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The Effect of Service Price Increases on Customer Retention

The Moderating Role of Customer Tenure and Relationship Breadth

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This study examines the impact of actual price increases on customer retention in a service context and how the effect of a price increase is moderated by both tenure and breadth of the customer's relationship. The study finds that tenure is associated with lowered customer sensitivity to price increases as well as having a favorable direct effect on customer retention rates. The study also finds that relationship breadth can exacerbate the adverse effect of price increases on customer retention. Finally, relationship breadth is found to have a favorable direct effect on retention rates only among newer customers. The managerial implication is that marketers must pay extra attention to short-tenure and broad-breadth customers when implementing price increases. The study represents a unique contribution to the service marketing literature, which to date reports little research examining the effect of actual price changes on consumer behavior.

Keywords: price increases; retention; loyalty; relationship; tenure.

Introduction and Background

Customers are increasingly recognized and managed as assets to the firm (Hogan, Lemon, and Rust 2002). A customer base represents a source of future revenue, from repeat-purchases and cross-buying of other products offered by the provider. If the firm incurs set-up costs to attract or recruit new customers, it is financially desirable to retain current customers rather than constantly lose customers and incur the expense of replenishing the customer base. It is also recognized that current customers who buy more products are each more valuable to the firm than light or infrequent buyers. Therefore, building "share of wallet," otherwise known as relationship breadth, is seen as an important goal in service industries (e.g., Bolton, Lemon, and Verhoef 2004). In turn, a broader relationship arguably benefits the firm by enhancing customer retention (Coyles and Gokey 2002; Kamakura, Kossar, and Wedel 2004). In the loyalty literature, *retention* means the number of customers who stay with the provider in the course of an established period, for example a year. *Tenure* is the length of time a customer remains a customer.

Relationship breadth is defined as the number of products the customer purchases from the firm.

Multiple benefits accrue from longer tenure and broader relationship depth (e.g., Reichheld 1996; Reichheld and Sasser 1990; Reichheld and Teal 1996). The benefits of tenure as listed by Reichheld include amelioration of acquisition costs, enhanced overall revenue arising from a longer relationship time period, easier servicing because of customer learning, more referrals, greater tolerance of higher prices, and less likelihood of customer defection in future years. The benefits of relationship breadth are more revenue per customer, greater opportunity to learn about customer needs, and the potential to build switching costs that further strengthen the relationship (Kamakura et al. 2003). Tenure and relationship breadth are mutually reinforcing: Tenure provides the opportunity to build relationship breadth, and building relationship breadth is one mechanism for improving tenure.

Many companies have recognized the above benefits of customer retention, tenure, and relationship breadth. As a consequence, they have embraced customer satisfaction (Biong 1993; Bloemer and Lemmink 1992;

Danaher and Gallagher 1997; Iacobucci, Grayson, and Ostrom 1994; Mittal and Lassar 1998; Patterson and Spreng 1997; Ranaweera and Prabhu 2003; Rust and Zahorik 1993) and relationship marketing (Christopher, Payne, and Ballantyne 1991) initiatives to retain customers longer, or increase their share of wallet. However, companies might sometimes choose, or be forced, to pursue routes that potentially have an unfavorable impact on customer sentiment (e.g., Homburg, Hoyer, and Koschate 2005). A prime example of such action is a price increase. Price increases are sometimes unavoidable, for example when input costs rise. More broadly, organizations have a powerful profit incentive to ensure their prices adequately reflect value and achieve margin objectives (e.g., Marn and Rosiello 1992). If the firm does raise prices, one of the basic tasks of marketing is to minimize the potential impact on the customer base. However, price increases represent a potential threat to the establishment and maintenance of long-term customer relationships and loyalty.

The question arises: What happens when a service provider raises prices? The overall expectation is that a price rise will cause higher levels of switching and reduced levels of cross-purchasing among current customers. However, does a price increase have different effects across customer groups? In particular, does price sensitivity differ according to the tenure of the customer or his or her breadth of relationship? To accurately address these questions, we need to recognize two forms of retention: a product-specific retention rate (continuing as a customer for a specific product) and a broader relationship retention rate (continuing as a customer at all). This study focuses on the former but recognizes the importance for marketers to understand both.

An appreciation of how sensitivity to a price increase differs according to customer tenure and breadth would contribute to academic knowledge in the service area and would also be useful to practitioners. For marketers, long-tenure and broad-breadth customers represent priorities for retention, since both tenure and breadth are linked to customer profitability (e.g., Ahmad and Buttle 2001; Garland 2003; Hallowell 1996). Therefore, knowing if long-term and broad relationship customers are more (or less) sensitive to price increases would help develop customer retention programs and make "win-back" initiatives (Stauss and Friege 1999; Thomas, Blattberg, and Fox 2004) easier to plan.

According to the literature, longer term customers should be less price sensitive (e.g., Reichheld and Sasser 1990; Reichheld and Teal 1996). Customers with broader relationships with the firm are, likewise, expected to be less price sensitive, on the basis that increased points of contact between the firm and the customer create switching costs (Kamakura et al. 2003). Conversely, expectations of reciprocity (Gouldner 1960) might in theory heighten the price sensitivity of customers who have a broad relationship with the firm. However, there is a lack of empirical evidence on these issues.

Because of the lack of empirical evidence, managers have little guidance as to the vulnerability of customer groups to a price increase. Indeed, the literature has emphasized a general lack of knowledge about buyer responses to price increases (e.g., Bijmolt, Van Heerde, and Pieters 2005; Sivakumar and Raj 1997) and, specifically, price increases in service contexts (Homburg et al. 2005). This research consequently investigates how customers with varying levels of tenure and relationship breadth respond to price increases from a service provider.

The remainder of the article is organized as follows: The next section discusses literature pertaining to customer loyalty, tenure, relationship breadth, and price. Next, the article introduces four hypotheses based on this discussion. Finally, two empirical studies are conducted to assess how customer tenure and relationship breadth affect the impact of actual price increases on customer retention. The market context used is domestic insurance (buildings, motor vehicle, and home contents).

Literature Review and Hypothesis Development

Tenure

A central tenet of marketing is that satisfying exchanges build customer continuance. Empirical associations between customer satisfaction and loyalty are well established (e.g., Bolton and Lemon 1999; Cooil et al. 2007; Crosby and Stephens 1987; Gustafsson, Johnson, and Roos 2005). As the continuance of the relationship (i.e., tenure) lengthens, the customer develops more trust toward the provider (e.g., Bejou, Wray, and Ingram 1996). According to Morgan and Hunt (1994), the corollary of trust is relationship commitment. This suggests that a longer tenure customer should have a heightened propensity to repurchase a specific product from a service provider.

A long-tenure relationship could also indicate greater inertia on the part of the customer (Oliver 1999), as well as higher risk aversion (Gupta, Su, and Walter 2004). That is, the customer prefers to continue with the certainty of the current relationship rather than risk a relationship with

another provider, even given the possibility that it will be a better relationship. These two factors suggest that a customer who has a longer purchase history for a particular product from a provider could have an accordingly heightened propensity to continue past behavior. However, there is a lack of empirical research on this issue.

The first hypothesis to be tested is therefore:

Hypothesis 1: Longer relationship tenure with a service provider is associated with heightened propensity to retain the use of a particular product from that provider.

The interplay between price sensitivity and tenure is an important issue for marketers. Pricing issues have been identified as key triggers for switching between service providers (Colgate and Hedge 2001; Keaveney 1995). Most studies examining the role of price in service have studied how satisfaction and service quality reduce price sensitivity (de Ruyter, Wetzels, and Bloemer 1998; Herrmann et al. 2004; Homburg et al. 2005). The association between tenure and price has been less closely studied. Reichheld and Teal (1996) asserted that long-tenure customers pay higher prices but presented no empirical evidence for this claim. Reichheld's assertion was investigated by Reinartz and Kumar (2000), who found that to the contrary in certain consumer markets, such as mail-order catalogues, newer customers paid higher prices. A replication study in a business-to-business market found the same (Reinartz and Kumar 2002). These two studies suggest long-term customers are not necessarily less price sensitive. However, no studies have investigated how consumer response to actual price increases might be influenced by tenure. The theoretical expectations follow below.

A customer with longer tenure can be argued to be desensitized to a price increase based on similar reasons to Hypothesis 1. The customer has a longer history of successful service with the provider, which can potentially offset the negative utility of the price increase. Tenure provides an opportunity for the customer to develop interpersonal bonds with (Gwinner, Gremler, and Bitner 1998) or dependence on (Bendapudi and Leone 2003) the service provider, which could also lower sensitivity to higher prices. Therefore, longer tenure customers are expected to be less price sensitive. Accordingly, Hypothesis 2 is as follows:

Hypothesis 2: Longer relationship tenure with a service provider is associated with reduced sensitivity to price increases for a particular product from that provider.

Relationship Breadth

Relationship breadth, by definition, arises from the customer's purchase of additional products from a service provider. This signifies a perception of receiving good value from that provider (Hallowell 1996). It also results in the consumer interacting to a greater extent with the service provider, which builds trust (Morgan and Hunt 1994) and familiarity. Relationship breadth through cross-selling is argued to heighten consumer switching costs by increasing contact points between customer and provider (Kamakura et al. 2003). Finally, research shows that consumer-based brand equity is built from repeated exposure to the brand (Aaker 1991). The consumer who uses a service brand for multiple products is in receipt of more information about that brand, which affords the brand more salience, or "share of mind." Salience is empirically linked to retention (Romaniuk and Sharp 2003). The third hypothesis consequently is as follows:

Hypothesis 3: A broader relationship is associated with a heightened propensity to retain the use of a particular product from that provider.

The possible association between relationship breadth and price sensitivity has not been previously explored in the literature, however related areas of inquiry provide a basis for hypothesis development. Two countervailing forces could arise from relationship breadth that might either dampen or heighten consumer sensitivity to price increases. Relationship breadth is one outcome of customer satisfaction (Cooil et al. 2007; Verhoef, Franses, and Hoekstra 2001), which is linked to lower price sensitivity (e.g., Homburg et al. 2005). Relationship breadth might also increase switching costs (Kamakura et al. 2003, p. 46) and therefore reduce price sensitivity.

However, there are two powerful rationales as to why relationship breadth could heighten price sensitivity. First, customers with a broad relationship with the firm should have a more finely attuned reference price because they purchase more products from the provider and therefore have a better grasp of the provider's price information. Empirical evidence shows that consumers are resistant to paying prices above their internal reference price (e.g., Kalyanaram and Winer 1995; Mazumdar, Raj, and Sinha 2005).

Second, a buyer who concentrates purchases with a certain provider might expect reciprocity (Gouldner 1960) from the provider in the form of favorable treatment. Reciprocity is a common expectation in interpersonal relationships (Perugini et al. 2003) and is a component of

affective commitment in a service context (e.g., Gustafsson et al. 2005). A price increase to a customer with relationship breadth could therefore violate that customer's expectations of reciprocity. This could reduce customer commitment and provide motivation to seek alternative providers. Consistent with this reasoning, Ganesan et al. (2005) found affective commitment could amplify the effect of supplier errors on buyer's switching intentions. Gregoire and Fisher (2008) similarly found that higher relationship quality could lead to a stronger desire by customers to retaliate against a provider following a service failure.

Expectations of reciprocity are more likely to arise from relationship breadth as compared to tenure because relationship breadth relates to current spending, or commitment levels, with the provider, while tenure reflects the past. Events that already occurred have less impact than those in the present or recent past (e.g., Mazursky and Geva 1989).

Since there are opposing arguments as to the effect of relationship breadth on price sensitivity, two competing hypotheses are framed below:

Hypothesis 4a: A broader relationship is associated with lessened sensitivity to a price increase for a specific product from a service provider.
Hypothesis 4b: A broader relationship is associated with heightened sensitivity to a price increase for a specific product from a service provider.

The five hypotheses are shown in schematic form in Figure 1.

The next section operationalizes the variables used to test the hypotheses. The initial empirical study and analysis model are then described.

## Construct/Variable Operationalization

Criterion Variable

The criterion variable in the model is customer retention. For an individual, this can take one of two binary conditions: remain or lapse. In aggregate terms, the criterion variable is the odds of lapsing as a customer at a specific point in time.

Independent Variables

Price change is the percentage price increase faced by the consumer, ranging from 0% to a 20% increase. *Tenure* is the number of years the consumer has been purchasing that product from the focal service provider.

**Figure 1
Diagram of Hypothesized Relationships**
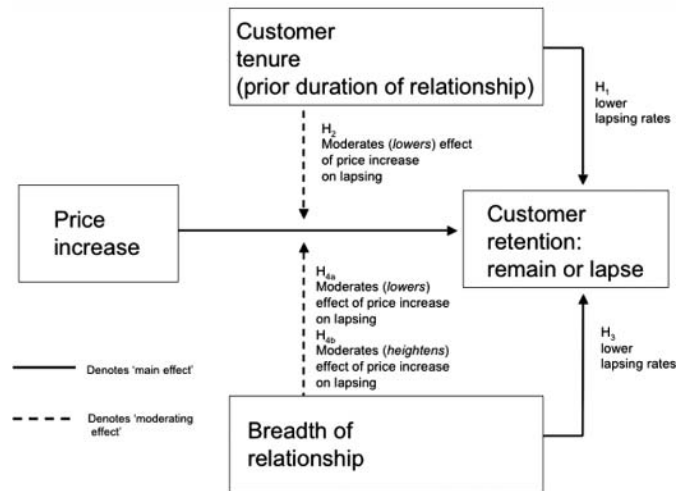
The tenure range in this study is 1 to 15 years. *Relationship breadth* is operationalized as the number of different products the customer currently purchases from the focal service provider.

Covariates

A series of covariates is included in the analysis models to account for respondent heterogeneity and avoid confounding influences on the results. Each will be discussed below.

Age. Age of the consumer is used as a covariate to avoid confounding age and tenure effects, because age and tenure are naturally linked. Age is also associated with heightened loyalty (Lambert-Pandraud, Laurent, and Lapersonne 2005; Patterson 2007).

Income. Higher income consumers have less economic incentive to seek transaction utility (Thaler 1983); therefore, income could be positively linked to retention. Income is included in Study 2 as a six-level ordinal variable (shown in Appendix 1).

Membership in a loyalty program. In the context of this study, loyalty program membership refers to taking out multiple policies for a monetary inducement. Such membership is expected to lead to higher retention and might also lead to lessened price sensitivity (Bolton, Kannan, and Bramlett 2000; Sharp and Sharp 1997).

Loyalty program membership has been used as a covariate in prior customer retention studies (Verhoef et al. 2001). Note that membership in a loyalty program is also statistically associated with relationship breadth in this market because the purchase of multiple policies is a prerequisite for program membership. However, there can be relationship breadth without program membership. For this reason, loyalty program membership is used as a covariate, not as an indicator of relationship breadth. It is included in the analysis models as a dummy variable.

Payment method. Direct debit or pay-by-the-month approaches indicate a heightened acceptance of the service provider and represent a switching cost (Burnham, Frels, and Mahajan 2003; Nilssen 1992). Pay-by-the-month is included as a dummy variable in the analysis models.

Price level. This is the amount paid, divided by the total coverage of the motor vehicle. A high value for this variable means the customer is paying comparatively more for the product than other customers. Paying a high price relative to coverage might be linked to lower retention because perception of payment equity is lessened (Bolton and Lemon 1999).

Satisfaction. Prior studies show an association between satisfaction and loyalty-related customer behavior (Szymanski and Henard 2001).

Total category usage. This represents the total number of products the customer has with any service provider in the market. It is included in Study 2 to clearly identify the hypothesized effects of relationship breadth, as distinguished from total category use.

These variables are now employed in the two empirical studies described below to test the research hypotheses.

Study 1

This study used data supplied by a large Australian provider of motor vehicle insurance. A total of 70,191 consumer records were supplied, which included the price the consumer paid last time he or she purchased/renewed the policy and the price he or she was then asked to pay 12 months later at the time of renewal. The data also included information on whether the customer renewed the policy, which serves as the binary criterion variable. Of the 70,191 consumers, 6,702 lapsed, for a lapsing rate of 9.5%. This figure is higher than the overall company-wide lapsing rate because it only includes those customers who received a price increase of between 0% and 20%.

Data included the customer's tenure, in years, for the policy. This study did not assess the effect of relationship breadth, since the service provider was unable to accurately assess relationship breadth in its database records (Study 2 addresses this). The sample was limited to customers aged between 25 and 70. Drivers younger than 25 years old were not considered representative of the broad spectrum of customers because they have a higher incidence of vehicle accidents and consequently pay higher premiums. After 70 years of age, the incidence of driving a motor vehicle in the population declines considerably; therefore, this was deemed an appropriate upper age limit.

Analysis Method

The criterion variable is binary (remain/lapse). A variety of analysis approaches could be used for such data, for example logistic or probit models. Binary logistic regression was chosen because the model parameters are interpretable as odds ratios (Gessner et al. 1988). Odds ratios are central to the subsequent discussion on the effects of tenure, breadth, and price on lapsing. The specific analysis approach used is based on the recommendations by Arnold (1982) and particularly Sharma, Durand, and Gur-Arie (1981) for the identification of moderator variables in regression models. While Sharma's approach focused on standard Ordinary Least Squares regression, it is also applicable to logistic regression. The approach is to construct a series of nested logistic models to identify whether tenure acts as a moderator and what type of moderator variable it is. The correlations between the variables used in the models are shown in Appendices 2 and 3.

The Moderated Regression Analysis (MRA) procedure commences with Model 1, which includes only the covariates and price increase. Tenure is then entered into Model 2. As explained by Sharma et al. (1981), if tenure is statistically significant in Model 2, it can be classified as a predictor variable. The interaction term for Price × Tenure is entered into Model 3. If this interaction is statistically significant, it indicates that the impact of a price increase on retention/lapsing is moderated by the level of tenure. The reason for using both Model 2 and Model 3 is to assess whether tenure is a "pure" moderator, with no direct association with the criterion variable, or a "quasi" moderator, which also has a direct association with the criterion variable. The MRA concludes with a subgroup analysis, which can identify a third type of moderator (homologizer) operating through the error term. It will

Table 1
Moderated (Logistic) Regression Analysis: Study 1

	Model 1			Model 2			Model 3		
	B	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*
Constant	2.0	.23	.001	2.2	.23	.001	2.2	.23	.001
Age	–0.02	.001	.001	–0.01	.001	.001	–0.01	.001	.001
Loyalty program	–0.55	.07	.001	–0.5	.07	.001	–0.50	.07	.001
Price level	0.11	.004	.001	0.11	.004	.001	0.11	.004	.001
Payment plan	–4.1	.22	.001	–4.1	.23	.001	–4.1	.23	.001
Price increase	0.04	.003	.001	0.03	.003	.001	0.03	.003	.001
Tenure				–0.08	.004	.001	–0.08	.004	.001
Price × Tenure							–0.002	.001	.005
Nagelkerke R^2		0.09			0.10			0.10	
–2 Log Likelihood ratio		41,364			40,948			40,940	
Schwarz Bayesian Criterion		41,442			41,037			41,040	

also clarify the extent to which the form of the price increase–lapsing relationship differs according to tenure.

The interaction terms for the MRA were formed by multiplying the mean-centered price change variable by the mean-centered tenure variable. Mean centering minimizes collinearity between the independent variables and the interaction term (Jaccard, Wan, and Turrisi 1990). The main effect terms for price and tenure were not based on mean-centered variables, as this is unnecessary and complicates their interpretation. The results of the MRA (logistic) are shown in Table 1.

Analysis Discussion

Three fit statistics are used to compare the nested models: –2 log likelihood ratio, Nagelkerke pseudo R^2, and Schwarz Bayesian Criterion (or SBC) (note the SBC was not used to compare subgroups, which have dissimilar sample sizes).

The Nagelkerke pseudo-R^2 figures are approximately .10 for all three models. This is an acceptable result, considering that the odds of lapsing are only approximately 1 in 10. Low baseline odds means that the naïve logistic model comprising only the intercept can correctly classify 90% of cases by simply classifying each one as a nonlapser. This makes it more difficult for the set of independent variables to improve the fit. This is a well-documented issue in logistic regression modeling (e.g., Agresti 2002).

The MRA Model 1 includes the covariates and the variable for price increase. The coefficient for price increase is positive and statistically significant, indicating that a price increase heightens the odds of lapsing. Age, membership in the loyalty scheme, and payment by installments all lower

the odds of lapsing. The price level variable (coverage received for price paid) also has a positive and statistically significant effect on lapsing. In Model 2, the term for tenure is entered. The likelihood ratio drops by 416 ($\Delta\chi^2$ 416, df 1, $p < .0001$), and the SBC reduces by 5, indicating a better model fit. Tenure has a negative and statistically significant effect on lapsing, supporting Hypothesis 1.

With tenure included, we can calculate the price elasticity for price increases in this market. The logistic parameter for price is 0.03. For a 1% price change, the odds ratio of lapsing changes by a multiple of $e^{0.03} = 1.03$. This equates to a 0.03% change in the lapsing rate, for example from 9.6% to 9.9%. Price elasticity in this market is therefore quite low, at –0.3. Note that this is the elasticity of demand for renewals; the price elasticity pertaining to new customer purchases is unknown.

In Model 3, we enter the interaction term for Price × Tenure. The likelihood ratio drops only slightly ($\Delta\chi^2$ 8, df 1, $p < .001$). The SBC increases, penalizing the model for adding a parameter with only marginal improvement in fit. However, the Price × Tenure interaction parameter is statistically significant at $p = .005$. The negative sign for the interaction term indicates that tenure lowers the effect of price increases on the odds of lapsing. In other words, price increases have less effect on lapsing among long-tenure customers. This supports Hypothesis 2.

Given that the parameter for tenure and the interaction term are both statistically significant, the appropriate classification for tenure is a quasi-moderator (Sharma et al. 1981). That is, tenure is related to the criterion variable and interacts with the predictor (independent) variable, namely price increase.

A subgroup analysis was then conducted to further clarify the role of tenure, by comparing the parameter for price

increases across short-tenure and long-tenure customers. The sample was split into two groups. The short-tenure group had an average tenure of 2.2 years; the long-tenure group had an average of 9 years. The parameter for price increase was markedly smaller for the long-tenure group as compared to the short-tenure group (0.023 vs. 0.035, $p <$ .05). Exponentiating the price increase parameter (e^B) for each subgroup indicated that a 10% price rise would increase the lapsing rate by 3 percentage points for the short-tenure customers, compared to only 1 percentage point for long-tenure customers. These results, based on this first set of data, suggest tenure does have a statistically and managerially significant effect in lowering customer's sensitivity to price increases. The next study examines the role of tenure in an additional set of data, while also examining the role of relationship breadth.

Study 2

This study builds on Study 1 by examining the possible impact of relationship breadth on retention and sensitivity to price increases. Tenure is also examined, as per Study 1. The data were gathered from a telephone survey of consumers conducted by a professional market research organization. The sample size for the survey was 807. As per Study 1, the sample was intentionally limited to people ages 25 to 70. The age and gender composition of the sample broadly matched the wider population within the 25 to 70 group, as shown in Appendix 4. The consumer contact details were sourced from the same insurance company as Study 1, but the respondents for Study 2 composed a completely different sample than that used in Study 1. The survey questionnaire asked respondents to indicate which types of insurance policies they currently held and with which company they had each policy. Three types of policies were covered: motor vehicle, buildings, and contents. Up to six policies were recorded, as some consumers had more than one vehicle or premises. The precise wording of the survey questions is shown in Appendix 5.

All consumers in the survey had an insurance policy due for renewal within 2 months. The survey was conducted several weeks prior to the renewal notice being sent to the consumer to avoid biased responses. The consumers were not informed or reminded they had a policy due when being surveyed.

The survey data were later matched with company records that indicated whether the consumer renewed their policy or not. Additional information provided by the service provider included tenure, whether the customer was currently a participant in the provider's loyalty scheme, and the payment method he or she used, as per Study 1. All consumers who were surveyed were listed in the company database to incur a price increase. Satisfaction was assessed from the survey by asking about recent claims or other interactions with the company. Preliminary analysis showed that satisfaction was best used as a dummy variable (1 = *dissatisfaction*, 0 = *absence of dissatisfaction*) in the analysis models. The consumer's income was also ascertained. Finally, a series of questions gauged the provider's brand image. These were not used in the analysis itself but verified that the service provider was seen as a mainstream brand rather than a "low-price" brand. The five questions pertained to "products provide complete cover," "convenient branches," "simple easy to understand policies," "fair attitude to paying claims," and "competitive on price." The respondents were asked to indicate whether they agreed the provider exhibited that attribute. The proportions agreeing with each statement were 67%, 89%, 58%, 58%, and 53%, respectively. These results indicate the service provider was not positioned strongly on price, compared to the other aspects explored. Therefore, it did not appeal to a particularly price-sensitive market segment, with unusual responses to price changes.

Analysis

Three logistic models were again constructed, followed by a subgroup analysis as outlined by Sharma et al. (1981). The results for the MRA are shown in Table 2. As per Study 1, negative parameters indicate a negative association with the odds of lapsing, and positive parameters indicate the variable is positively associated with lapsing.

Results—Study 2

The main effect for price was positive and statistically significant ($p = .04$) in Model 1. This again indicates that price increases heighten the odds of lapsing. Several covariates were also statistically significant. In particular, the ratio of the price paid by the customer for the coverage provided by his or her policy was statistically significant at $p = .001$. This was consistent with Study 1—consumers paying a comparatively high price for the service were more likely to lapse when it was due for renewal. Satisfaction, or rather reporting a dissatisfying experience, also heightened the odds of lapsing. Participation in an installment payment scheme lowered the odds of lapsing. This result reinforces the role of building switching costs between supplier and customer to enhance retention (e.g., Burnham et al. 2003; de Ruyter et al. 1998).

Table 2
Moderated (Logistic) Regression Analysis: Study 2

	Model 1			Model 2			Model 3		
	B	SE	p	B	SE	p	B	SE	p
Constant	1.33	1.09	.22	1.71	1.11	.12	2.69	1.33	.04
Age	–0.02	0.01	.09	–0.01	0.01	.19	–0.02	0.01	.12
Income	–0.08	0.06	.21	–0.08	0.07	.23	–0.08	0.07	.25
Loyalty program	–0.15	0.31	.64	0.04	0.33	.91	–0.07	0.35	.84
Price ratio	0.12	0.04	.001	0.11	0.04	.001	0.12	0.04	.001
Payment plan	–2.20	0.73	.003	–2.34	0.74	.002	–3.07	1.02	.003
(Dis)satisfaction	1.50	0.50	.003	1.75	0.51	.001	1.70	0.52	.001
Price increase	0.04	0.02	.04	0.03	0.02	.17	0.01	0.02	.80
Total category usage	–0.13	0.08	.10	–0.04	0.10	.67	–0.03	0.10	.78
Tenure				–0.08	0.03	.015	–0.10	0.04	.006
Relationship breadth				–0.17	0.09	.06	–0.17	0.09	.06
Price × Relationship Breadth							0.02	0.01	.080
Price × Tenure							–0.02	0.01	.006
Nagelkerke R^2		0.11			0.13			0.17	
–2 Log Likelihood ratio		516			506			486	
Schwarz Bayesian Criterion		576			573			565	

Tenure and relationship breadth were inserted in Model 2. Their inclusion improves the model. The SBC reduces by 3, and the –2 Log Likelihood ratio drops by 10 ($\Delta\chi^2$ 10, df 2, $p < .01$). The parameter for tenure is statistically significant ($p = .01$), which reconfirms Hypothesis 1: Tenure is associated with lower lapsing rates. The parameter for relationship breadth is marginally statistically significant ($p = .06$), which gives tentative support for Hypothesis 3. More insight on this issue might emerge from the subgroup analysis.

The interaction terms are included in Model 3. All indicators of model fit improve. The SBC reduces by 8. The interaction term for Tenure × Price Change is negative and statistically significant ($p < .01$). This result supports Hypothesis 2, consistent with Study 1: Longer tenure is associated with lower price sensitivity of customers to price increases from their service provider. In terms of the moderating effects of tenure and relationship breadth, the parameter for the interaction Price × Breadth is positive, with a p value under .10. This indicates that relationship breadth heightens the effect of price increases on customer lapsing, supporting Hypothesis 4b. Note that this effect was identified while controlling for total category usage, by including it as a covariate. A check for collinearity between category usage and relationship breadth identified that while the two variables are correlated, the Variance Inflation Factor for the latter was only 1.5. This is far below the level at which it is considered to be a concern (Mendenhall and Sincich 1996, chap. 6). It appears that

while total category usage has a marginally significant association with lapsing in Model 1, this effect was completely mediated (Baron and Kenny 1986) by the inclusion of relationship breadth.

The parameter for price increase is .04 in Model 1. This translates to a price elasticity for renewals of –.04, which is quite close to the elasticity figure of –.03 obtained in Study 1. The inclusion of the main effects terms in Model 2 and the interaction terms in Model 3 alters the price increase parameter. The parameter becomes nonsignificant in Model 2 ($p = .17$) and even less so in Model 3 ($p = .80$). This was not due to collinearity between the interaction terms and the price change variable, because the interaction variables were constructed from mean-centered variables. To verify if this parameter change was due to one or both interaction terms, two supplementary analyses were run, in each case entering only one of the interaction terms. The inclusion of the Price × Relationship Breadth interaction still resulted in a parameter for price that was nonsignificant ($p = .16$). The inclusion of the Price × Tenure interaction resulted in a more dramatic reduction in the significance level of the parameter, to a p value of .78. It appears that incorporating the moderating effects of relationship breadth, and particularly tenure, on price increases into the model renders the main effect of the price increase to nonsignificance.

A subgroup analysis was then conducted as per Study 1. The sample was split into low/high-tenure subgroups and low/high-relationship-breadth subgroups. Logistic models were used to clarify how the price parameter

varied across these subgroups. The tenure subgroups had 2.4 and 9 years average tenure, respectively; and the breadth subgroups had 1.6 and 3.6 products with the service provider, respectively.

The parameter for price increase was positive and statistically significant ($p = .01$) for the short-tenure group but not significant for the long-tenure group ($p = .31$). This confirms the MRA analysis and the results from Study 1, namely that price increases have more effect on lapsing among newer customers than longer term customers.

The parameter for price increase was not statistically significant in the narrow breadth group ($p = .70$) but was positive and statistically significant ($p = .03$) for the wide relationship breadth group. This more convincingly confirms the conclusion from the MRA model, namely that the effect of price increases on lapsing is moderated—more specifically, exacerbated—by relationship breadth.

The subgroup analysis based on the short-tenure/long-tenure split also indicates that tenure might moderate the main effect of relationship breadth on customer retention. In the short-tenure group, the parameter for breadth was negative and statistically significant ($p < .01$), indicating the odds of lapsing are lower among customers with more relationship breadth. However, the parameter for breadth was not significant in the long-tenure group ($p = .34$). This indicates that cross-selling additional products has more impact on retention among newer customers rather than long-tenure ones.

Discussion and Implications

The tests of the four hypotheses found the following:

Hypothesis 1—supported in Study 1 and Study 2.
Hypothesis 2—supported in Study 1 and Study 2.
Hypothesis 3—supported in Study 2 but contingent on the level of customer tenure.
Hypothesis 4a—not supported in Study 2.
Hypothesis 4b—supported in Study 2.

This research finds that long-tenure customers are less sensitive to price increases. It therefore partially supports a widely cited claim by Reichheld (1996; Reichheld et al. 1990) that long-term customers are less sensitive to price.[1] While Reichheld's claim is intuitive, it has lacked empirical support to date. Furthermore, as mentioned earlier, Reinartz and Kumar (2000, 2002) found a completely opposite effect of tenure on price paid to that postulated by Reichheld. Therefore, this study makes a significant contribution by identifying more clearly the

boundary of Reichheld's assertion. That is, long-tenure customers might not necessarily pay higher prices, but they do appear to be less sensitive to price increases.

This study also contributes to the literature on loyalty in service contexts by proposing and testing the hypothesis that relationship breadth is associated with heightened price sensitivity. This proposition is nonintuitive, and its two theoretical bases, namely reciprocity and reference price, have been relatively unexplored in the service arena. Therefore, this study makes an advance by drawing a conceptual link between these constructs as well as identifying an empirical relationship between breadth and price sensitivity. The managerial implications from the study are that if a price increase has to be implemented, greater attention needs to be paid to shorter tenure customers and those with broader relationship breadth.

The findings from this study are also useful for the literature on price elasticities. The study calculated an overall price elasticity for renewals of between –.03 to –.04. Meta-analyses of the magnitude of price elasticities (Bijmolt et al. 2005; Tellis 1988) have not included service contexts.

The study also found that the expensiveness of the product was negatively associated with customer retention. Although not surprising, this represents knowledge development in the service area. In this study, expensiveness was distinct from the price increase to the customer from one period to another and reflects the amount paid relative to the coverage the customer received on the policy. Some customers pay more for what they receive, which has a negative association with retention. This is a useful confirmation of Bolton and Lemon's (1999) findings relating to payment equity. Indeed, this finding highlights that the relative expensiveness of the service among individual buyers can be used in further research on price and retention in service contexts. Marketers should be aware that while some customers pay a premium for their service, which at face value is desirable for the firm, such customers appear more likely to lapse.

Conclusions, Limitations, and Directions for Future Research

There are several limitations of this study. First, while the research reports on two empirical studies, which is desirable for internal validity, it was confined to a single industry. Consequently, caution is needed in generalizing to other contexts. Nonetheless, it is worth noting that

domestic insurance, the industry used in these studies, shares an important similarity to certain other commonly used service categories in that switching costs are low. A customer, even with several other insurance products from the same provider, can readily switch to another provider for a particular product, as is true in other markets.[2] For example, in telecommunications, multiservice providers offer related products such as landline, mobile, e-mail, and broadband. A consumer purchasing multiple products from one provider can readily switch to a competitor for many of these types of products. Another example is consumer banking, in which switching providers for a specific product can be quite straightforward, unless the product is linked to another one (for example, a transaction account with linked automatic payments). This similarity between domestic insurance and other markets in terms of switching costs enhances the robustness of the present study.

One other limitation of this research is that it examined how the price for a particular product influenced the retention or lapsing for that particular product, rather than the retention or lapsing of multiple products, or lapsing of a whole relationship with a service provider. It could be that relationship breadth has a stronger retention effect for situations involving the absolute cessation of a relationship with a provider, as more effort is involved in that circumstance. However, this study provides evidence that marketers need to be particularly cautious in raising prices for customers with multiple product holdings, as in this study, they appear to be more price sensitive.

The results reported here demonstrate a need for further research to examine the role of relationship breadth and its link to customer price sensitivity. The hypothesized rationale for price sensitivity was based on consumer expectations of reciprocity and more finely attuned reference prices. The following propositions could be investigated further: Do broad-breadth customers perceive that their patronage should be reciprocated by the service provider? Do broad-breadth customers have heightened knowledge or different price expectations of their service providers? These are potentially fruitful avenues for further research.

Finally, while the main issue of interest in this study was how tenure and relationship breadth were associated with the effect of price on customer retention, the interplay between tenure and breadth has also shown to be a potentially useful field to explore further. This study found that relationship breadth might be more of a factor in aiding retention among short-tenure customers as compared to long-tenure customers. Further knowledge about this could potentially be very important for marketing practitioners in terms of resource allocation. If cross-selling aids retention far more among newer customers than long-tenure customers, this is an obvious focus for planning such cross-selling efforts.

Appendix 1
Household Income, Study 2

Household Income Ordinal Scale Value	Income Classification
1	Less than $25,000 p.a.
2	$25,000 to $39,999 p.a.
3	$40,000 to $54,999 p.a.
4	$55,000 to $69,999 p.a.
5	$70,000 to $99,999 p.a.
6	More than $100,000 p.a.

Note: p.a. = per annum.

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Appendix 2
Descriptive Statistics and Correlations Among Variables, Study 1

	Variable	Summary Statistic	SD	1	2	3	4	5	6	7
1	Age (years)	43	11.9		−.01	−.07***	−.11***	−.09***	.22***	−.06***
2	Loyalty program (% membership)	4.9	na			.01**	.01*	.04***	.02***	−.03***
3	Price level (annual payment as % of sum insured)	5.0	2.8				.04***	.07***	.05***	.10***
4	Payment plan (% in installment payment plan)	11.6	na					.04***	−.06***	−.11***
5	Price increase (%)	5	5						−.13***	.06***
6	Tenure (years)	4.6	3.8							−.08***
7	Renew (% renewing)	89.5	na							

Note: Note that "loyalty program" and "payment plan" are categorical variables. Measure of association between these is Cramer's V.
*p < .10. **p < .01. ***p < .001.

Appendix 3
Descriptive Statistics and Correlations Among Variables, Study 2

	Variable	Summary Statistic	SD	1	2	3	4	5	6	7	8	9	10	11
1	Age (years)	47	11		−.03	.01	−.03	−.12***	−.02	.19***	.03	−.04	−.01	−.04
2	Income (six-level ordinal)	3.8	1.9			.03	.03	.00	.00	.02	.00	.13***	.24***	−.06
3	Loyalty program (% membership)	18	na				.07*	−.08**	−.08	−.02	.05	.36***	.07**	.00
4	Price level (annual payment as % of sum insured)	5	2.8					.06*	.07**	−.11***	.03	.03	−.01	.12***
5	Payment plan (% in installment payment plan)	11	na						.07**	−.12***	.01	−.08**	−.06*	−.11***
6	Price increase (%)	3.5	5.5							−.18***	−.07**	−.08**	.00	.07*
7	Tenure (years)	6.5	4.0								.07**	.03	−.01	−.10**
8	Satisfaction (% dissatisfied)	4.0	na									.11***	.05	.10***
9	Relationship breadth (number products with provider)	3.4	1.7										.55***	−.08***
10	Total category usage (number products with any provider)	5.0	1.5											−.06*
11	Renew (% renewing)	89	na											

Note: Note that "loyalty program," "payment plan," "satisfaction," and "renew" are categorical variables. Measure of association between these is Cramer's V.
*p < .10. **p < .01. ***p < .001.

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Appendix 4
Survey Details, Study 2

Sample characteristics	n	%
Gender		
Male	411	51
Female	395	49
Total	807	100
Age		
25 to 34	116	15
35 to 44	196	24
45 to 54	283	35
55 to 64	177	22
65 to 70 years	35	4
Total	807	100

Appendix 5
Survey Questions, Study 2

Could you please tell me which of the following insurance products you currently have:

Home–Building insurance?

Home–Contents?

Comprehensive motor vehicle insurance (for your car)?

If respondent nominated home building insurance, ask:

For your principal residence, which insurance company is your home building insurance with? (brand _____)

. . . and which insurance company is your contents insurance with for this residence?

(brand _____)

Do you own a second home that you have insured?

[if yes] Do you have both building and contents insurance for this property?

[if has buildings insurance] And with which insurance company is this residence insured for home building insurance?

(brand _____)

[if has contents insurance] And who is it insured with for contents? (brand _____)

With which insurance company is your main car insured for comprehensive insurance?

(brand _____)

Do you own a second car that is insured?

[if has second car] Who is it insured with for comprehensive insurance? (brand _____)

Notes

1. Specifically, Reichheld (1996) claimed long-term customers pay higher prices and are less price sensitive. The two terms are closely related. The term *less price sensitive* could mean either that a customer will pay a premium or is more tolerant of a price increase.

2. Note that customers might also switch between products offered by the same provider in response to price increases. However, the advice from the service provider who provided these data was that the customers who lapsed their policy were not simply migrating between products.

References

Aaker, David A. (1991), *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. New York: The Free Press.

Agresti, Alan (2002), *Categorical Data Analysis*, 2nd ed. Hoboken, NJ: Wiley.

Ahmad, Rizal and Francis Buttle (2001), "Customer Retention: A Potentially Potent Marketing Management Strategy," *Journal of Strategic Marketing*, 9, 29-45.

Arnold, Hugh J. (1982), "Moderator Variables: A Clarification of Conceptual, Analytic, and Psychometric Issues," *Organizational Behavior and Human Performance*, 29, 143-74.

Baron, Reuben M. and David A. Kenny (1986), "The Moderator: Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, 51 (6), 1173-82.

Bejou, David, Barry Wray, and Thomas N. Ingram (1996), "Determinants of Relationship Quality: An Artificial Neutral Network Analysis," *Journal of Business Research*, 36, 137-43.

Bendapudi, N. and R. P. Leone (2003), "Psychological Implications of Customer Participation in Co-Production," *Journal of Marketing*, 67 (January), 14-28.

Bijmolt, Tammo H. A, Harald J. Van Heerde, and Rik G. M. Pieters (2005), "New Empirical Generalization on the Determinants of Price Elasticity," *Journal of Marketing Research*, XLII (May), 141-56.

Biong, Harald (1993), "Satisfaction and Loyalty to Suppliers Within the Grocery Trade," *European Journal of Marketing*, 27 (7), 21-38.

Bloemer, José M. M. and Jos G. A. M. Lemmink (1992), "The Importance of Customer Satisfaction in Explaining Brand and Dealer Loyalty," *Journal of Marketing Management*, 8, 351-64.

Bolton, Ruth N., P. K. Kannan, and M. D. Bramlett (2000), "Implications of Loyalty Program Membership and Service Experiences for Customer Retention and Value," *Journal of the Academy of Marketing Science*, 28 (1), 95-108.

Bolton, Ruth N. and Katherine N. Lemon (1999), "A Dynamic Model of Customers' Usage of Services: Usage as an Antecedent and Consequence of Satisfaction," *Journal of Marketing Research*, XXXVI (May), 171-86.

Bolton, Ruth N., Katherine N. Lemon, and Peter C. Verhoef (2004), "The Theoretical Underpinnings of Customer Asset Management: A Framework and Propositions for Future Research," *Journal of the Academy of Marketing Science*, 32 (3), 271-92.

Burnham, Thomas A., Judy K. Frels, and Vijay Mahajan (2003), "Consumer Switching Costs: A Typology, Antecedents, and Consequences," *Journal of the Academy of Marketing Science*, 31 (2), 109-26.

Christopher, M., A. Payne, and D. Ballantyne (1991), *Relationship Marketing*, 1st ed. Oxford, UK: Butterworth-Heinemann.

Colgate, Mark and Rachel Hedge (2001), "An Investigation Into the Switching Process in Retail Banking Services," *International Journal of Bank Marketing*, 19 (5), 201-12.

Cooil, Bruce, Timothy L. Keiningham, Lerzan Aksoy, and Michael Hsu (2007), "A Longitudinal Analysis of Customer Satisfaction and Share of Wallet: Investigating the Moderating Effect of Customer Characteristics," *Journal of Marketing*, 71 (January), 67-83.

Coyles, Stephanie and Timothy C. Gokey (2002), "Customer Retention Is Not Enough," *The McKinsey Quarterly*, 2, 81-9.

Crosby, Lawrence A. and Nancy Stephens (1987), "Effects of Relationship Marketing on Satisfaction, Retention and Prices in

the Life Insurance Industry," *Journal of Marketing Research*, 24 (November), 404-11.

Danaher, Peter J. and Rodger W. Gallagher (1997), "Modelling Customer Satisfaction in Telecom New Zealand," *European Journal of Marketing*, 31 (2), 122-33.

de Ruyter, Ko, Martin Wetzels, and Josée Bloemer (1998), "On the Relationship Between Perceived Service Quality, Service Loyalty and Switching Costs," *International Journal of Service Industry Management*, 9 (5), 436-53.

Ganesan, Shankar, Dixon H. Ho, Steven P. Brown, and Babu L. John (2005), *Does Relationship Commitment Help or Hurt in Business-to-Business Relationships? The Role of Incumbent Errors and Competitive Market Pressures*. University Park: Institute for the Study of Business Markets, The Pennsylvania State University.

Garland, Ron (2003), "Share of Wallet's Role in Customer Profitability," *Journal of Financial Services Marketing*, 8 (3), 259-68.

Gessner, Guy, Wagner A. Kamakura, Naresh Malhotra, and Mark E. Zmijewski (1988), "Estimating Models with Binary Dependent Variables: Some Theoretical and Empirical Observations," *Journal of Business Research*, 16 (1), 49-65.

Gouldner, Alvin W. (1960), "The Norm of Reciprocity: A Preliminary Statement," *American Sociological Review*, 25 (2), 161-78.

Gregoire, Yany and Robert J. Fisher (2008), "Customer Betrayal and Retaliation: When Your Best Customers Become Your Worst Enemies," *Journal of the Academy of Marketing Science*, 36, 247-61.

Gupta, Alok, Bo-chiuan Su, and Zhiping Walter (2004), "Risk Profile and Consumer Shopping Behavior in Electronic and Traditional Channels," *Decision Support Systems*, 38, 347-67.

Gustafsson, Anders, Michael D. Johnson, and Inger Roos (2005), "The Effects of Customer Satisfaction, Relationship Commitment Dimensions, and Triggers on Customer Retention," *Journal of Marketing*, 69 (October), 210-18.

Gwinner, Kevin P., Dwayne D. Gremler, and Mary Jo Bitner (1998), "Relational Benefits in Services Industries: The Customer's Perspective," *Journal of the Academy of Marketing Science*, 26 (2), 101-14.

Hallowell, R. (1996), "The Relationships of Customer Satisfaction, Customer Loyalty, and Profitability: An Empirical Study," *International Journal of Service Industry Management*, 7 (4), 27-42.

Herrmann, Andreas, Frank Huber, K. Sivakumar, and Martin Wricke (2004), "An Empirical Analysis of the Determinants of Price Tolerance," *Psychology & Marketing*, 21 (7), 533-51.

Hogan, John E., Katherine N. Lemon, and Roland T. Rust (2002), "Customer Equity Management: Charting New Directions for the Future of Marketing," *Journal of Service Research*, 5 (1), 4-12.

Homburg, Christian, Wayne D. Hoyer, and Nicole Koschate (2005), "Customers' Reactions to Price Increases: Do Customer Satisfaction and Perceived Motive Fairness Matter?" *Journal of the Academy of Marketing Science*, 33 (1), 36-49.

Iacobucci, Dawn, Kent A. Grayson, and Amy L. Ostrom (1994), "The Calculus of Service Quality and Customer Satisfaction," in *Advances in Services Marketing and Management*, Teresa A. Swartz, David E. Bowen, and Stephen W. Brown, eds. Vol. 3. Greenwich, CT: JAI Press, 1-67.

Jaccard, James, Choi K. Wan, and Robert Turrisi (1990), "The Detection and Interpretation of Interaction Effects Between Continuous Variable in Multiple Regression," *Multivariate Behavioral Research*, 25 (4), 467-78.

Kalyanaram, Gurumurthy and Russell S. Winer (1995), "Empirical Generalizations from Reference Price Research," *Marketing Science*, 14 (3, Part 2), 161-69.

Kamakura, Wagner A., Bruce S. Kossar, and Michel Wedel (2004), "Identifying Innovators for the Cross-Selling of New Products," *Management Science*, 50 (8), 1120-33.

Kamakura, Wagner A., Michel Wedel, Fernando de Rosa, and Jose Afonso Mazzon (2003), "Cross-Selling Through Database Marketing: A Mixed Factor Analyzer for Data Augmentation and Predicition," *International Journal of Research in Marketing*, 20, 45-65.

Keaveney, Susan M. (1995), "Customer Switching Behavior in Service Industries: An Exploratory Study," *Journal of Marketing*, 59 (April), 71-82.

Lambert-Pandraud, Raphaëlle, Gilles Laurent, and Eric Lapersonne (2005), "Repeat Purchasing of New Automobiles by Older Consumers: Empirical Evidence and Interpretations," *Journal of Marketing*, 69 (April), 97-113.

Marn, Michael V. and Robert L. Rosiello (1992), "Managing Price, Gaining Profit," *Harvard Business Review*, September//October, 84-94.

Mazumdar, Tridib, S. P. Raj, and Indrajit Sinha (2005), "Reference Price Research: Review and Propositions," *Journal of Marketing*, 69 (October), 84-102.

Mazursky, David and Aviva Geva (1989), "Temporal Decay in Satisfaction-Purchase Intention Relationship," *Psychology & Marketing*, 6 (3), 211-27.

Mendenhall, William and Terry Sincich (1996), *A Second Course in Statistics: Regression Analysis*, 5th ed. Upper Saddle River, NJ: Prentice-Hall International.

Mittal, Banwari and Walfried M. Lassar (1998), "Why Do Customers Switch? The Dynamics of Satisfaction Versus Loyalty," *The Journal of Services Marketing*, 12 (3), 177-94.

Morgan, Robert M. and Shelby D. Hunt (1994), "The Commitment-Trust Theory of Relationship Marketing," *Journal of Marketing*, 58 (July), 20-38.

Nilssen, Tore (1992), "Two Kinds of Consumer Switching Costs," *The Rand Journal of Economics*, 23 (4, Winter), 579-89.

Oliver, Richard L. (1999), "Whence Consumer Loyalty?" *Journal of Marketing*, 63 (special issue), 33-44.

Patterson, Paul G. (2007), "Demographic Correlates of Loyalty in a Service Context," *Journal of Services Marketing*, 21 (2), 112-21.

——— and R. A. Spreng (1997), "Modelling the Relationship Between Perceived Value, Satisfaction and Repurchase Intentions in Business-to-Business, Services Context: An Empirical Examination," *International Journal of Service Industry Management*, 8 (5), 414-34.

Perugini, Marco, Marcello Gallucci, Fabio Presaghi, and Anna Paola Ercolani (2003), "The Personal Norm of Reciprocity," *European Journal of Personality*, 17, 251-83.

Ranaweera, Chatura and Jaideep Prabhu (2003), "On the Relative Importance of Customer Satisfaction and Trust as Determinants of Customer Retention and Positive Word of Mouth," *Journal of Targeting, Measurement and Analysis for Marketing*, 12 (1), 82-90.

Reichheld, Frederick F. (1996), "Learning From Customer Defections," *Harvard Business Review*, 74 (2), 56-69.

——— and W. Earl Sasser Jr. (1990), "Zero Defections: Quality Comes to Services," *Harvard Business Review*, 68 (5, September-October), 105-11.

————— and Thomas Teal (1996), *The Loyalty Effect: The Hidden Force Behind Growth, Profits, and Lasting Value*. Boston: Harvard Business School Press.

Reinartz, Werner and V. Kumar (2000), "On the Profitability of Long-Life Customers in a Noncontractual Setting: An Empirical Investigation and Implications for Marketing," *Journal of Marketing*, 64 (4), 17-35.

Reinartz, Werner and V. Kumar (2002), "The Mis-Management of Customer Loyalty," *Harvard Business Review*, July, 86-94.

Romaniuk, Jenni and Byron Sharp (2003), "Brand Salience and Customer Defection in Subscription Markets," *Journal of Marketing Management*, 19, 25-44.

Rust, Roland T. and Anthony J. Zahorik (1993), "Customer Satisfaction, Customer Retention, and Market Share," *Journal of Retailing*, 69 (2, Summer), 193-215.

Sharma, Subhash, Richard M. Durand, and Oded Gur-Arie (1981), "Identification and Analysis of Moderator Variables," *Journal of Marketing Research*, 18 (August), 291-300.

Sharp, Byron and Anne Sharp (1997), "Loyalty Programs and Their Impact on Repeat-Purchase Loyalty Patterns," *International Journal of Research in Marketing*, 14 (5), 473-86.

Sivakumar, K. and S. P. Raj (1997), "Quality Tier Competition: How Price Change Influences Brand Choice and Category Choice," *Journal of Marketing*, 61 (July), 71-84.

Stauss, Bernd and Christian Friege (1999), "Regaining Service Customers: Costs and Benefits of Regain Management," *Journal of Service Research*, 1 (4), 347-61.

Szymanski, David M. and David H. Henard (2001), "Customer Satisfaction: A Meta-Analysis of the Empirical Evidence," *Journal of the Academy of Marketing Science*, 29 (1), 16-35.

Tellis, Gerard J. (1988), "The Price Elasticity of Selective Demand: A Meta Analysis of Econometric Models of Sales," *Journal of Marketing Research*, 25 (November), 331-41.

Thaler, Richard (1983), "Transaction Utility Theory," *Advances in Consumer Research*, 10, 229-32.

Thomas, Jacquelyn S., Robert C. Blattberg, and Edward J. Fox (2004), "Recapturing Lost Customers," *Journal of Marketing Research*, 41 (1), 31-45.

Verhoef, Peter C., Philip Hans Franses, and Janny C. Hoekstra (2001), "The Impact of Satisfaction and Payment Equity on Cross-Buying: A Dynamic Model for a Multi-Service Provider," *Journal of Retailing*, 77 (3), 359-78.

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