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Full Length Article

How procedural, financial and relational switching costs affect customer satisfaction, repurchase intentions, and repurchase behavior: A meta-analysis

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ABSTRACT

Switching costs and customer satisfaction may differently affect marketing strategy. Managers would benefit from knowing how different switching costs (financial, procedural, and relational) and satisfaction jointly affect repurchase in order to properly invest marketing resources. A meta-analysis of 233 effects from over 133,000 customers shows that: (1) relational switching costs have the strongest association with repurchase intentions and behavior; and (2) procedural and relational switching costs mitigate the association between satisfaction and repurchase intentions/behavior whereas financial switching costs enhance it.

1. Introduction

How do customer satisfaction and different types of switching costs affect repurchase intentions and behavior (Grewal, Chandrashekaran, & Citrin, 2010)? Burnham, Frels, and Mahajan (2003, p. 110) define switching costs as "onetime costs that customers associate with the process of switching from one provider to another," and describe three types of switching costs: (1) *financial switching costs* (e.g., fees to break contract, lost reward points); (2) *procedural switching costs* (time, effort, and uncertainty in locating, adopting, and using a new brand/provider); and (3) *relational switching costs* (personal relationships and identification with brand and employees).

Burnham et al. (2003) empirically examined these switching costs in two samples: 158 credit card and 144 long-distance telephone customers. They found that: relational switching costs exhibited the strongest association (.30) with repurchase intentions, followed by procedural (.20) and financial (.15) switching costs. However, contrary to their theory, switching costs did *not* moderate the relationship between satisfaction and repurchase intentions (all p's > .10). Since then, empirical replications of Burnham et al. (2003) have produced inconsistent or conflicting results. We use a meta-analysis[4] to: (1) quantify the relative effect of different switching costs on repurchase intentions and behavior; (2) and to examine the extent to which each type of switching cost moderates the association between customer satisfaction and repurchase intentions/behavior.

2. Methodology

2.1. Search process and coding of studies

We: (1) examined scientific databases (e.g. ProQuest) and manually searched major marketing journals using the search terms "switching costs," "switching barriers," and "customer/consumer satisfaction;" (2) examined the references of the articles collected to find additional articles; and (3) contacted authors to obtain unpublished studies and missing information from articles we already collected. We included studies

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[4] A complete list of articles included in our meta-analysis, the sample size, and the construct measured is displayed in Web Appendix A. A detailed description of our search, coding, and analysis procedures can be found in Web Appendix B.

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Table 1
Meta-analytic results of the association between switching costs, customer satisfaction, and customer loyalty.

Predictor	O	N	Min	Max	Simple average corrected correlation	Sample-weighted average corrected correlation	Sample-weighted reliability adjusted corrected correlation	Lower CI	Upper CI	Power (80%) N	Fail-safe N
Predictors of repurchase intentions											
All switching costs → repurchase intentions	89	59,587	−.10	.74	.274	.275	.301*	.294	.308	84	464
Financial switching costs → repurchase intentions	23	17,815	.04	.60	.274	.224	.257*	.244	.271	116	98
Procedural switching costs→ repurchase intentions	45	33,227	−.10	.60	.237	.274	.296*	.287	.306	87	230
Relational switching costs→ repurchase intentions	21	8545	−.07	.74	.353	.383	.406*	.388	.423	45	160
Customer satisfaction → repurchase intentions	100	68,266	.06	.97	.515	.600	.643*	.639	.648	16	1142
Predictors of repurchase behavior											
All switching costs → repurchase behavior	13	19,205	.02	.53	.282	.118	.135*	.121	.148	428	22
Financial switching costs → repurchase behavior	3	8450	.02	.40	.162	.079	.107*	.086	.128	683	2
Procedural switching costs → repurchase behavior	7	10,028	.06	.49	.269	.127	.135*	.115	.154	428	10
Relational switching costs → repurchase behavior	3	727	.32	.53	.434	.422	.431*	.369	.488	39	16
Customer satisfaction → repurchase behavior	31	37,156	−.03	.78	.338	.406	.413*	.405	.422	43	234

Notes: O = number of data points; N = total sample size, lower CI = lower confidence interval; upper CI = upper confidence interval; power (80%) N = sample sizes required for a .80 chance of detecting effects at the .05 level; fail-safe number attenuated at .05; all switching costs = financial switching costs + procedural switching costs + relational switching costs.
* Indicates significant at $p < .05$.

reporting correlations or the standardized regression coefficients to maximize the number of effect sizes included (Peterson & Brown, 2005).

Two independent coders extracted data and coded each study for variables such as effect size, sample size, and statistical artifacts. To account for study-design artifacts, they coded information to correct for sampling error, measurement error, dichotomization, and range restriction (Hunter & Schmidt, 2004). The final dataset is based on 153 empirical articles, containing 178 independent samples and 133,734 subjects. In total, we analyzed 233 effect sizes.

2.2. Meta-analysis: three-step approach

2.2.1. Step 1 (Integrate effect sizes/pairwise analysis)

We first corrected the collected effect sizes for the artifacts mentioned previously, and then calculated the simple average (corrected) correlation. Finally, we adjusted for sampling error and measurement error, resulting in sample-weighted reliability adjusted correlations. Table 1 displays the 95% confidence interval of the sample-weighted, reliability-adjusted correlations, an assessment of publication-bias (fail-safe N), and power calculations. Recognizing the limitations of fail-safe N, we also created funnel plots to assess publication bias. Reassuringly, results are statistically significant with no evidence of publication bias.

2.2.2. Step 2 (Path model to simultaneously assess relationships)

Path analysis requires that effect sizes between every construct in the model be available. For this analysis, we determined the average-adjusted correlations among all associations in the framework that were reported in three or more studies (presented in Table 2). We converted correlations to covariances using standard deviations, and input the complete covariance matrix in LISREL 8.80 (Franke & Park, 2006).

2.2.3. Step 3 (Test moderating effect of switching costs using six split-path models)

Finally, we examine if the association between customer satisfaction and repurchase intentions/behavior differs for high versus low switching costs to test the moderating role of switching costs. We used a median split for each switching cost to derive two separate correlation matrices representing effect sizes from industries with high (and low) switching costs.

3. Results

3.1. Integrating effect sizes/pairwise relations

The results summarized in Table 1 support and replicate Burnham et al. (2003). With repurchase *intentions*, relational switching costs have a stronger association ($r = .406$, $p < .01$) than procedural ($r = .296$, $p < .01$) and financial switching costs ($r = .257$, $p < .01$); procedural switching costs also exhibit a stronger association than financial switching costs ($p < .01$).[5] With repurchase *behavior*, relational switching costs ($r = .431$, $p < .01$) have the strongest association, followed by procedural ($r = .135$, $p < .01$) and financial switching costs ($r = .107$, $p < .01$); procedural switching costs also have a stronger association with repurchase behavior than financial switching costs ($p < .05$).

3.2. Path model to simultaneously assess relationships

The results of the path analysis are reported in Table 3, Panel A and they are used to assess both direct and indirect effects. Regarding repurchase *intentions*, the path model replicates Burnham et al. (2003): relational switching costs exhibit the strongest association ($\beta = .170$, $p < .01$), followed by financial switching costs ($\beta = .083$, $p < .01$) and procedural switching costs ($\beta = .072$, $p < .01$). Results for repurchase *behavior* are different: (1) the total effect of relational switching costs is positive, strong, and statistically significant; (2) the total effect of procedural costs is null, and (3) the total effect of financial costs is small, negative, and statistically significant. Finally, customer satisfaction has a strong positive effect on repurchase intentions ($\beta = .550$, $p < .01$) and repurchase behavior ($\beta = .150$, $p < .01$).

3.3. Moderating effect of switching costs using six split path models

In Panel B of Table 3, we assess if the association between customer satisfaction and repurchase intention/behavior is moderated by switching costs, i.e., differs for high and low levels of each switching cost type. In all cases, the difference between high and low switching costs is statistically significant, as shown in the last column of Table 3, Panel B. Except for one association (customer satisfaction and repurchase intentions in the presence of financial switching costs), results show that higher switching costs weaken the association between satisfaction and repurchase intentions/behavior. In other words, except for the case of financial switching costs enhancing the association between customer satisfaction and repurchase intentions, the association between customer satisfaction and repurchase intentions/behavior is stronger when switching costs are lower.

[5] *Z*-tests (which take the cumulative sample size *N* into account) were used to assess the statistical significance of the differences between the sample-weighted reliability adjusted corrected correlations for each switching cost type.