are tested using data from a large-scale survey of the telecommunication industry.

Literature review

During early stages of service quality research, it was common to measure perceptions of service quality as a proxy measure of customer satisfaction, implying a perfect correlation between the two constructs. Now, it is more common to posit service quality as an antecedent of customer satisfaction (e.g. Cronin *et al.*, 2000). Early research had a simple premise – that satisfied customers continue service patronage, resulting in positive financial benefits to



the service provider. However, it is now known that mere satisfaction does not ensure continued service patronage. Furthermore, there is also evidence to show that in addition to satisfaction, other emotional responses such as inertia and indifference may also have an impact on retention. Therefore, the focus in recent research has somewhat shifted from studying drivers of customer satisfaction to examining drivers of customer behaviours such as repurchase habits. This is a safer approach since the financial benefits of customer retention are more apparent. In line with this shift, Johnston (1999) in a recent article argued for the need to look in further detail at linking operational performance to business drivers.

Few key studies have already established the links between service characteristics and customer satisfaction, and between satisfaction and firm financial performance. For example, Johnston (1995) examined the link between service transactions and overall satisfaction. Fornell *et al.* (1995) linked customer satisfaction and quality initiatives to firm financial performance. Ittner and Larcker (1996) undertook a similar study, where the main focus was the link between quality initiatives (closely linked to customer satisfaction) and firm financial performance. Reichheld and Sasser (1990), Heskett *et al.* (1994), and, Rucci *et al.* (1998) established the link between customer satisfaction and improved financial performance. More recently, the international service study looked at, among other things the link between business practices and customer satisfaction (Roth *et al.*, 2000). Anderson and Sullivan (1993), among others, through a large sample survey, established the link between customer satisfaction and behavioural intentions.

Service quality (SQ) perceptions as a driver of customer retention

Although the “cognitive evaluations – emotional responses – behavioural intentions” link is conceptually the strongest in explaining how customers form their behavioural intentions, many studies have also found a direct positive link between service quality perceptions (arguably a cognitive evaluation) and customer behavioural intentions (e.g. Boulding *et al.*, 1993; Zeithaml *et al.*, 1996). Methodologically, a key advantage in this approach is the ability to separately manipulate the effect of price perceptions on retention. In a recent study, Cronin *et al.* (2000) conducted a large-scale survey of six industries and confirmed the direct linear effect of SQ perceptions, customer satisfaction, and value, on behavioural intentions. A surprising result in their study was that service quality perceptions had a much greater impact than price in determining value. Cronin and his colleagues concluded that service customers might place greater importance on the quality of service than on the cost of acquiring that service. These results were generally consistent with the earlier studies reported above. However, the seminal study by Cronin and Taylor (1992) that initiated the SERVQUAL vs SERVPERF debate on the measurement of service quality was one major study that failed to establish the SQ perceptions – customer behavioural intentions link. Using alternative measures of SQ, they found that often only satisfaction and not perceptions of SQ determined repurchase

intentions. However, Cronin and Taylor (1992) did agree that the results did not mean that “service quality fails to affect purchase intentions”.

Furthermore, some past studies that attempted to link customer satisfaction (a similar construct to SQ perceptions) to customer retention in the retail sector with little or no switching barriers, found a significant non-linear relationship between the two constructs (e.g. Jones and Sasser, 1995; Mittal and Kamakura, 2001). Therefore, in the absence of switching barriers, a non-linear association between SQ perceptions and customer retention too could be a plausible proposition. However, being consistent with past research, the current study hypothesises a linear association between SQ perceptions and customer retention. Therefore:

H1. The higher the perceptions of service quality, the greater the level of repurchase intentions.

Price perceptions as a driver of customer retention

Empirical support for the price perceptions – customer retention link in the service sector is scant. Indeed, one of the few exceptions is the recent study by Varki and Colgate (2001). Their review illustrated that given the importance of price perceptions, surprisingly little work has been done on the impact of price in the service sector and they argued the need for future research to focus more on this link. Based on a survey of the banking sector, they found evidence to support a direct positive association between price perceptions and customer behavioural intentions. Indeed, if such a hypothesis holds true in a service shop environment such as banking, it is expected that the same association would be similar, if not stronger, in a mass service such as the fixed line telephone sector, where the importance of price has been argued to be even more. Therefore:

H2. The better the perceptions of price, the greater the level of repurchase intentions.

Moderating effect of price perceptions

Although in general the SQ perceptions – customer retention link has been confirmed in a number of different settings, there is also a strong belief that in mass services the impact of SQ on customer retention may be low. In fact, some have argued that in mass services competition lies on price (see Kellog and Nie, 1995). Although the Kellog and Nie study did not offer empirical support for these claims, the previous section did illustrate the importance of price. However, what has not been tested in the extant literature and is plausible is a situation where customer retention requires positive perceptions of both price and SQ. In such a scenario, absence of one is likely to significantly weaken the level of customer retention. For example, those who are unhappy with price despite positive SQ perceptions are bound to be less likely to stay. Indeed, the qualitative data collected during the first phase of the current study through interviews of 40 customers also gave strong support for such an argument. Therefore:

H3. In mass services with low customisation and customer contact such as the fixed line telephone sector, price perceptions will moderate the relationship between SQ perceptions and repurchase intentions.

As said before, although past research on drivers of customer behavioural intentions focussed almost entirely on service characteristics, there is now a growing realisation of the need to incorporate additional characteristics – such as industry and customer characteristics – to make models of customer retention more complete. Coming sections discuss some alternatives.

Inertia as a driver of customer retention

Based on in-depth interviews, Gremler and Brown (1996) suggested a model that included switching costs as an antecedent of customer loyalty. They defined switching costs as investment of time, money and effort perceived by customers as factors that make it difficult to switch companies and gave the examples of habit, inertia, set up costs, search costs, learning costs, contractual costs, and continuity costs.

Few studies have since then reported the impact of inertia on behavioural intentions. Huang and Yu (1999) conceptualised inertia as a non-conscious form of retention. They distinguished inertia from loyalty by the degree of consciousness involved in the decision to continue to purchase from the same service provider. Their reasoning was that those who repurchase due to loyalty do so subsequent to a conscious decision strategy. They also asserted that consumer research should not limit its focus to conscious decisions, but should also explore non-conscious or involuntary customer relationships.

Chintagunta and Honore (1996) had previously held similar views. They argued that the effect of true loyalty is a propensity to make repeat purchases enduring and constant over time, whereas, the effect of inertia is repeated purchase made passively without much thought or, despite having negative perceptions. Gupta *et al.* (1996) demonstrated how, the greater the degree of inertia displayed, the more likely they are to be sensitive to special promotions, or similar attempts by competitors to attract them.

Huang and Yu (1999) claimed that since there is no underlying commitment among customers displaying inertia towards the product, such promotional tools as point of purchase displays, extensive couponing, or noticeable price reductions would be adequate to unfreeze a customer's habitual pattern.

The above discussion illustrated the possibility of customers continuing to repurchase out of inertia despite lack of positive perceptions of the service. However, it also illustrated how a condition such as inertia could be unstable. Although this discussion is inadequate to build a firm hypothesis linking inertia to customer retention, it is expected that inertia will strengthen the level of customer retention. Therefore:

H4. The higher the level of inertia, the greater the level of repurchase intentions.

Indifference as a driver of customer retention

Fornell (1992), during the Swedish Customer Satisfaction Barometer study found further criteria that can impact on customer repurchase habits. He

showed that where supply is homogeneous and demand heterogeneous, overall satisfaction levels are low, and that customers could remain with a service provider even with low levels of satisfaction under such circumstances. Further, Lambert (1998) argued that in addition to industry characteristics, such as homogeneous supply environments, certain customer characteristics such as customer's relative wealth, and the importance of the product or service in the individual's utility function, could also determine customer behaviours. It is expected that customer indifference formed by perceptions of service homogeneity and spend will strengthen the level of customer retention. Therefore:

H5. The higher the level of customer indifference, the greater the level of repurchase intentions.

Moderating effect of indifference

Indeed, the role of indifference can be more complex. Those who have positive perceptions of the service and also show a certain level of indifference are the least likely to leave since their service expectations are fulfilled, and at the same time, see no gains from switching. In such a scenario, the possibility for variety seeking will be nearly non-existent. It is also plausible that even in the absence of positive SQ perceptions, the perceived lack of gains attributed to switching will restrain customer switching behaviour. If so, indifference can have a significant moderating effect on the link between SQ perceptions and customer retention. Therefore:

H6. Perceived customer indifference will moderate the relationship between service quality perceptions and repurchase intentions.

Methodology

Initially, 40 interviews of actual customers representing different demographic categories were undertaken with the aim of offering qualitative support for the model. Next, a postal survey of 2,850 randomly selected, fixed line residential telephone customers was conducted. Respondents, who came from two adjacent medium-large towns in south eastern England, were selected from the customer database of a major UK service provider. The respondents belonged to the two premier service providers in the country. The sample was selected based approximately on the prominence of each service provider in the geographical region. The same geographical region was selected to ensure that all respondents had similar service experiences. Customer retention, service quality perceptions, inertia, indifference and price were all measured on a seven-point Likert type scale (see Appendix). A survey approach to solving this type of research problem is consistent with past studies with similar aims. For example, Anderson and Sullivan (1993) conducted a large-scale survey to ascertain drivers of customer satisfaction. Similarly, nearly all the research reported earlier that studied drivers of customer behavioural intentions were survey based.

Measures

Customer retention

In the past, the terms customer retention and customer loyalty have been used to describe the same phenomenon (see Zeithaml *et al.*, 1996; Reichheld and Sasser, 1990). As such, the current study too made no attempt to differentiate between the two terms. Recent literature has conceptualised customer retention as a multi-dimensional construct consisting of both behavioural and affective dimensions. For example, Gremler and Brown (1996) defined service loyalty as follows: “service loyalty is the degree to which a customer exhibits repeat purchase behaviour from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises”. Consistent with this definition, Zeithaml *et al.* (1996) operationalised customer loyalty to consist of repurchase intentions, positive and negative word of mouth, and price sensitivity. However, when it comes to scale development, two distinct approaches can be seen in the extant literature. Some built summated scales of customer retention based on the multiple dimensions (e.g. Zeithaml *et al.*, 1996), whereas others looked at the individual dimensions separately (e.g. Singh, 1988). The current study uses the second approach. It is argued that in the current context this approach is superior because what drives repeat purchase can be fundamentally different from what drives the other dimensions of customer retention. For example, the current study hypothesises inertia and indifference as drivers of repurchase intentions. It is doubtful whether those who continue to patronise a supplier only because of inertia or indifference will also display affective loyalty. It is more likely that their “loyalty” is limited to behavioural loyalty as reflected by repurchase habits. In this context, inclusion of other dimensions to build a summated scale of an overall customer retention construct would have confounded the results.

Therefore, the focus of the current study is the repeat purchase dimension. Indeed, this approach of looking at the single repurchase dimension has firm support in the literature (see Anderson and Sullivan, 1993; Cronin and Taylor, 1992; Morgan and Hunt, 1994, albeit in a different setting). The actual scale used to measure repurchase intentions was adapted from the three-item formative scale used by Morgan and Hunt (1994) to measure “propensity to leave” in a business-to-business relationship. The three items measured the likelihood of the respondent leaving the service provider at three different periods in the future – six months, one and two years respectively. Factor analysis confirmed the underlying structure of the construct. The overall score was a summation of the three weighted items: following Morgan and Hunt’s approach, the first item was weighted four times, second was weighted twice, and the simple score of the third item was taken[1].

Service quality perceptions

The SQ construct has been defined as a consumer’s appraisal of a service’s overall excellence or superiority (see Zeithaml, 1988). Recent research has

consistently agreed with this definition. Operationalisation of the SQ construct using both the expectations based SERVQUAL scores as well as the now popular performance based SERVPERF scores is consistent with this conceptual definition. In this study, SQ perceptions were captured using performance-based measures, consisting of a total of 12 items. The statements were consistent with those contained in the measure of service quality in Cronin *et al.* (2000), but with some adjustments to suit specific industry needs. Cronin *et al.* (2000) developed the measure based on the ten service quality criteria identified by Parasuraman *et al.* (1985) and supported empirically by Johnston *et al.* (1990). They initially developed multiple-item scales for each of the ten criteria. These scales were tested on a convenience sample and based on the results, the item with the highest inter-correlation with the other items in each scale was selected to represent the ten service quality criteria. In the current study, there was one statement representing each of the criteria, courtesy, capability, ease of contact, reliability, safety, service package, understanding, and recovery service. There were two statements each representing communication and uncertainty. The 12 items loaded on the same factor with only the statement on safety having a variance extracted of less than 0.5 (0.455). The 12 items gave an inter-item correlation (Cronbach's α) of 0.94, and the average of the 12 items was calculated as the "service quality perceptions" score.

Inertia

Huang and Yu (1999) defined inertia as a non-conscious form of human emotion, and it has been conceptualised as a single dimensional construct consisting of "passive service patronage without true loyalty". Huang and Yu (1999) operationalised the construct as: "... not ready to put forth effort required for switching". Feedback from the preliminary interviews that were partly aimed at gaining some insights on the wording of the constructs was consistent. The statement almost uniformly identified by the 40 respondents to reflect inertia was "I can't be bothered to change my phone company". It is argued that this statement agrees with both the conceptual definition of passive patronage and the operationalisation by Huang and Yu of being unwilling to put forth effort.

Indifference

Past literature on measuring indifference is scant and has sometimes been used in the marketing literature in relation to consumer's attitude towards advertising, described as neither positive nor negative. This definition is consistent with the Oxford dictionary definition of "the condition of neutrality". Past research has referred to two specific dimensions – perceived spend on service, and perceived homogeneity in service in a given industry – as determinants of customer indifference towards switching (see Lambert, 1998). Lambert suggested that customer indifference is *formed* by customer's perceptions of service homogeneity and perceptions of spend. Thus, indifference in this study was measured using a two-item formative scale

suggested by Lambert (1999) incorporating perceptions of supply homogeneity and individual spend. In addition to the formative scale, an overall measure of indifference was also included in the survey instrument for testing reliability of the measure. Results from using the formative scale were statistically identical to those using the overall measure of indifference, indicating a high degree of reliability of the indifference measure.

Price perceptions

Perceptions of price were measured on a single item scale. As said before, the topic of price in service settings is relatively underrepresented (Varki and Colgate, 2001). As such, extensively tested measures of price perceptions of a service could not be found. The actual wording for the single statement used in the survey was derived from the preliminary customer interviews. During these interviews, customers often referred to the “reasonableness of price”. Reasonableness reflects the way price is perceived relative to that of the competitors. This statement is therefore consistent with Varki and Colgate’s single item measure of price perceptions that emphasised the relative standing of one’s service provider on price: i.e. “how competitive do you perceive your bank’s fees and charges are?” or, “I perceive the fees and charges of my bank to be competitive”. Consistent with this statement, the single item measure used in the current survey read as follows: the prices charged by my phone company are reasonable.

Indeed, it has to be acknowledged that some of the constructs, specifically, inertia and price perceptions, were measured using single statements. The specific statements were both derived from initial interviews and are consistent with past literature, thus ensuring content validity. However, some measurement error would have crept into these single item measures, whose size cannot be estimated. However, in defence of this approach it has to be said that recent literature agrees on the difficulty of using multiple item measures in service research due to practical reasons, and acknowledges the adequacy and sometimes superiority of single item measures. For example, Drolet and Morrison (2001), based on a sophisticated analysis of measurement error, concluded that “incremental information from each additional item is extremely small . . . and even the second or third item contributes little to the information obtained from the first”. Furthermore, they also empirically proved that “added items actually aggravate respondent behaviour, undermining respondent reliability”. It is argued that given these findings, a single item, when suitably worded based on rigorous respondent feedback and consistent with extant literature (as in the current study), will result in valid measures despite the inherent inability to calculate a reliability coefficient.

Analysis and results

There were 461 responses, of which 29 were incomplete and were disregarded. The balance was substantially complete and resulted in a valid response rate of

16.2 per cent. There were no significant differences in the response rates for the two companies. Non-respondent biases were examined by comparing the scores for the key constructs given by early and late respondents. No significant differences were found on any of the constructs in the model, confirming the absence of significant non-respondent biases. For the individual tests, missing items were treated as missing completely at random and were excluded list-wise; 66 per cent of the respondents were male and 30 per cent were female; 4 per cent failed to respond to that question. The questionnaire specifically requested that “the person most involved with the decision to switch phone companies” responds to the survey. The average age of the respondent was 48 years. Compared to the actual population distributions, older age groups were somewhat over represented. However, all age categories were adequately represented.

As is common in most customer perceptions scores, data showed that the customer behavioural intentions scores were skewed, indicating that customers on average are more likely to stay than leave. The independent variables showed no unacceptable levels (outside ± 1) of skewness or kurtosis. However, there were some indications of unequal variance. Therefore, all variables were transformed into log scale. Examination of transformed variables showed no clear violations of regression assumptions.

Table I illustrates the simple bivariate correlations between the main independent variables and the dependent variable. There was adequate evidence to confirm the hypotheses *H1*, *H2*, and *H5* at a 0.01 level of significance, indicating the significant positive linear effects of SQ perceptions, price perceptions, and indifference on customer retention. However, there was inadequate evidence to support hypothesis *H4* that the higher the level of inertia, the greater the level of customer retention. Although the absence of a significant linear effect does not preclude the presence of a non-linear relationship between the two constructs, testing for non-linear effects was not a stated aim of this study.

	Retention	Service quality	Price	Inertia	Indifference
Retention	1.000				
Service quality	0.579**	1.000			
Price	0.485**	0.613**	1.000		
Inertia	0.038	-0.055	-0.153**	1.000	
Indifference	0.305**	0.149**	0.112*	0.223**	1.000
	0.000	0.000	0.033	0.000	-

Table I.
Pearson correlations
(significant two-tailed)

Notes: *correlation is significant at 0.05 (two-tailed); **Correlation is significant at 0.01 level

Regression analysis

In testing the hypotheses relating to the moderating effects, the procedure recommended by Aiken and West (1991) and more recently in Irwin and McClellan (2001) was followed. Regression analysis was undertaken hierarchically to test for significant interaction effects over and above the simple effects of the independent variables. The resultant models are shown in Table II. As per recommended practice, the independent variables SQ, price, and indifference were standardised prior to forming the interaction variables, to prevent the interaction variables from causing unacceptable levels of multicollinearity. The initial model (model 1) contained the simple additive model, which had an adjusted R -square of 42.1 per cent. At the next stage the two interaction effects – “SQ.price” and “SQ.indifference” – were added to the model (model 2). This resulted in an increase in the adjusted R -square value to 46.2 per cent. As shown in model 3, the addition of the remaining interaction effects – “price.indifference” – and the three-way interaction – “SQ.price.indifference” – resulted in a reduction in the adjusted R -squared value. The following discussion is therefore based mainly on model 2.

All five independent variables including the two interaction variables had significant positive relationships with customer retention, confirming the moderating effects of price perceptions (at 0.10 level) and indifference (at 0.01 level), hypothesised in $H3$ and $H6$ respectively. The prediction was not affected by multi-collinearity. The variance inflation factors (VIF) were well within the acceptable limit of ten. The collinearity diagnostics showed that none of the condition indexes was above the threshold limit of 15 to even warrant a further examination of variance proportions. The variance proportions confirmed these results, with no two coefficients having a substantially high variance proportion loading on the same dimension (the collinearity diagnostics have not been shown due to space limitations).

Next the regression variate was evaluated to confirm that they fulfilled the regression assumptions. Here too, there were no major causes for concern.

Independent variable	Model 1		Model 2		Model 3	
SQ	0.126	(0.473)***	0.132	(0.496)***	0.133	(0.501)***
Price	0.004	(0.171)***	0.004	(0.157)**	0.004	(0.141)**
Indifference	0.005	(0.173)***	0.006	(0.227)***	0.005	(0.199)***
SQ × price			0.002	(0.079)*	0.002	(0.069)*
SQ × indifference			0.004	(0.201)***	0.005	(0.208)***
Price × indifference					0.006	(0.027)
SQ × price × indifference					0.001	(0.068)
R^2	0.426		0.469		0.472	
Adjusted R^2	0.421		0.462		0.461	
F	85.968***		61.201***		43.894***	

Notes: β coefficients shown within brackets; * $\alpha < 0.10$; ** $\alpha < 0.05$; *** $\alpha < 0.01$

Table II.
Results of OLS
regression analysis of
drivers of customer
retention

Though trial results using non-transformed data led to some problems of heteroscedasticity and non-normality of the error term, log transformations overcame this problem. Examination of the normal probability plots showed that the error term distribution fell almost perfectly on the diagonal. Residual analysis did not show a perfect null plot. However, the plots did not show any strong trends either, and thus, it was deemed not to have violated the assumption of constant variance of the error term. Further, there were no indications of non-linearity. Independence of the error term was tested using a sequencing variable (the respondent ID) and the resultant plots showed no clear patterns, confirming the assumptions for the variate. Examination of residuals enabled the identification of six outliers. The above model excludes those outliers.

Discussion

The regression results showed that all three simple effects of service quality perceptions, price perceptions and indifference on customer retention were significant and positive. Furthermore, the results also showed that as hypothesised, price perceptions and indifference moderated the relationship between SQ perceptions and customer retention. These results confirmed all the hypothesised relationships except *H4*. The highest coefficient was associated with SQ. The simple effect of price was less than that of both SQ and indifference.

In a regression model with a moderator effect, interpretation of the coefficients is fundamentally different. What the β value shows is the effect of the independent variable (SQ) when the other independent variables are zero. To determine the total effect of an independent variable at given levels of the other independent variables, the separate and moderated (amplified) effects must be combined. After standardisation, scores of zero meant average (mean) indifference and average (mean) perceived price reasonableness. Accordingly (interpreting the β coefficients), when customers perceive average levels of indifference and price reasonableness, an increase in service quality by 10 per cent is going to increase rate of retention by almost 5 per cent. Further, when customers perceive low indifference and low price reasonableness (one standard deviation from mean), and thus have a higher propensity to leave, an increase in service quality by 10 per cent is going to increase rate of retention by a high 8.8 per cent. Thus, it shows that increasing SQ can significantly strengthen the rate of retention of even those who are unhappy about price. Survey data offered further supporting evidence. The respondents cited price as the main reason for switching. However, data also illustrated how more than a third of those who cited price as the reason for leaving had a recent problem relating to service quality. It is possible that an incident of poor service quality acts as a trigger in making customers who perceive high prices to decide to leave. When customers perceive high indifference and high price reasonableness (one standard deviation from mean), and thus have a higher propensity to stay, an increase in service quality by 10 per cent is going to increase rate of retention only by 1.1 per cent. Therefore, it is clear that increasing SQ can significantly increase the level of

retention of those who are likely to leave as a result of poor price perceptions and low indifference towards the service.

The regression results also showed that both price perceptions and customer indifference would moderate the effect of service quality on retention. The positive coefficient for the interaction term, $SQ \times price$, shows that for a given level of service quality, those who perceive reasonable prices are significantly more likely to be retained than those who perceive unreasonable prices. Figure 1 illustrates this phenomenon graphically. (For the purpose of drawing this graph, both variables were discretised. SQ was split into quartiles and price perceptions were split into three approximately equal groups.) Figure 1 shows that even among those who perceive very high levels of service quality (upper quartile), the mean retention rate is negative (above the 0.25 level on the vertical scale) for those who perceive unreasonable prices. This implies that they are on average more likely to leave than stay. At high perceived service quality levels, the difference in mean rate of retention of the third who had the poorest price perceptions and the two-thirds who had the best and average price perceptions combined was significant at $\alpha < 0.05$ level. These results add a new dimension to what was discussed earlier on the relationship between SQ, price, and customer retention. We earlier said that SQ perceptions have the highest positive effect on rate of retention. However, a look at the means in Figure 1 shows that high service quality perceptions alone may be inadequate to retain some customers. Certainly, where perceived service quality could be improved, and price perceptions are poor, increasing service quality will strengthen customer retention. But where perceived service quality levels are already high, the only way to retain those customers who perceive unreasonable prices (at high-perceived SQ levels) seems to be a combined price and SQ strategy. Further, it can also be seen how even at “low service quality levels” (second lowest quartile), those who perceive highly reasonable prices are, on average, likely to be retained. This lends further support for the combined strategy.

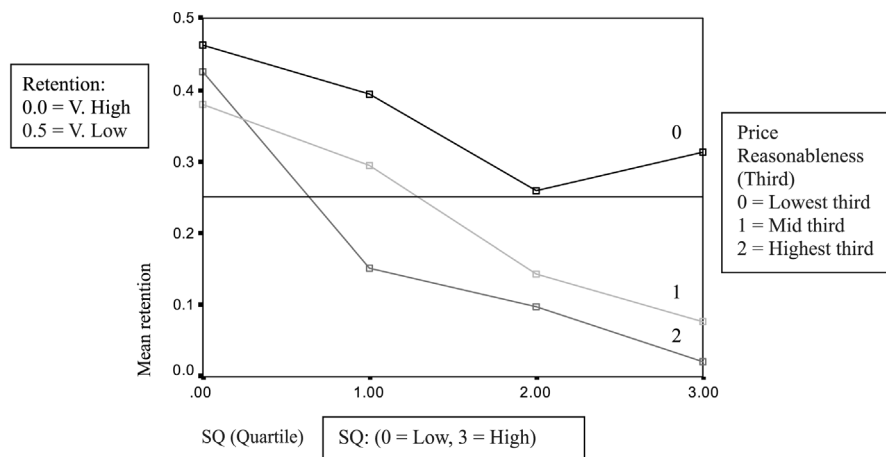


Figure 1. Observed sample means of retention

Indifference had a similar moderating effect. The positive coefficient for the interaction term, $SQ \times$ indifference, indicates that for a given level of SQ, the higher the level of indifference, the stronger the rate of retention. Even at low levels of service quality, high indifference is bound to reduce the likelihood of customers defecting. Figure 2 illustrates this phenomenon graphically (in this instance, both variables – SQ and indifference – were split based on quartiles). Figure 2 illustrates that even among those who scored the lowest levels of service quality, those who perceive high indifference towards the service have a mean retention rate that is positive (below the 0.3 level on the vertical scale). This means that they are on average likely to stay. At low SQ levels (0.00 and 1.00 levels in Figure 2), the difference in mean retention between those displaying high indifference (highest quartile) and the rest were significant at $\alpha < 0.05$ level. This discussion illustrates the significant impact that customer indifference, resulting from perceived supply homogeneity and low customer involvement, can have on determining the customers' propensity to stay/leave their service provider.

However, inertia was found not to have a significant linear relationship with retention. While this result was contrary to what was hypothesised, it was not totally unexpected since it was argued that the condition of inertia was bound to be unstable. Indeed, an examination of mean retention rates at different levels of service quality and inertia, by discretising the scores, gave some interesting results (see Figure 3). Among those who had low levels of service quality perceptions (lowest quartile), there was a significant difference (at 0.10 level) in the level of retention between those who showed high inertia (the highest quartile) and the rest. However, whether this difference is practically significant is questionable since a look at the simple means shows that, at low service quality levels, both those who have high and low inertia are, on average, more likely to leave than stay with their service provider. Further, a similar chart linking price perceptions, inertia and retention (Figure 4) found that where customers have poor price perceptions,

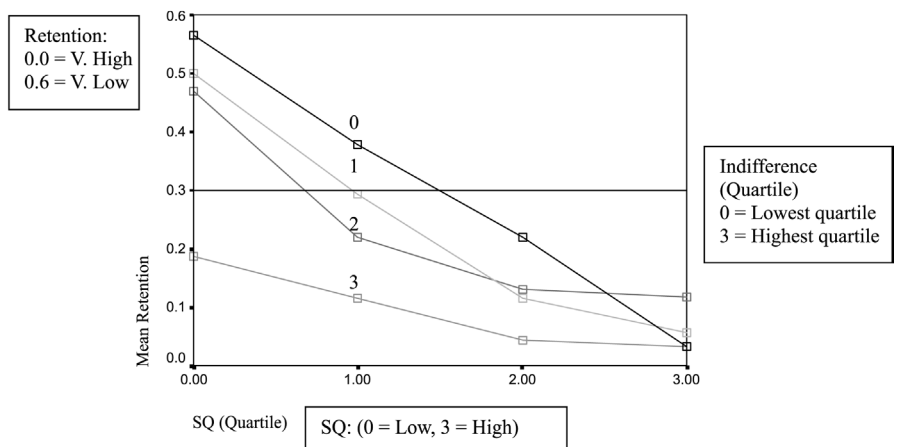


Figure 2.
Observed sample means
of retention

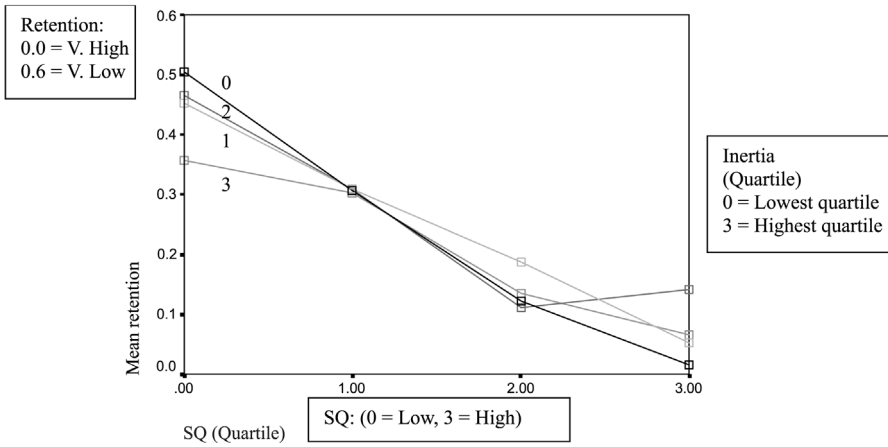


Figure 3.
Observed sample means of retention

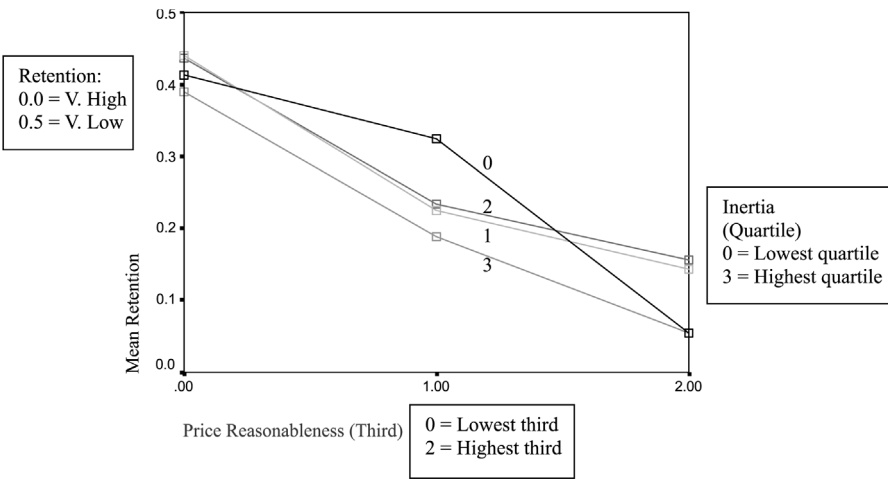


Figure 4.
Observed sample means of retention

level of inertia did not have a significant effect on determining a customer's propensity to stay or leave, confirming the aforementioned lack of stability of this condition.

Indeed, the absence of a linear relationship between inertia and customer retention does not mean that inertia has no impact on customer retention, as partly illustrated in Figure 3. Recent research has found instances where switching costs, having some conceptual overlaps with inertia, had a direct linear association with switching intentions. For example, Bansal and Taylor (1999) found evidence in the banking sector in a survey of mortgage customers and Lee *et al.* (2001) found evidence in the mobile phone sector in France. However, in the latter case, the association between switching costs and customer retention was significant only for low users of the service. As such, it is possible that the impact of inertia on retention will be determined by the competitive structure of the industry.

Conclusions

Whereas most past studies attempted to link a key customer perception such as SQ perceptions to customer behavioural intentions, the current study attempted to build a more holistic model. In addition to SQ perceptions, the current study also incorporated less often discussed constructs such as customer indifference and inertia into the retention model. The paper reported that service quality is indeed an important driver of customer retention, even in a mass service, given that SQ perceptions explained the highest variation in the dependent variable. However, SQ certainly does not seem to be the sole concern of the customer because high SQ at the expense of a reasonable price also appeared to be unacceptable, at least for the more price sensitive segments of customers. Where price perceptions are poor and there is potential for improving service quality, SQ improvements can lead to a significant increase in rate of retention. However, where negative price perceptions are associated with high service quality perceptions, service quality alone will be inadequate to retain customers. Indeed, this is likely to be a result of fixed line telephone services being a mass service. In this context, a combined service quality-price strategy may work best. Companies could look at the economics of offering special packages to the more price-sensitive customers. In the telecommunication sector, major players in the UK already offer different types of packages to business customers based on price. The situation is not the same in the residential segment. Results show that companies should consider expanding optional plans to the residential segment.

The roles of indifference and inertia appeared to bring mixed blessings to the service provider. Indeed, businesses are likely to be in a position to take advantage of customer indifference to retain customers despite low perceived service quality levels. However, the effect of inertia on repurchase habits was statistically only marginally significant, and further, was unlikely to be practically significant. Inertia had no impact on rate of retention of customers with poor price perceptions, confirming previous claims in research that it is an unstable condition. Therefore, reliance on inertia to retain customers could indeed be a risky strategy for the service provider.

This study was limited by the fact that it was based on cross sectional data. Further, some of the constructs in this study such as inertia and indifference are relatively under-researched and as such, future research could attempt to build more robust measures of these constructs. This study also looked only at linear relationships between the various constructs. While the linear relationship between inertia and retention was non-significant, plausible arguments could indeed be developed to hypothesise non-linear relationships. Therefore, future research could pursue such non-linear relationships to test whether they better explain customer repurchase intentions.

Note

1. As per standard practice, reliability coefficients were not calculated for the formative scale.

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Formative scale – two items

Strongly agree

Strongly disagree

1. There is very little difference between the overall service provided by different phone companies
2. How would you describe your/your family's spending on phone bills?)

Very low

Very high

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Inertia

Strongly agree

Strongly disagree

1. I feel that I cannot be bothered to change my phone company

Price perceptions

Strongly agree

Strongly disagree

1. The prices charged by my phone company are reasonable