
Original Article

Designing competitive loyalty programs: How types of program affect customer equity

Received (in revised form): 27th September 2009

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ABSTRACT Loyalty programs are one of the most popular marketing strategies developed by firms across a broad range of industries. Despite the prevalence of these programs, there is only a limited amount of research that focuses on the stage before program implementation. The main purpose of this study is to formulate a theory of designing *ex ante* competitive loyalty programs, and subsequently to provide supporting empirical evidence. The author argues that loyalty programs could be classified into two types: monetary-based rewards and special treatment-based rewards. The author proposes a theory that posits that customer perceptions of the utility of loyalty programs differ between the two types of reward, and are contingent upon the relationship between the customer and the firm. Programs that are perceived favorably by customers will in turn create stronger attitudinal loyalty and higher customer profitability. Using settings of airline passengers and bank customers, the results of the research produce findings that monetary rewards are perceived to provide higher utility perceptions of customers in contractual relationships as compared to non-contractual relationships. However, this research failed to provide empirical support that special treatment rewards are perceived to provide higher utility perceptions of customers in non-contractual relationships compared to contractual ones. The research also models consumer switching using the Markov Chain, and reveals that higher program utility perception is associated with higher attitudinal loyalty, thereby increasing customer equity. Firms are encouraged to incorporate affective elements into their loyalty programs, in addition to monetary elements.

Journal of Targeting, Measurement and Analysis for Marketing (2009) 17, 307–319. doi:10.1057/jt.2009.20;
published online 9 November 2009

Keywords: loyalty programs; attitudinal loyalty; switching; customer lifetime value; customer equity

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INTRODUCTION

One of the most popular strategies developed by firms to retain their customers is the implementation of loyalty programs. A loyalty program is a marketing action of a firm that is designed to provide reward incentives for profitable customers who are deemed to be loyal to the focal firm,¹ providing more satisfaction and values to certain customers,² retaining customers by creating high switching costs, and building a base of customers who make repeat purchases, pay premium prices and make referrals to other customers.³

Some researchers have attempted to introduce typologies of loyalty programs.⁴ This puts forward a new typology of designing loyalty programs. It is posited that all loyalty programs can be categorized as comprising either monetary-based rewards or special treatment-based rewards.

Loyalty programs should be designed in such a way that they would be perceived positively by customers, and create attitudinally loyal customers who would allocate a higher share of their wallets to the focal firm relative to other competitors in their future purchases.

This research uses customer lifetime value (CLV) and customer equity (CE) as the ultimate dependent variables to determine the return on investment of a loyalty program initiative. The ability to make a projection of the return on any marketing action is in line with the Marketing Science Institute's research priorities of measuring marketing productivity and return on investment measurement of marketing expenditures.⁵

RESEARCH PROBLEM

Assessing how types (monetary-based rewards or special treatment-based rewards) of loyalty program design, before implementation, interact with relationship modes in affecting customer utility perceptions of the programs, customer attitudinal loyalty and customer profitability for the focal firm has been unsatisfactory to date, despite many attempts.⁶

Therefore, this study strives to close the gap in the marketing literature by focusing on the *ex ante* of loyalty program design instead of the *ex post*. Given the high costs and risks involved

in implementing and administering loyalty programs, this research intends to investigate the imperatives for firms to plan meticulously before launching loyalty programs for their customers, and to carefully design the types of program being considered before actual implementation.

RESEARCH OBJECTIVES

The main purpose of this study is to fill the void in the marketing literature on loyalty programs by generating a theory of *ex ante* competitive loyalty program design. Pursuant to the main purpose, this research will attempt to achieve the following objectives:

- to empirically show the main effects of program type (monetary-based or special treatment-based rewards) on customer utility perceptions;
- to investigate the effects of the interactions between types of loyalty program and relationship modes on customer utility perceptions;
- to test the relationship between customer utility perceptions and their future loyalty to the firm; and
- to relate customer loyalty to the profitability of customers, operationalized as the CLV and CE of the focal firm.

LITERATURE REVIEW

Loyalty programs

Customer loyalty programs have attracted widespread attention from marketing researchers.⁷ The focus of this research is directed toward investigating how these programs contribute to the firm's financial and market performance,² and their ability to cultivate customer loyalty.⁸

Further, it is generally accepted that short- and long-term-oriented customers differ in factors that determine their future exchanges.⁹ Customers with transaction orientation rely on satisfaction, whereas customers with relational exchange orientation rely more on trust and commitment. Firms must be able to approach these different types of customer with the appropriate marketing activities.

Recent studies have shown that hedonic benefits evoke promotional emotions of cheerfulness and excitement, whereas utilitarian benefits evoke preventive emotions of confidence and security.¹⁰ Both emotions would eventually lead to post-consumption satisfaction, word of mouth referrals and repurchase intentions.

Monetary rewards in this research are analogous to utilitarian benefits, and special treatment rewards are analogous to hedonic benefits. Post-consumption emotions correspond to loyalty program utility perceptions, as both constructs measure the customer's assessment of different sets of stimuli, namely, product benefits and types of loyalty program, respectively.

Special treatment rewards

Loyalty programs with special treatment rewards are designed mainly to provide comfort and peace of mind to loyal customers. Customers develop feelings of reduced anxiety, increased trust and confidence in the firm.¹¹ For example, loyalty programs of a restaurant that provides certain strategic tables only for its selected customers will provide the selected customers with feelings of assurance and reduced anxiety that they surely will get a table anytime they patronize the restaurant, a benefit that could not be obtained by other, non-selected customers.

Special treatment rewards, to a certain extent, are analogous with hedonic benefits. They both refer to aesthetics, experiential and enjoyment-related benefits of offerings. In the context of consumer goods such as cars, availability of sunroofs and luxurious interiors is an example of hedonic benefits. Special treatment rewards trigger promotion emotions of cheerfulness and excitement in customers' minds.

Monetary rewards

Loyalty program designs that contain various types of monetary-based reward are mainly aimed at providing economic advantage to selected numbers of the firm's customers. These customers could easily calculate their better 'profit and loss

statement'. The rewards could be in the forms of real cash, bonus points, vouchers and so on, but despite the various forms, customers are usually able to perform 'conversion' of the rewards value into the equivalent cash value.

Monetary rewards are, to a certain extent, analogous with utilitarian benefits. They both refer to functional, instrumental and practical benefits of offerings. In the context of consumer goods, a mobile phone's battery life and sound volume are examples of utilitarian benefits. Monetary rewards trigger the prevention emotions of confidence and security in customers' minds.¹⁰

In practice, monetary reward-type loyalty programs are at risk of being perceived as similar to promotion programs.¹ Marketers must carefully design loyalty programs in such a way that they do not give instant rewards to any customer. Rewards must be given only to those customers who are potentially loyal (that is, if the loyalty programs have not yet been implemented) and loyalty programs must be committed to nurturing long-term successful relational exchanges,¹² instead of maximizing short-term sales for the firm.

Contractual and non-contractual relationships

In general, the relationship between a customer and a firm can be classified into two modes: contractual and non-contractual.¹³ The main difference between the two modes involves whether the relationship is governed by a legal contract or membership inclusion, in the contractual instance, or neither in the non-contractual instance. In a contractual relationship, a customer is 'locked' to a firm for a specified period, whereas in the non-contractual relationship the customer has the freedom to choose to transact with any firm of his or her own volition.

The difference between the two modes of relationship can also be looked at from the point of view of switching costs. Contractual relationships force higher switching costs onto the customers, whereas non-contractual relationships have either lower or no switching costs.

Attitudinal loyalty

Earlier, Dick and Basu¹⁴ provided a typology of loyalty construct. Loyalty is a two-dimensional construct comprising attitude and repeat patronage behavior. However, it is possible for a customer to make frequent purchases of a brand, simply for convenience; this is called ‘spurious loyalty’. Customers with spurious loyalty will defect from the firm at the earliest possible opportunity.

There is a significant difference between the behavioral and attitudinal loyalty of customers. Reinartz and Kumar¹⁵ defined behavioral loyalty as observed repeat purchase action that customers have demonstrated toward a particular product or service. In contrast, attitudinal loyalty is referred to as perceptions that customers have of a particular product or service.

Customer lifetime value and customer equity

CLV is the sum of cumulated cash flow, discounted with a firm’s cost of capital, of a customer over his or her entire relationship with the firm.¹⁶ There is another definition of CLV that regards it as the present value of all future profits obtained from a customer during his or her relationship with a firm.¹⁷

Studies on CLV and CE cannot be isolated from the advances in related accounting fields, such as the spread of activity-based costing, which permits the computation of the true value of customer relationships.¹⁸ In marketing, the value of customers is considered an important element in firm value, and hence the question that needs to be answered is how customer value links to shareholder value. Some scholars’ evidence has shown that the estimates of value of customers or customer profitability are reasonably close to the market valuation of the respective firms, and thereby linked to shareholder value.¹⁹ With these findings, both institutional and retail investors have re-examined their assumptions about what constitutes tangible and intangible value, and broadened their scope to include CLV and CE.

Knowing the CLV of individual customers enables a firm to improve its customer selection,

customer segmentation and marketing resource allocation. At aggregate level, CE is defined as the total of discounted lifetime values summed over all current and potential customers of a firm.²⁰ Understanding a firm’s CE provides the firm with a long-term perspective, and serves as a yardstick for monitoring long-term growth and profitability.

CONCEPTUAL MODEL

Figure 1 depicts the conceptual model used in this study. There are six variables used in the model, one of which serves as a control variable.

HYPOTHESES

The effect of monetary-based rewards on program utility perception

Monetary rewards contained in loyalty programs will be perceived more positively by customers in contractual relationships. The nature of a contractual relationship is such that a customer is ‘forced’ to make transactions with a firm,²¹ regardless of whether he or she is satisfied with the firm, until the contract period is over. Therefore, monetary rewards will be seen by customers as a ‘compensation mechanism’ to make up for any shortcomings experienced during the relationship period, and as a result the firm will be perceived more positively. Contractual relationships are more formal, businesslike and straightforward in nature, which will make the value of monetary rewards easier to align with the main product or service being offered.

In contrast, customers in a non-contractual relationship will exhibit opportunistic behavior¹² or spurious loyalty¹⁴ if they are given monetary rewards. Customers will view the loyalty programs as the same as ordinary promotion programs, as the forms of rewards are easy to convert into economic gain or advantage. Customers may decide to choose the firm as their supplier owing to the rewards, but this does not necessarily mean that they will stay loyal in the future.

Hypothesis 1: The effect of the monetary rewards-type loyalty program on program

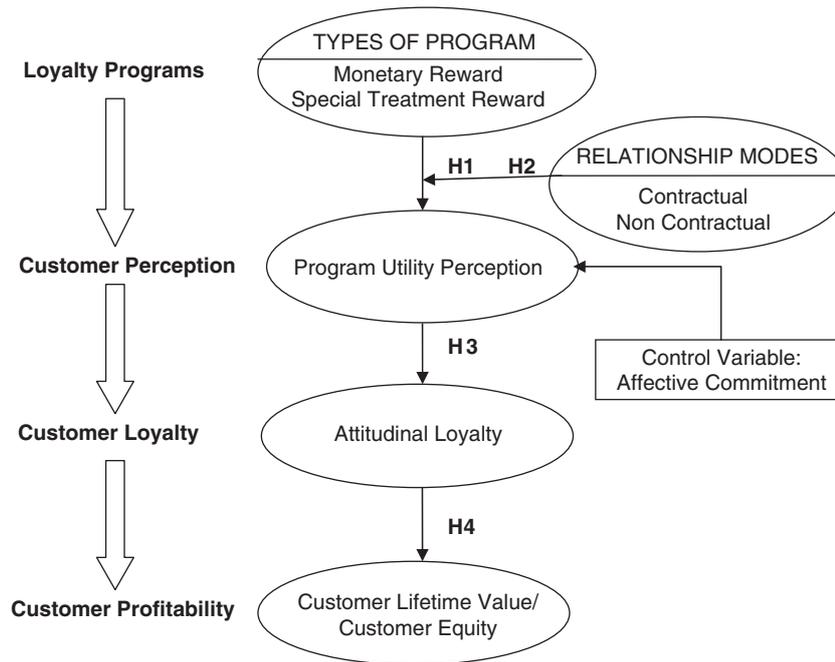


Figure 1: Conceptual model.

utility perception is contingent upon the relationship modes, and as such the program utility perception will be (a) higher in a contractual relationship, and (b) lower in a non-contractual relationship.

The effect of special treatment-based rewards on program utility perception

Non-contractual relationships entail fewer formal business procedures and no legal or administrative constraints in conducting business, and this could seed a positive, mutual relationship and bonding between a company and its customers. With such a relationship, the value of special treatment rewards is easier to align with the main product or service being offered, creating better utility perception for customers. Special treatment rewards are potential in delivering both surprise and delight to customers.

For customers in a contractual relationship, special treatment rewards would be perceived as something that is already included in the ‘price’ they have paid to the firm. As customers are bound and attached to a firm, they expect

that it will provide more tangible benefits to them in return.²²

Hypothesis 2: The effect of the special treatment rewards-type loyalty programs on program utility perception is contingent upon the relationship modes, and as such the program utility perception will be (a) lower in a contractual relationship, and (b) higher in a non-contractual relationship.

The effect of program utility perception on attitudinal loyalty

It is argued that in order for customers to be loyal to a firm’s brand, the loyalty program must be perceived as providing utility to customers, and the loyalty toward the program must be operating as a result of that utility perception. Therefore, loyalty toward the program is not tested further in this study, as it is implied that customers who become attitudinally loyal to a firm have already passed the stage whereby they perceive the program favorably, and therefore become loyal to the program and subsequently to the firm.

Customers who perceive a loyalty program as valuable to them will exhibit greater liking for the program, manifested in a more positive attitude toward the firm.⁴ These customers will have strong preferences for the brand, put the brand in first priority every time the need arises, and will recommend the brand to other customers.^{23,24}

Hypothesis 3: Customers with higher utility perceptions of a firm's loyalty programs are associated with higher attitudinal loyalty toward the firm's offerings.

The effect of attitudinal loyalty on CLV/CE

Loyal customers will exhibit specific attitudes and behaviors in favor of the focal firm. Despite the possibility of performing brand switching or of polygamous loyalty in their purchase intentions,²⁵ these customers tend to maintain a higher share of wallet for the focal firm.

Loyal customers will have higher amounts or numbers of purchases, more frequent purchases, and are more committed to the relationship development with the firm.²⁶ Share of wallet, amount or number of purchases, frequency of purchases and relationship commitment of customers will affect the CLV.²⁷

Hypothesis 4: Customers with higher attitudinal loyalty are associated with higher customer profitability, as measured in terms of customer lifetime value and customer equity.

METHODOLOGY

This research consists of two studies. Study 1 aims to test the relationship between types of loyalty program design and perceived utility of the programs. Study 2 uses program utility perception as a link in the relational chain involving attitudinal loyalty toward the firm, and its subsequent effect on customer profitability.

Data collection and sampling

This research uses two service categories as the basis for data collection and sample

drawing. The categories are domestic airlines (as representative of non-contractual relationships) and banking services (as representative of contractual relationships). For each service category, the respondents are asked about the most recent airline/bank they have done business with, and they rate the probability of doing future business with that particular firm, and each of another four competing firms.

The total probability of the five firms in each service category would have to be 100 per cent. The five firms must be selected such that they are considered major players in their respective categories, but at the same time they should be more or less equally competitive in consumers' minds.

To facilitate more switching and reduce the inertia effect, the service type used for banks in this study is monthly bill payment. This type of service would not require customers to have an account in a particular bank to still be able to use the bill payment services of the bank.

This research uses convenience sampling, which is classified under non-probability sampling.²⁸ Data for the airline service category were mostly obtained from airline passengers about to board flights departing from the domestic terminal of Jakarta's main airport – Soekarno-Hatta.

As for the bank service category, as the data were collected conveniently from university colleagues, students, professionals and so on all domiciled in Jakarta, it is considered reasonable to assume that each respondent is relatively familiar with bank services.

Procedures

Studies 1 and 2 were conducted simultaneously. For each service category, there were two prepared sets of questionnaires, namely, one set for monetary-based rewards and one set for special treatment-based rewards. The two sets were randomized for every service category (airline or bank) so that every participant in a category had equal probability (that is, 50 per cent) to receive one of the prepared sets of questionnaires.

The questionnaires first asked participants to answer several questions about the focal airline/bank, to measure their affective commitment as a covariate. Affective commitment is controlled in order to ensure that respondents have high numbers of repeat visits, and to investigate the types of attachment to the firm, as required by the theoretical models.²⁹

Next, they were asked to read one of the four prepared scenarios for a loyalty program, while assuming that the airline/bank is considering introducing such a loyalty program. They are then asked to evaluate the perceived utility of the intended loyalty program of the airline/bank, and their expected attitudinal loyalty to the focal firm after the program implementation.

Operationalization of variables

The two independent variables in study 1, that is, types of loyalty program and relationship modes, are manipulated by the different sets of questionnaires (for type of program) and by the service category (for relationship modes). The measurement of attitudinal loyalty uses two different scales.

The first scale, adopted from Yi and Jeon,¹ is used to measure attitudinal loyalty as a dependent variable, being influenced by the perceived utility of the program. The second scale is adopted from Rust *et al.*,²⁷ and is used to measure attitudinal loyalty as an independent variable, influencing the amount of CLV/CE.

The measure for attitudinal loyalty as a dependent variable consists of four items on a 6-point Likert scale, while the measure as an independent variable consists of a composite of next-purchase probability with the five competing firms, as well as average amount and average frequency of purchase.

For the question on next-purchase probability, the respondents are requested to assign a probability of doing business in the future with every service provider on the list. Respondents in the airline/bank service category rated a probability for each of the five airlines/banks. For each service category, the total sum of probability of using all the service providers had to add up to 100 per cent.

Analytical tools

The two studies use different approaches in terms of analytical tools. Study 1 employs general linear modeling (GLM) in the form of analysis of covariance (ANCOVA), whereas study 2 is based on stochastic mathematical modeling, derived from Markov Chain analysis. Study 2 closely adopts the approach used by Rust *et al.*²⁷ in the measurement of CLV and CE.

RESULTS

Data collection was carried out in two rounds, using two different sets of respondents in two different time periods, with a time gap between the first and second round of data collection of around 7 weeks.

The 1st round of data collection managed to obtain 105 people as eligible respondents, while the 2nd round (after replacing 29 non-eligible respondents with new respondents in a make-up survey) eventually obtained 152 eligible respondents. The two rounds of data collection make a total of 257 respondents without missing data.

Test of Hypotheses 1 and 2

Hypotheses 1 and 2 were tested simultaneously using ANCOVA, such that

$$Y_{ijk} = \mu + (A)_i + (AB)_{ij} + X + \varepsilon'_{ijk},$$

whereby

Y_{ijk} the k th observation in cell i, j for program utility perception

μ mean value of program utility perception

X covariate, which is the affective commitment to the firm before evaluating the loyalty program

$(A)_i$ parameter of the effect of the i th level of the reward types

$(AB)_{ij}$ parameter of interactions between program types and relationship modes in cell i, j

ε'_{ijk} random error

The null hypothesis is $(AB)_{ij} = 0$, for i and j .

The regression equations for ANCOVA, obtained from the parameter estimates using SPSS 14.0, of the 1st and 2nd round of data collection, respectively, are as follows:

$$\text{Program Utility Perception (1st round of data collection)} = 10.941 - 0.05 \star [A = 1] + 0.058 \star [A = 1] \star [B = 1] - 1.363 \star [A = 2] \star [B = 1] - 0.113 \star X$$

$$\text{Program Utility Perception (2nd round of data collection)} = 10.781 + 0.073 \star [A = 1] + 0.928 \star [A = 1] \star [B = 1] - 1.152 \star [A = 2] \star [B = 1] - 0.100 \star X$$

The results of study 1 give support to Hypothesis 1 but fail to support Hypothesis 2. Monetary rewards are perceived better by bank customers (contractual relationship) compared to airline customers (non-contractual relationship). As for special treatment rewards, both bank customers and airline customers perceive the programs as the same insofar as utility is concerned, with no significant differences existing between the two modes of relationship.

Insignificant support for Hypothesis 2 suggests that there are exogenous factors that attenuate the moderating role of relationship modes. A recent study by Gill³⁰ shows that there are asymmetric additivity effects between a base product and additional features embedded in the base product. Specifically, utilitarian products with additional hedonic features create more value than those with additional utilitarian features, whereas hedonic products with additional hedonic features create more value than those with additional utilitarian features.

Airline and bill payment services (that is, the base products), which are more utilitarian in nature, may also experience these effects. Special treatment rewards (that is, the additional features), which are more hedonic in nature, may create higher value (that is, enjoyment and excitement) in the perceptions of customers in both relationship modes. The moderating roles of relationship modes might have dissipated owing to the high excitement induced by the special treatment rewards.

Tests of Hypotheses 3 and 4

Hypothesis 3 predicts that program utility perception is associated positively with attitudinal

loyalty. The higher the program utility perception of a customer, the higher is his or her attitudinal loyalty toward the firm. A simple linear regression is used to test Hypothesis 3.

Hypothesis 4 argues that the higher the attitudinal loyalty of a customer (as indicated by higher share of wallet) is toward a focal firm, the higher his or her CLV should also be. On an aggregate basis, the firm will command a higher average CLV and higher CE. Markov Chain modeling is employed in testing Hypothesis 4. Some assumptions with regard to key figures such as discount rates, contribution margins, target populations and time horizons were obtained either by guestimates or from secondary data sources.

Attitudinal loyalty as an independent variable was measured using purchase intentions toward five airlines listed in the questionnaires. In this study, for reasons of practicality, only the top-two companies in each service category underwent further detailed analysis. This could easily be extended in future research if required. Each respondent has his or her own individual switching matrix. In this case, the individual switching matrix is collapsed into 1×3, as each respondent has one last company he or she has transacted with, thus constituting three companies (two top companies plus one other) available as options for future transactions. These individual switching matrices of all respondents in each of the service categories (airline and bank) are then averaged in order to obtain the Markov Transition Matrix. Tables 1 and 2 show the Markov Transition Matrix for airline respondents and bank respondents, respectively.

Tables 1 and 2 show that an average Lion Air customer has increased his or her probability of using Lion Air again (retention rate) from 48.29 to 66.38 per cent for the next domestic trip occasion, and decreased from 27.02 to a 16.91 per cent chance that he or she will switch to Merpati Airline, and from 25.09 to a 17.13 per cent chance that he or she will switch to other airlines. For an average Merpati customer, the current versus future chance of flying again with Merpati is 50.23 per cent versus 67.73 per cent (retention rate), the chance of switching to Lion

Table 1: Current Markov Transition Matrix (Airlines)

	<i>Lion</i>	<i>Merpati</i>	<i>Others</i>
Lion	0.4829	0.2702	0.2509
Merpati	0.3216	0.5023	0.1821
Others	0.3830	0.2220	0.3950

Source: Summary of Matlab output.

Table 2: Future Markov Transition Matrix (Airlines)

	<i>Lion</i>	<i>Merpati</i>	<i>Others</i>
Lion	0.6638	0.1691	0.1713
Merpati	0.2045	0.6773	0.1182
Others	0.2098	0.2219	0.5683

Source: Summary of Matlab output.

is 32.16 per cent versus 20.45 per cent, and the chance of switching to other airlines is 18.21 per cent versus 11.82 per cent.

The same analysis is used for measuring the retention rates of banks. The current versus future retention rate of Bank Mandiri is 47.14 per cent versus 52.86 per cent, of BCA is 75.76 per cent versus 83.33 per cent, and of the other three banks (combined) is 34.58 per cent versus 46.25 per cent. BCA apparently had managed to retain more of its customers than Bank Mandiri (in terms of percentage of revisits). However, higher retention may not automatically translate into higher CLV and CE for the company. The company cost of capital, contribution margin, frequency of purchase, amount per purchase, size of target population and the time horizon would determine the ultimate CLV and CE.

Cost of capital, that is, discounted rate, is assumed to be 12.50 per cent for both bank services and domestic airlines, whereas contribution margin is assumed to be 5 per cent for airlines and 0.25 per cent for monthly bill payments. The latter is considered fee-based income, which is extra income for a bank, in addition to the main service of providing intermediary functions. The target population for domestic airlines is 15 million passengers (potential target market of the five competing airlines in the list), whereas the target population for bank customers who would pay their monthly

bills through banks is 20 million customers (we assume only residents of large cities in Indonesia), which is half the total number of individual customers.

The CLV of each customer of company j is calculated using the following formula:

$$CLV_{ij} = \sum_{t=0}^{T_{ij}} (1 + d_j)^{-t/f_i} V_{ijt} \pi_{ijt} B_{ijt},$$

where

d_j discount rate for company j

t purchase occasion

T time horizon

f_i purchase frequency of customer i in 1 year

V_{ijt} average amount per purchase

π_{ijt} contribution margin to company j from customer i in purchase t

B_{ijt} Markov Transition Matrix

An illustration of a CLV calculation would be as follows. John last flew with Lion Air on a domestic trip. His previous frequency of air travel trips was once a month (and this frequency is assumed to remain the same in the future), and on average he pays 750 000 000 rupiahs for the airfare every time he flies. However, John often switches airlines, with a probability of 0.3 of using Lion Air again in the future, 0.5 of using Merpati, 0.1 of using Batavia Air and 0.1 of using Sriwijaya Air (note that the sum of probabilities must be equal to 1). Therefore, his switching matrix is (0.3 0.5 0.2). As John flies once a month, in the next 3 years he will face $12 \times 3 = 36$ possible future switching situations. Accordingly, there will be 36 rounds of calculation in order to obtain John's CLV with regard to Lion Air ($t=0, 1, 2, \dots, 36$).

The Markov Switching Matrix, B_{ijt} , is squared for the second round, tripled for the third round and so on, until the calculation reaches the power of 36 before being multiplied by John's switching matrix. Using Matlab programming,

Table 3: Summary of retention rates by types of reward

Relationship mode	Company name	Monetary		Retention rate		Special treatment		Retention rate	
		Current	Future	Change (%)	P-value	Current	Future	Change (%)	P-value
Contractual	Mandiri	0.5563	0.6313	13.5	0.017	0.4000	0.4421	10.5	0.004
	BCA	0.7214	0.7935	12.6	0.022	0.7923	0.8552	7.9	0.048
Non-contractual	Lion Air	0.5312	0.6743	26.9	0.001	0.4768	0.6107	28	0.000
	Merpati	0.4939	0.6286	27.3	0.000	0.5304	0.6782	27.9	0.001

Source: Output compilation by the authors.

Table 4: Summary of CLV and CE calculation

Assumptions	Airline	Bank			
Discount rate	12.50%	12.50%			
Contribution margin	5%	0.25%			
Population	15 million passengers	20 million bank customers			
Type of service	Domestic air transport	Monthly bill payment			
Time horizon	3 years	3 years			
No. of switchings	Unique for each individual customer	Same for all customers, one time/month			
Parameters	Lion	Merpati	Mandiri	BCA	
Retention rate	66.38%	67.73%	52.86%	83.33%	
Current CLV	Rp 47.715	Rp 35.332	Rp 2.473	Rp 18.220	
Current customer equity	Rp 716 billion	Rp 530 billion	Rp 49.47 million	Rp 364.40 million	
Future CLV	Rp 76.605	Rp 77.206	Rp 4.730	Rp 23.515	
Future customer equity	Rp 1.15 trillion	Rp 1.16 trillion	Rp 96.41 million	Rp 470.31 million	
Improvement of customer equity	60.55%	119.00%	91.25%	29.06%	

Source: Output compilation by the authors.

the CLV for John is then obtained. The same process applies to all other Lion Air customers, such that the average CLV for Lion Air is eventually obtained. The average CLV is then multiplied by the number of existing and potential customers in the target population, to arrive at the CE for Lion Air.

We subsequently perform testing on differences in attitudinal loyalty (that is, retention rates) before and after the information about loyalty programs were provided to respondents. A summary of the differences in retention rates for each type of reward is depicted in Table 3.

In contractual relationships, monetary rewards produce a higher percentage of changes in retention rates as compared to changes in retention rates induced by special treatment rewards (that is, 13.5 versus 10.5 for Mandiri, and 12.6 versus 7.9 for BCA).

In non-contractual relationships, the percentage of changes in retention rates as the result of monetary rewards and special treatment rewards are almost the same (that is, 26.9 versus 28 for Lion Air, and 27.3 versus 27.9 for Merpati).

As can be seen from Table 4, even though the retention rates of Lion Air and Merpati are similar, the change in CE for Merpati (119 per cent) is more than double that of Lion Air (60.55 per cent). As for the monthly bill payment using banks, the change in CE for Mandiri is 91.25 per cent with a retention rate of 52.86 per cent, whereas BCA scored a mere 29.06 per cent increase in CE with a high retention rate of 83.33 per cent. Each company could then compare the changes in CE with the investments required to launch and maintain future loyalty programs. Overall, Hypothesis 4 is supported, as increase in attitudinal loyalty

(higher share of wallet, higher re-purchase probability with regard to a focal firm) is associated with higher CE.

There should be some caution, however, with regard to the correctness of the assumptions behind some financial figures such as discount rates and contribution margin. As the focus of this study is on the CLV and CE calculation as affected by the changes in customer attitudinal loyalty, the author did not perform detailed and accurate calculations for discount rates and contribution margin. Such calculations are reserved for future research, more likely in the finance area.

CONCLUSION

The results of this study show that

- (a) Program utility perception is indeed higher when monetary rewards are offered to bank customers (contractual relationship) instead of to airline customers (non-contractual relationship).
- (b) There are no significant differences in program utility perception between bank customers (contractual relationship) and airline customers (non-contractual relationship) when a loyalty program is designed to offer special treatment rewards.
- (c) Higher program utility perception is associated with higher attitudinal loyalty, thereby increasing CE by 60.55 per cent and 119 per cent, respectively, for two firms in non-contractual relationships, and 91.25 per cent and 29.06 per cent of CE growth, respectively, for two firms in contractual relationships. Each company could then compare the changes in their respective CE with the investments required to launch and maintain the future loyalty programs, as increase in attitudinal loyalty (higher share of wallet, higher re-purchase probability with regard to a focal firm) is associated with higher customer profitability (that is, CLV and CE).

CONTRIBUTIONS

There are at least four important contributions made by this study. The first is that it focuses on

relating marketing actions to customer profitability, as part of making marketing accountable³¹ and managing customers as assets.³² This study is one of the first attempts to link the effects of loyalty program designs with projected customer profitability, as measured by CLV and CE. The research shows how managers could project the financial consequences of a planned loyalty program before its implementation. By varying the types of loyalty program, the notion that loyalty programs are of one static type is discarded, as different drivers of loyalty, as channeled through different types of loyalty program design, may affect customers differently in their perceptions, attitudinal loyalty and CE.

The second contribution is that this research specifically extends the framework of loyalty program typology, as suggested by previous scholars, by classifying the types of loyalty program design into monetary-based and special treatment-based rewards. The new suggested typology of loyalty programs covers almost all forms and designs of programs as practiced by firms in various industries to date, with the objective of making the results of this study generalizable.

The third contribution from this study is methodological. Brand switching or polygamous loyalty²⁵ is operationalized in this research using a stochastic Markov Chain approach.³³ Unlike previous research on customer loyalty, using behavioral loyalty and single brand loyalty, this study aims at accommodating the fact that many customers are attitudinally loyal to a brand, but at the same time do not hold single brand loyalty, especially in a non-contractual setting. Brand switching is incorporated into the model of customer retention, making the model used in this study more accurate and realistic.

The ultimate contribution of this study is in advancing the current marketing literature on loyalty programs, by postulating a new theory of competitive loyalty program design before implementation. This research also tests the theory empirically by showing how different types of loyalty program will eventually impact customer profitability (value of customers to a firm).

Firms in contractual relationships are encouraged to design loyalty programs that contain elements of monetary rewards, as these types of loyalty program design would generate better utility perceptions from their customers. As for the special treatment rewards, firms in both contractual and non-contractual relationships should adopt them. In the latter case, firms have greater leeway to opt for which types of reward they want to incorporate into future loyalty programs. Loyalty programs with special treatment rewards would create insignificant differences (between contractual and non-contractual relationships) in customer utility perception.

LIMITATIONS AND FUTURE RESEARCH

There are several limitations to this study. First, this research uses convenience sampling, which may imply that the result is not generalizable to the whole population. Future research using different respondents and settings is recommended.

Second, this research uses several financial assumptions and figures that require future validation and empirical testing. Determining a firm's beta, cost of capital and contribution margin is a separate intensive research project in and of itself, and is therefore beyond the scope and objectives of this study. Future research, especially in the area of finance, should be conducted using validated financial figures and assumptions.

Third, study 1 of this research uses a field experiment, which naturally contains many exogenous and confounding factors (time constraints of passengers, hot weather, fatigue and so on) that could not be controlled. Future research should attempt to replicate the setting in a laboratory experiment, to assess whether the effects obtained from the field also appear in an isolated environment. Manipulation checks in future research might also be applied in confirming the types of reward (that is, whether monetary rewards indeed trigger prevention emotions and special treatment rewards trigger promotion emotions) and the significance of reward manipulation in customers' perceptions

(that is, 5 per cent sufficient or might be increased to 10 per cent and so on).

Fourth, this study uses text-based stimuli to manipulate the types of program. Stronger stimuli for types of program (using pictures, audio, brochures and so on) are suggested for use in future research. With stronger stimuli, it is expected that different drivers of loyalty program could be more clearly observed. Future researchers may also further explore how varying levels of monetary rewards (that is, 5 per cent versus 10 per cent versus 20 per cent and so on) and special treatment rewards (that is, only dedicated staff versus dedicated staff + personalized service and so on) may exert different impacts on customer perception, loyalty and profitability.

Fifth, the stochastic brand-switching model used in this research assumes that the number of major brands or firms in a focal industry remain the same over the next 3 years. Therefore, future research might want to incorporate the effect of competitive density into the model. The inclusion of the competition effect would make the model more robust and sensitive to changes in the competitive landscape.

Lastly, the GLM procedures used in this research limit conclusions regarding causality. As the tests of the hypotheses were conducted discretely instead of simultaneously, it cannot be concluded that the relationships among variables are necessarily cause and effect, but rather, for example, close associations. Future research may use multivariate structural equation modeling as an analytical tool, in order to check simultaneous relationships among variables, and thus reach more tenable conclusions.

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