

Loyalty, Repurchase, and Satisfaction: A Quantitative Review

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Abstract: Loyalty, repurchase, and satisfaction are three of the most widely studied and closely watched constructs in marketing. However, research findings on their relationship and magnitude are mixed. The purpose of this study was to provide a quantitative review of the research to date in order to resolve questions of direction and magnitude as well as to indicate areas for fruitful future research into these constructs. Findings indicate that the relationship between loyalty and satisfaction, satisfaction and repurchase and repurchase intent are positive and that the average correlation range from .54 to .63. The variance attributable to sampling error range from 100 percent to 32 percent for the relationship between satisfaction and repurchase. Indications are that moderator analysis may provide additional insight.

Keywords: Loyalty, Repurchase, Satisfaction, Meta-analysis, Quantitative review

1 Introduction

Loyalty, repurchase, and satisfaction are considered to be among the most significant concepts in marketing research (Fullerton, 2005; Heitmann, Lehmann, & Herrmann, 2007; Lam, Shankar, Erramilli, & Murthy, 2004; Mittal & Lassar, 1998; Rauyruen & Miller, 2007). Organizations view these variables as the key to superior performance and understanding consumer behavior (Anderson & Sullivan, 1993; Balabanis, Reynolds, & Simintiras, 2006; Divett, Crittenden, & Henderson, 2003; Dixon, Bridson, Evans, & Morrison, 2005; Lam et al., 2004; Mittal & Lassar, 1998; Shih & Fang, 2005; Yi & La, 2004). The academic literature provides a number of research findings on the relationship between loyalty, repurchase, and satisfaction, however, as Szymanski and Henard (2001) have noted research findings are mixed (Olsen, 2007; Seiders, Voss, Grewal, & Godfrey, 2005). Conflicting findings prevent the development of a comprehensive picture of the relationships and the theoretical progress in this area. One way to overcome the issue of conflicting results is to conduct a quantitative review of these concepts in order to provide a cumulative picture of the true relations, their strength and direction.

Loyalty and satisfaction are multidimensional constructs, defined and viewed differently by researchers (Butcher, Sparks, & O'Callaghan, 2001; Dick & Basu, 1994; Harris & Goode, 2004; Oliver, 1999; Rauyruen & Miller, 2007). Despite the large body of published research in the area of satisfaction and loyalty, Oliver (1999) has stated that the loyalty-satisfaction relation is not well defined. The general assumption is that loyal consumers are satisfied. However, several researchers have reported that satisfaction itself is an unreliable predictor of loyalty (Oliver, 1999; Rowley & Dawes, 2000; Seiders et al., 2005; Suh & Yi, 2006). While many researchers consider loyalty and repurchase highly related concepts and often use these two terms interchangeably, other researchers disagree and note that high repurchase rates do not necessarily indicate loyalty and low repurchase rates do not always indicate disloyalty (Dick & Basu, 1994; Rowley & Dawes, 2000). Several researchers, including Bloemer and Kasper (1995), have stated that only actual behavior is important, whatever the customer's degree of commitment or satisfaction. In contrast, some perspectives on loyalty consider behavioral antecedents such as consumer expectations and perceived value (Parasuraman et al., 1988; Zeithaml, 1988). Researchers distinguish between the psychological aspect of loyalty and the behavioral aspect of loyalty

as identified with repurchase (Dick & Basu, 1994; Jacoby, Chestnut, & Fisher, 1978; Rauyruen & Miller, 2007).

This research will attempt to synthesize previously reported statistical findings on loyalty, satisfaction, and repurchase through conducting a meta-analysis using the Hunter and Schmidt (1990) meta-analysis technique described in their book *Methods of Meta-Analysis: Correcting Error and Bias in Research Findings*. Hunter and Schmidt (1990) have noted that “Scientists have known for centuries that a single study will not resolve a major issue. Indeed, a small sample study will not even resolve a minor issue. Thus, the foundation of science is the cumulation of knowledge from the results of many studies” (p.13). The purpose of this quantitative review is to help determine the strength, magnitude and direction of hypothesized relationships and provide clear direction for future researchers by identifying gaps in existing research and avenues for further study.

2 Prior Research

Each of these constructs has been the subject of individual study and analysis. In addition, various research studies have examined changing combinations of these variables. The discussion below highlights key definitional work and quantitative findings.

2.1 Loyalty and Repurchase

Customer loyalty is believed to provide numerous benefits to companies including higher profit, cost reduction, and time savings (Balabanis et al., 2006; Divett et al., 2003; Reichheld, Markey, & Hopton, 2000). Loyalty, repurchase, and satisfaction are the foundation for the customer relationship management (CRM) programs which are becoming important in many organizations (Teng, Ong, & Ching, 2007; Tung, 2007; Zineldin, 2006). The loyalty construct is based on several different theoretical strands of research. The marketing literature provides two of the most popular approaches to loyalty (Jacoby and Kyne, 1973; Oliver, 1999; Zeithaml, 2000; Yang and Peterson, 2004). The first approach to loyalty is an attitudinal one. Different feelings create an individual’s attachment to a specific brand, product, or service and lead to the consumer’s desire to continue the relationship. The second approach to loyalty is behavioral and the focus is actual repurchase rates for the same product or service. While attitudinal loyalty is different from repurchase, behavioral loyalty is synonymous in most research with repurchase. Wanke and Fiese (2004) stated that getting consumers to choose the same brand, product, or service on repeated purchases is a primary marketing goal and is a key aspect of brand loyalty. A large number of researchers and practitioners measure loyalty entirely by purchase behaviors (Jacoby & Kyner, 1973; Olsen, 2007). Other researchers found that repurchase alone is not sufficient evidence for loyalty. Newman and Werbel (1973) stated that repurchase of a brand without deliberation does not necessarily mean loyalty.

Rauyruen and Miller (2007) identified three streams of loyalty research, including behavioral loyalty (defined in terms of the actual purchases over a certain time period); attitudinal loyalty (defined as customer’s psychological attachment); and composite loyalty (defined as the combination of behavioral and attitudinal loyalty). Within each stream, researchers have used various means of classifying the strength of the loyalty construct, usually with the goal of identifying corporate strategies for each group of consumers. For example, Dick and Basu (1994) examined the attitude-repurchase relationship using four scenarios: loyalty, non-loyalty, spurious loyalty, and latent loyalty. The first scenario is loyalty, characterized by high favorable consumer attitude and a high repurchase rate. This is the best scenario for companies. The no-loyalty scenario is characterized by low favorable attitude and a low repurchase rate. The task for marketers is to develop strategies to convert non-loyal consumers to loyal. Spurious loyalty and latent loyalty scenarios represent the areas of greatest concern and challenge for marketers. The spurious loyalty scenario involves low favorable attitude, but a high level of repurchase. Marketers need to identify and address the reasons for low consumer attitude. The opposite of spurious loyalty is latent loyalty, characterized by high favorable attitude but low repurchase rate. Customers liked the product or service, but

experienced some constraints in purchasing it. Under this scenario, marketing efforts should concentrate on addressing those constraints.

2.2 Satisfaction

Satisfaction is the construct believed to drive loyalty and repurchase (Oliver, 1996, 1999; Szymanski and Henard, 2001). However, Mittal and Kamakura (2001) have observed that it is not easy for firms to establish a link between satisfaction ratings and repurchase behavior. Further, a number of researchers (e.g., Reichheld, 1996; Rust, Zahorik & Keiningham, 1995; Szymanski & Henard, 2001) have reported that consumers who are satisfied do defect. Satisfaction appears to be a multidimensional construct and customers can be satisfied in one area, but dissatisfied in others (Parasuraman et al., 1985, 1988). For example, they may be satisfied with the product, but dissatisfied with the service or the price. Szymanski and Henard (2001) have reported that satisfaction explains less than 25% of the variance in repurchase behavior; unsatisfied consumers may stay loyal while satisfied consumers may defect. Meanwhile, Soderlund (1998) has noted that, although the relationship between loyalty and satisfaction is positive, an increase in customer satisfaction does not generate an equal increase in consumer loyalty. There also appear to be industry differences in the relationship between customer satisfaction, loyalty and repurchase (Fornell, 1992).

3 Methodology

3.1 Meta-analytic Technique

Meta-analysis is a technique for summarizing and testing statistical results across other independent researcher's findings related to the same topic. According to Hunter and Schmidt (1990) the process of accumulating knowledge has two steps: "(1) the cumulation of results across studies to establish facts, and (2) the formation of theories to organize the facts into a coherent and useful form" (p. 13). The ability to summarize findings across multiple situations in order to discover trends is a critical component of scientific research (Saxton, 2006). The meta-analytic process is a useful quantitative method for pulling all the results together into a mathematically concise package for a better interpretation (Leedy and Ormrod, 2005). Many researchers have suggested that meta-analysis helps in theory development rather than theory generation by providing the empirical building blocks for theory formation (Hunter and Schmidt, 1990). It also provides directions about the remaining research. Meta-analysis is helpful in assessing the level of agreement or disagreement on a topic of a given research question (Saxton, 2006). Ankeny (2005) has noted that meta-analysis not only allows more precise results but increases statistical power and reduces the likelihood of a type II error. Currently, meta-analysis application is rapidly growing in behavioral, social sciences, psychology, business, medical field, and health care.

The first step in conducting a meta-analysis is to collect studies and to extract information in order to create a database of individual research findings related to the investigated research questions. The focus is the bivariate relationship between the variables of interest. These variables do not have to be the primary focus of the individual studies so long as the relevant statistical information is reported. The second step includes the conversion of collected statistical information to the same measurements, if needed. Meta-analysis can be used only if reported statistics are represented in the same statistical form, or could be converted to the same type of quantitative variables in order to be meaningfully compared. The third step in meta-analysis is analyzing the collected data. Saxton (2006) indicated that meta-analysis tests whether findings from multiple studies involving bivariate analysis agree or disagree in terms of the direction of association between variables and the strength of that relationship. The goal of meta-analysis is not to average the findings, but to treat data from multiple studies as a part of a single study. The selection of variables and the effect size are very important. Small sample sizes can cause wide variability across studies. Studies are weighed by sample size, taking into account the effect size involved in the bivariate relationship. The mean effect size is calculated, and can be expressed in terms of standard normal deviations, followed

by the calculation of the significance value. The significance level can be inferred from the boundaries of confidence intervals around the mean effect size.

3.2 Data Collection

A fairly extensive search for relevant studies on the relationship between loyalty-satisfaction, repurchase-satisfaction, and loyalty-repurchase was conducted. These studies were identified through search engines of electronic databases such as ABI/Inform, ProQuest, WilsonWeb, JSTOR, PsycINFO, UMI, and others by using key words including satisfaction, loyalty or repurchase. Searches of the references found in the available studies were conducted in addition to the manual searches of peer reviewed journals such as *the Journal of the Academy of Marketing Science*, *Journal of Marketing Research*, *Psychology & Marketing*, *Journal of Financial Services Marketing*, *Journal of Service Research*, *International Journal of Service Industry Management*, *Journal of Consumer Satisfaction*, *Management Science*, and others. The relevant studies were coded into three databases: Loyalty-Satisfaction; Repurchase-Satisfaction, and Loyalty-Repurchase. Due to a number of researchers examined Repurchase Intent separately from Repurchase, the Repurchase-Satisfaction database was further divided into two areas: Repurchase-Satisfaction, and Repurchase Intent-Satisfaction.

F-statistics, t-statistics or chi-squares with their corresponding degrees of freedom were converted to Pearson product-moment correlation coefficients. Not all statistical measurements could be converted due to a lack of information in the published studies; therefore, these studies were excluded from the database. Some studies conducted two or more analysis under different conditions and reported more than one correlation coefficient. Therefore, the number of select studies does not correspond to the number of reported correlation coefficients.

3.3 Analysis

After collecting the sufficient sample size of correlation coefficients with the reported sample size, a meta-analysis was performed. The Hunter and Schmidt (1990) software package and the method of meta-analysis were employed, which weights individual correlations by the sample size and assumes that the correlations entered are independent. The standard deviation of observed correlation was used to estimate the variability in the relationship between studied variables. Rosenthal, Hoyt, Ferrin, Miller, and Cohen (2006) indicated that correlation coefficients are standardized effect sizes and can be directly compared across studies despite different measures, which may be used for one or both variables in those studies.

4 Results

The following section reports the overall results of the meta-analysis by the relationship of interest.

Table 1 Results of Meta-Analysis Loyalty and Satisfaction

Measure	Output
Sample Size	153,150
Number of correlations	82
Observed Correlation (r)	0.5431
Observed SD	0.1612
90% Credibility Interval	0.3402<0.5431<0.7460
% Variance attributable to SE	100%
SD residual	0.1603
Corrected Correlation (r)	0.5431
SD of Corrected r	0.1585
95% Confidence Interval	0.2832<0.5431<0.8030

4.1 Loyalty and Satisfaction

The results of the conducted meta-analysis are displayed in the Table 1. The total sample size across the collected empirical studies was 153,150 with 82 reported or converted correlations. The correlation coefficients were collected from studies published in peer journals between 1992 and 2006. These studies report data from 12 different countries. Industries included large and small corporations, retail, banking, e-commerce, hotel, restaurants, cosmetics, recreational facilities, media, insurance, automotive, transportation, and others.

The mean correlation between loyalty and satisfaction was 0.5431. Sampling error accounted for 100 percent of the observed variance. Neither the credibility interval nor the confidence interval included zero which indicates that the observed relationship is consistently positive. Although all of the observed variance has been accounted by sampling error, the relatively large standard deviation indicates the possible presence of moderator variables. Moderator analysis might help in further refining the strength of the relationship.

4.2 Repurchase and Satisfaction

Due to the large number of reported statistical findings, studies were further divided into two subgroups: repurchase and satisfaction relations, and repurchase intent and satisfaction relations. The results of the meta-analysis for repurchase and satisfaction are displayed in the Table 2. The total sample size across the collected studies was 13,098 with 11 reported or converted correlations. The collected studies were published in peer journals between 1993 and 2005. These studies reported data from 69 countries and included large and small corporations in the following sectors: automotive, e-commerce, retail, hospitality, industrial suppliers, airlines, banks, military, education, banking, telecommunication, tourism, and others.

The mean correlation between repurchase and satisfaction is 0.5616. Thirty-two percent of the observed variance was attributed to the sampling error. The confidence interval for the repurchase-satisfaction relationship did include zero, however, no negative correlations were observed in the raw data. Therefore, it is reasonable to assume that any relationship that exists is positive. Given the relatively large standard deviation and the unaccounted variance, moderator analysis should be conducted and is expected to be helpful in clarifying the strength of the relationship.

4.3 Repurchase Intent and Satisfaction

The results of the analysis for repurchase intent and satisfaction are displayed in the Table 3. The total calculated sample size across the collected empirical studies was 1,640,056 with 59 reported or converted correlations. The collected studies were published in peer journals between 1993 and 2005. These studies

Table 2 Results of Meta-Analysis Repurchase and Satisfaction

Measure	Output
Sample Size	13,098
Number of Correlations	11
Observed Correlation (r)	0.5616
Observed SD	0.3485
90% Credibility Interval	0.1244<0.5616<1.0
% Variance attributable to SE	32%
SD residual	0.3479
Corrected Correlation (r)	0.5616
SD of Corrected r	0.3439
95% Confidence Interval	0.0<0.5616<1.0

Table 3 Results of Meta-Analysis Repurchase Intent and Satisfaction

Measure	Output
Sample Size	1,640,056
Number of Correlations	59
Observed Correlation (r)	0.6314
Observed SD	0.0439
90% Credibility Interval	0.5760<0.6314<0.6868
% Variance attributable to SE	67%
SD r	0.0438
Corrected Correlation (r)	0.6314
SD of Corrected r	0.0433
95% Confidence Interval	0.5604<0.6314<0.7024

reported data from a number of industries including automotive, e-commerce, retail, hospitality, industrial suppliers, airlines, banks, military, education, banking, telecommunication, and tourism.

The mean correlation between repurchase intent and satisfaction was 0.6314. Sixty-seven percent of the observed variance was attributable to sampling error. The repurchase intent-satisfaction relationship is consistently positive as indicated by the credibility interval and the confidence interval which do not include zero. Taken together, the relatively low standard deviation and unexplained variance indicate that while there are other factors moderating the observed results, these are not likely to change the results in any major way. The satisfaction construct is clearly a strong, positive indicator of repurchase intent.

4.4 Loyalty-Repurchase

The loyalty-repurchase database is currently under the development. Due to different approaches to loyalty and repurchase constructs, such as attitudinal and behavioral, only a small number of studies have been identified that meet the necessary criteria for meta-analytic review (4). Those studies were published in peer journals between 1973 and 2004. The market consisted of 3 countries including USA, France and Korea. Industries include retail, telecommunication, automobile, e-commerce and restaurant. Additional research needs to be conducted in order to identify more statistical findings on loyalty and repurchase relation.

5 Discussion

Loyalty, repurchase intent, and satisfaction have generated a great deal of research in the marketing literature and a great deal of intention in the corporate world (Reichheld, 2006). While our analysis has found several areas of research that merit further study and consideration, the size of the relationship between these three variables clearly shows that the efforts to understand them are warranted; loyal, satisfied customers do show a strong tendency to repurchase. This is the good news for companies. However, our analysis does confirm the observation of Szymanski and Henard (2001) about the failure of satisfaction to explain repurchase behavior. While the calculated correlation was a relatively strong 0.56, the standard deviation and unexplained variance (Table 2) indicate that there is a great deal more going on in this particular relationship. Because satisfaction is such a multifaceted construct, it is clearly possible that some aspects of satisfaction are more predictive of repurchase than others. Satisfaction may be more related (and predictive) of repurchase in some industries than others do to the nature of that industry, its products, its size and diversity.

6 Limitations and Future Research

The research has several limitations. First, research that did not report their findings in statistical forms that could be converted to effect size or correlation or did not report sufficient information to permit conversion

were not included. Second, only published studies were included and it is possible that studies not reporting significant results were not selected for publication. Third, we have not attempted to correct for other statistical artifacts, namely range restriction and measure reliability as information on these artifacts was not available.

The next step in this analysis will be to conduct moderator analysis on those relationships where we have not explained all of the observed variance or where the standard deviation remains large. Of particular interest is the relationship between repurchase and satisfaction. As noted above, there are several avenues of investigation including the various dimensions and industries represented in the studies. A further area of interest given the recent popular emphasis on loyalty over satisfaction is the nature of this relationship. When is a satisfied customer also a loyal one? Why does a satisfied customer defect?

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(Studies whose findings are included in the meta analysis are not cited and available on request).

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