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## **WORKING PAPER**

# **The moderating impact of relational strength on the relationship between relationship quality and purchasing behavior**

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# The moderating impact of relational strength on the relationship between relationship quality and purchasing behavior

## Abstract

We investigate the moderating impact of relational strength on the relationship quality model, that is extended from intentions onto real behaviour. Empirical investigations are conducted in the context of apparel buying, combining survey and data base information. Relational strength impacts the attitudes-intentions as well as the intentions-behavior relationship. The opposite signs of the effects may explain disappointing results when relationship quality is used to boost behavioral loyalty.

# The moderating impact of relational strength on the relationship between relationship quality and purchasing behavior

## THEORETICAL FRAMEWORK

Research in the field of customer-firm relationships is fuelled by the firm belief in the impact of relationship quality concepts such as trust (e.g. Morgan and Hunt, 1994), commitment (e.g. Pritchard, Harvitz, and Howard, 1999) and satisfaction (e.g. Zeithaml, Berry, and Parasuraman, 1996) on the customer's subsequent behavior (Reichheld, 1996). The most commonly used approach to predict customer behavior in repeat buying contexts has been synthesized by Anderson and Mittal (2000) as the satisfaction-profit chain. Dick and Basu (1994) have given a useful synthesis and delineation of the concepts within that chain by suggesting that loyalty is built up of attitudinal loyalty (consisting of commitment, trust, and satisfaction), which leads to repeat patronage intentions, which in turn lead to loyal behavior. They immediately acknowledged that the impact of the attitudinal antecedents on real behavior is not to be considered as linear.

Oliver (1999), Zeithaml (2000), Reinartz & Kumar (2002), and Anderson & Mittal (2000) identify the lack of understanding of the customer himself as an important avenue for further research in this context. Recent research has concentrated on improving the predictive power of models predicting behavior through the introduction of moderating variables (Homburg and Giering, 2001; Mittal and Kamakura, 2001; Seiders, Voss, Grewal, and Godfreid, 2005; Sheeran and Abraham, 2003; Sheeran and Orbell, 2000; Sheeran, Orbell, and Trafimow, 1999). First results do confirm the expectation that accounting for heterogeneity among respondents through specific characteristics enhances our understanding of the forces at stake in the relationship quality model (Homburg and Giering, 2001; Mittal and Kamakura, 2001).

Following this stream of research, the objective of this paper is to investigate the impact of customer characteristics that could enhance our understanding of the relationship between relationship quality as an antecedent, behavioral intentions as a mediating variable and real behavior as an outcome variable. More specifically, we discuss the potential impact of relationship strength based on an empirical study in the apparel retailing context combining survey information with behavioral data.

Modeling the past relationship between the customer and the company in some way adds to our understanding of the predictive power of the model in research predicting behavior (e.g. Bolton, 1998; Grayson and Ambler, 1999; Jap and Ganesan, 2000; Mittal and Katrichis, 2000; Verhoef, Franses and Hoekstra, 2002; Viaene et al., 2001; Weiss and Kurland, 1997;). Generally speaking, exchange characteristics moderate relationships in models predicting behavior (Kumar, Bohling, and Ladda, 2003). In the majority of the research reported, length of relationship is the variable under study (Garbarino and Johnson, 1999; Rust and Zahorik, 1993; Yi and La, 2004). These effects have been attributed to levels of direct experience (Smith and Swinyard, 1983) and to the learning process (Verhoef, Franses, and Hoekstra, 2002).

Based on each of these theories, a positive impact of a stronger relationship to the retailer is expected on both the relationship between relationship quality and purchase intentions and between purchase intentions and purchase behavior. However, the length of the relationship is a biased indicator of direct experience and learning process, because it does not inherently reflect comparable frequencies of purchases between customers. We suggest that considering the length of the relationship along with the regularity of that relationship more truthfully reflects the learning process and direct experience of the customers with the provider under study. As behavioral learning theory (Rothschild and Gaidis, 1981) suggests that behavior is a reinforcement that influences subsequent behavior through multiple, in part attitudinal processes, with the frequency and number of direct experiences as a crucial factor, a more truthful reflection of the direct experience and learning process of the customer should result in the proposed positive interaction of relational strength with relationship quality on the one hand and with purchasing intentions on the other hand. Thus we model relational strength as a variable that reflects both the length and the regularity of the relationship. We hypothesize that:

Relational strength positively moderates both the impact of relationship quality on intentions and the impact of intentions on subsequent behavior.

## RESEARCH METHOD AND DATA COLLECTION

### *Respondents*

A sample of customers from a Belgian apparel retailer (N=634) responded to a questionnaire, and this survey information was linked to the behavioral database.

### *Measures*

#### Dependent variables

The outcome variable in our model is the behavior in the season subsequent to the survey. We estimate both a purchase incidence model and several purchase behavior models in order to reflect possible differences in effects. We computed a dichotomous variable indicating whether a customer has purchased at least once at the retailer during the season subsequent to the survey. We further computed three behavioral outcome variables reflecting the purchasing behavior of the buyers within that same season: total expenditure, number of visits with buying event to the retailer's shop, and number of product types from which the customer purchased.

#### Moderating variable

The relational strength variable was computed as the length of relationship with the retailer multiplied by the regularity of their relationship, expressed as the number of seasons with buying event over the number of seasons since the start of the relationship plus one, with a maximum history of 10 seasons.

#### Independent variables

Independent variables were the relationship quality antecedents, along with the mediator, intentions. They were collected through a questionnaire based on both an exploratory and a quantitative research. In the first phase, an in-depth study of the literature on customer-firm relationship research resulted in a selection of survey scales and possible customer characteristics to study. A full questionnaire was presented to ten marketing research professionals. Based on their questions and remarks we rephrased some items. A pretest among consumers confirmed the reliability of the scales used.

The target population of the quantitative study consisted of the customers of a Belgian apparel retailer. During a 4-day period in February 2004 the survey was distributed personally to consumers visiting 12 of the 71 stores of this retailer. 1753 consumers bought something at one of the 12 shops, and 2306 questionnaires were distributed, which suggests that fairly every consumer visiting the shop was approached to participate in the research, and took the questionnaire home. 960 consumers returned a completed questionnaire (response rate: 42%).

As this recruitment method could have resulted in an over representation of frequent customers of the retailer, we made a selection of an additional 2500 customers, classified by the retailer as 'cold customers'. We mailed them the same questionnaire as was distributed in the shops, along with a prepaid response envelop. 266 customers returned a completed questionnaire (response rate: 11%). Based on information given by the customers we were able to uniquely link 634 respondents to their buying behavior information provided by the retailer.

#### Relationship quality

To test the reliability and validity of the relationship quality constructs' metric characteristics, we performed confirmatory factor analysis using LISREL 8.5. Based on loadings, information on standardized residual covariances, and modification indices (Bagozzi and Baumgartner, 1994; Steenkamp and van Trijp, 1991), disturbing items were revised. 1 commitment item was left out. Chi-square over degrees of freedom was 6.952, which is above the desired ratio of between 2 and 3 (Bollen and Stine, 1993). The root mean square error of approximation (RMSEA) was smaller than .09, which is slightly above the desired value of .08 recommended by Browne and Cudeck (1993). Non-normed fit index (NNFI of TLI=.98) were above the cut-off value of .95 recommended by Hu and Bentler (1999). These measures tend to indicate unidimensionality. The significant factor-regression coefficients, along with the fact that all item-construct correlations were higher than the recommended value of .50, support the assumptions for convergent validity (Hildebrandt, 1987; Steenkamp and van Trijp, 1991). Average variance extracted was .68, which exceeds the .50 recommended by Steenkamp and van Trijp (1991). Composite reliability was .94.

## Purchase intentions

Intentions were measured using a single semantic differential (Cronin and Taylor, 1992; Rossiter, 2002) capturing the intention to buy at least once at the retailer during the upcoming summer season (February 2004 – July 2004).

## RESULTS

### *Relationship between relationship quality and purchasing intentions*

The moderating impact of the customer characteristics on the relationship between relationship quality and intentions was assessed by means of a series of regression analyses with purchase intentions as a dependent variable. The results are summarized in Table 1.

Table 1: Standardized coefficients of relationship quality, relational strength, and their interaction on the relationship quality – intentions model

Intentions	Adj R <sup>2</sup>	RQ	Moderator	RQ*moderat or
Non moderated model	.368**	.607**	-	-
Relational strength	.434**	.552**	.271**	-.193**

(\*\*=significant at the .01-level; \*=significant at the .05-level)

The interaction term does add to our understanding of the relationship between the relationship quality construct and intentions. Adding relational strength to the model improves the adjusted R<sup>2</sup> measure as compared to the non moderated model. As the antecedents have a direct effect too, the effect is not fully captured by the interaction term (Cohen et al., 2003). The direct positive effect indicates that the more customers are intimate, the more likely they are to form positive intentions towards the retailer. The sign of the interaction term indicates that the impact of the antecedent decreases with increasing strength of relationship. Our hypothesis is not supported as far as the impact of relationship quality on intentions is concerned. Relationship quality better predicts intentions among low intimacy customers than among high intimacy customers.

### ***Relationship between purchase intentions and behavior***

When accounting for moderating effects on the relationship between intentions and subsequent behavior, the interaction term yielded no significant result on the purchase incidence model (i.e. predicting a dichotomous outcome variable buy/no buy). In all three purchase behavior models (total expenditure, number of visits, and number of product types) the explanatory power of the model is improved by the interaction of relational strength with intentions (dependent variable: three indicators of purchase behavior).

Table 2: Standardized coefficients of relationship quality, relational strength, and their interaction on the intentions – behavior model)

Dependent variable	Adj R <sup>2</sup>	Intention	Moderator	Intention* moderator
Total expenditure				
Non moderated model	.057**	.244**	-	-
Relational strength	.149**	.126*	.254**	.118*
Number of visits				
Non moderated model	.081**	.289**	-	-
Relational strength	.240**	.135**	.300**	.187**
Number of product types				
Non moderated model	.028**	.176**	-	-
Relational strength	.091**	n.s.	.204**	.109*

(\*\*=significant at the .01-level; \*=significant at the .05-level)

Relational strength has a consistently positive direct impact on subsequent behavior. Furthermore, the interaction of relational strength with purchase intention is consistently positive. This indicates that the stronger the relation of customers with the retailer is, the stronger the predictive power of



their intentions becomes. The weaker the relation of customers with the retailer, the weaker the predictive power of intentions becomes.

As a conclusion of the logistic and linear regressions, we can state that as far as the impact of intentions on subsequent behavior is concerned, our hypothesis is partially supported (only in the purchase behavior models, not in the purchase incidence model).

## **DISCUSSION**

The results show that the moderating impact of relational strength differs depending on the outcome variable under study. Relational strength does indeed moderate the relationship between relationship quality and intentions and predicting purchase behavior (except for the purchase incidence model). These findings confirm the moderating role of relational strength on the relationship quality – intentions – behavior model. However, the signs of the interactions explain why high relationship quality does not consistently translate into behavior. Indeed, intimate customers build their behavior on their intentions, but not their intentions on their attitudes. Less intimate customers build their intentions on their attitudes, but their intentions do not lead consistently to behavior.

Our findings on the moderating role of relational strength confirm the expectation of Reinartz and Kumar (2000) and Garbarino and Johnson (1999) that relationship quality antecedents play a more crucial role in predicting behavior(al intentions) among weakly relational customers. This suggests levels of direct experience (Smith and Swinyard, 1983) and learning (Verhoef, Franses, and Hoekstra, 2002) reflected by the strength of the relationship do not positively moderate the relationship between relationship quality and intentions. Indeed, the most intimate customers' intentions relate less to relationship quality than do the less intimate customers' intentions. At the level of the relationship between intentions and behavior, the effects suggested based on direct experience and behavioral learning theory are confirmed. However, the inversion of the sign of the relationship strength interaction terms between the relationship quality - intentions and the intentions-behavior relationships is a striking result of our study. Indeed, the stronger the past relation of customers to the firm as measured through behavior, the weaker the impact of their

relationship quality on their intentions but the stronger the impact of their intentions on their subsequent response behavior is, in terms of total expenditure as well as number of visits and number of product types purchased.

To disregard relationship strength within models predicting behavior and to omit the mediating role of intentions results in an incomplete assessment of the dynamics of purchase behavior. Influencing the intentions of customers based on their appreciation of the relationship to the retailer (relationship quality) is more effective among customers with low relational strength. For the intimate customers, the pay off is much less. This suggests that efforts directed at improving relationship quality influence the intentions of disloyal customers most. However, taking relational strength into account when considering the impact of intentions on subsequent behavior does enhance our understanding too, but the interaction works in the opposite direction. Among high relational strength customers, higher scores on intentions are indeed associated with higher purchase behavior, while the relationship is weak among customers scoring low on relationship strength. Thus, although the efforts directed at low relational strength customers to improve their perception of the company and the behavior at stake may result in higher intentions, these do not immediately translate into higher subsequent behavior. Raising the intentions of high relational customers is far more effective, but the impact of raising relationship quality is lower here.

## **CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS FOR FURTHER RESEARCH**

The major finding presented in this study is that relational strength does moderate the relationships in relationship quality – intentions – behavior model presented here. Moreover, we have shown that effects differ with the outcome variable chosen.

Treating all customers in the same way may lead to a less effective marketing approach. Marketing practitioners should approach high relational strength customers differently from low relational strength customers. On the one hand, raising high relational strength customers' intentions will indeed boost expenditures, number of visits and number of product types purchased, but raising their level of relationship quality might not be the most effective approach to achieve increased intentions. On the other hand, raising low relational strength customers' intentions can be achieved

through improvement programs aimed at increasing scores on relationship quality. It will, however, not necessarily impact their purchase behavior. Raising attitudinal scores among these customers is less effective in terms of the impact on purchase behavior than it is among high relational strength customers.

These insights call for great precautions to be taken by marketers who do not dispose of database information on their customers. Indeed, basing marketing strategies or evaluations and predictions of customer response behavior on intentions and their predictors alone is erroneous, as the general trends among the customer base hides opposite trends specific for high and low relational customers. For companies who do not wish to invest in a detailed tracking system of the customer's behavior, tracking the length and the regularity of the customer's relationship to the firm makes it possible to use relationship quality along with intention indicators in a far more effective way, namely by introducing relational strength as a moderator.

The results of our study are drawn from the apparel retailing environment, which is a specific context. Different relationships between the variables under study might emerge in different contexts. The level of hedonism or utility of a product as well as environmental elements such as industry-level competition or product maturity level might result in altered findings. In order to study these effects, replicating our study in a different research context or a large scale cross-industrial study is necessary, and we hope the results detailed here will encourage both academics and practitioners to engage in such a research. It might also further clarify why we could not find the expected effect of attitudinal versus normative control, and of non search purchase tendency.

Our main conclusion on the opposite moderating effects of relational strength on the relationships between relationship quality – intentions – behavior is based on a cross sectional research. When validating the model in a longitudinal study, the long term effect of improving relationship quality scores among low relationship strength customers could clarify to what extent the findings in our research are mainly attributable to the cross-sectional character of the study. It is indeed possible that the effect of improving the scores on the antecedents and thus on intentions among low relational strength customers does pay off in the long run. Within the context of such a longitudinal study, the stability of intentions could be taken into account, and effects of moderators on stability of intentions on the one hand, and effects of stability of intentions on behavior on the other hand could translate into different results.

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