# The Effect of Two-Way and Three-Way Interaction of Perceived Rewards on the Relationship Quality

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***Abstract***

*Cognitive Evaluation Theory illustrates how the policy of reward redemptions interact with the type of offered reward (social or economic) to influence the quality of relationship with consumers. This paper aims to examine the interactive effect of perceived reward type, reward policy and customer involvement on the relationship quality between customer and organization. Scope of the study covered relational reward program of a non-paid and accumulated reward program. The hypotheses are empirically tested with a sample of frequent flyer program (FFP) members conducted through online survey (n=475). The data were statistically analyzed using structural equation modeling (SEM) as a first order construct. Results indicate that informational reward policy and high customer involvement have an enhancing effect on all commitment types, regardless of reward type. Commitments are more influenced by social rewards than economic rewards.*

**Keywords:** *Relational Benefits, Frequent Flyer Program, Commitments*

## I. INTRODUCTION

Relational program is tool for an organization to retain customers who are profitable and to build customer loyalty by offering incentives [1]. This concept has been widely implemented in many business areas including airline industry. Initiating by American Airlines with its frequent flyer program (FFP) known as "AAdvantage" in 1981, FFPs become the largest membership of loyalty program with more than 120 million members enrolled in one or more of the 200 FFPs globally [2]. While FFPs have attracted a great deal of attention in the transportation and marketing literatures, there has been no study on the effect of frequent flyer program on the relationship quality generated by the members to the airline. The first and only study on the effect of loyalty reward on the relationship quality of customer to organization (business-to-customer exchanges) has been ever conducted is study by Melancon et al. (2011). The study was carried out in a specific geographic area (USA) and on a specific type of relational program (paid and non-accumulated type of rewards) in the context of a professional sports team and a fictional hotel reward. The effect of loyalty reward onto customer value in the context of non-paid and accumulated type of rewards, such as airline frequent flyers, has never been studied yet. Hence, the non-financial value of FFP's members to the airline related to the loyalty program has not been known yet.

A three-component model of commitment describes customer specific behaviors in contributing to the relationship to organization. Consumers are motivated to maintain a relationship with an organization through three approached of commitments, hereafter, as affective, normative and continuance commitments [3]. The reason customer keeps staying with the organization may be generated because of affective (desire-based) or normative (obligation-based) or continuance (cost-based) commitments. This approach was known as a three-component model of commitments which is referred by organizational behavior literature as the physiological state of customer' relationship with the organization and customer' decision to retain and or exit the membership in the organization. The dominant dimension of the commitment influences the behavior of customer. This Allen & Meyer' three-component model is widely used as the basis for derivation of a consumer commitment construct on relational variables [4].

Cognitive Evaluation Theory (CET) posit that reward type and reward policy interact each other. The interactions result may affect the customer commitment. Social rewards may increase customers' intrinsic commitment, while economic rewards typically increase extrinsic motivation. Controlling reward signals typically weaken intrinsic motivation and increase extrinsic motivation, while informational reward signals typically increase intrinsic motivation. The

interaction between type of rewards and structure of rewards can impact on the strength and nature of motivation of customer [5].

Social benefit awarded in flexible reward structure such that customer feels being special valued customer for the organization, can become more intrinsically motivating than just social benefit only. In contrast, social benefit awarded in controlling reward structure, lessens intrinsic motivation and increases extrinsic motivation for economic rewards [5]. Economic rewards provided in controlling reward policy will reduce extrinsic motivating power in a greater reduction because of having more pressures on autonomy. However, economic reward can become more intrinsically motivating if it is delivered in flexible reward structure that increases feeling of autonomy or competence [6]. High involvement customers are believed responding against reward benefits by having more increasing intrinsic motivations [7]. High-involvement consumers are likely to process information more thoroughly than those of low-involvement [8]. When the controlling dimensions of a reward are more salient than its informational aspects, the reward will weaken intrinsic motivation. On the contrary, when the informational dimensions of a reward are more salient, the reward will enhance intrinsic motivation [9]. Furthermore, diminishing intrinsic motivation may arise from threats, deadlines, directives, pressure evaluation and imposed goals related to the rewards because they conduce toward an external perceived locus of casuality (i.e. diminished autonomy) [5]. Customer will focus on maintaining rewards thus more monetary related reward in exchange for desired behavior. This condition may increase extrinsic motivation which is identified as continuance commitment.

Involvement is defined as an engangement with the product. Involvement is related on personal relevance. Hence, the product is "relevant" to the needs and values of customer and hence interest for product information and commitment to brand choice. Behavioral learning theory suggests that involvement varies depending on the relationship between the individual relevances and benefits or reward offered.

For this reason, this paper is intended to examine the interactive effect of reward type, reward policy and involvement on relationship quality of commitment in terms of loyalty reward program. Scope of the study covers analyzing the nature of a non-paid and accumulated reward program in the context of FFP offered by an airline in Indonesia.

This study becomes unique by accessing direct FFP relationship between the airline and the members to examine the value of FFP members. Research with access to actual FFP data from an airline is still uncommon [2]. This result does contribute to the literature on relational reward programs and suggestion to the industry in practice about how frequent flyer program influences non-financial value of customers to organization.

*A. Framework*

Derived from on the above approaches, the model of interactive effect of reward type, reward policy and involvement is developed as framework shown in Figure 1.

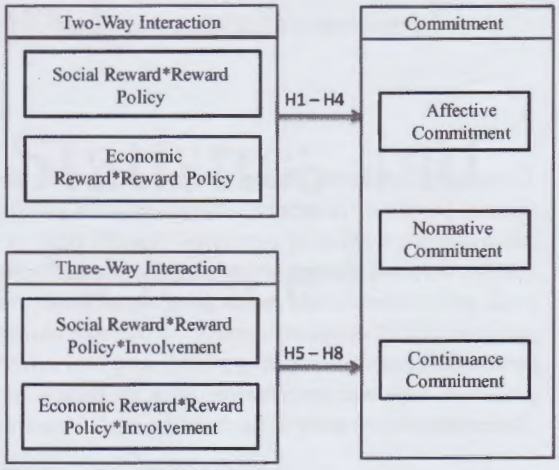


Fig.1. Conceptual Model

## II. METHOD

*A. Research Design*

The impact of interactions between the nature and structure of rewards on the strength of customers' commitment were examined using primary data. The data were collected from the membership of loyalty program through online survey in August 2013. The loyalty program was referred to FFP of a state owned airline in Indonesia, Garuda Indonesia. An email invitation with an embedded URL link to the online survey was sent to the respondent to participate in the study. Respondent who participated on the study was awarded an incentive of 300 free miles.

*B. Sampling Technique*

A stratified random sampling was generated by the system for 4,900 members. A total of 475 usable responses were returned (response rate was 9.69%). This number was deemed of acceptable based on the constraints of structural equation modeling. The ratio of free parameters estimated to sample size lie in the range of 10:1 to 5:1 [10]. Referring to the recommendation, a minimum sample size 110 is required for representing 22 questionnaires. In term of representation of the population variance and desired precision, an optimum sample size (n) of 384 for the population of GFF members at 0.05 of standard error [11]. Hence, the sample size of 475 in the study is denoted as adequate representing the model.

*C. Variables & Measurements*

The variables and scales used in this study are adapted from previous studies with adjustment to

the context of FFP. All indicator is measured on a 6-point Likert scale where 1=strongly disagree, 2=disagree, 3=mildly disagree, 4=mildly agree, 5=agree, 6=strongly agree. All items and scale sources of the study are presented in Table 1.

Table 1. Variables

| No | Latent Variable | Scales | Items |
|---|---|---|---|
| 1 | Social Reward Benefit | Modification of Hennig-Thurau et al. (2002) | 4 |
| 2 | Economic Reward benefit | | 3 |
| 3 | Controlling Reward Policy | Modification of Melancon et al. (2011) | 3 |
| 4 | Involvement | | 3 |
| 5 | Affective Commitment | Meyer & Allen (1991) | 3 |
| 6 | Normative Commitment | | 4 |
| 7 | Continuance Commitment | | 2 |

*D. Hypotheses*

This study accessed the interactionness of rewards and involvement of members in influencing the commitments. The two-way interactions between type and policy of rewards were accessed through H1 – H4, while three-way interactions amongst type and policy of rewards and involvement were accessed through H5 – H8.

1. Two-Way Interaction of Reward Type and Policy on Customer Commitment (H1-H4)

H1: There will be a negative interaction between perceived social rewards and perceived controlling reward policies on affective commitment

H2: There will be a positive interaction between perceived social rewards and perceived controlling reward policies on continuance commitment

H3: There will be a negative interaction between perceived economic rewards and perceived controlling reward policies on affective commitment

H4: There will be a positive interaction between perceived economic rewards and perceived controlling reward policies on continuance commitment

2. Three-Way Interaction between Reward Type, Policy & Involvement (H5-H8)

H5: There is a negative interaction between perceived social rewards and perceived controlling policy on affective commitment with lower involvement than higher involvement customers

H6: There is a positive interaction between perceived social rewards and perceived controlling policy on continuance commitment with lower involvement than higher involvement customers

H7: There is a negative interaction between perceived economic rewards and perceived controlling policy on affective commitment with lower involvement than higher involvement customers

H8: There is a positive interaction between perceived economic rewards and perceived controlling policy on continuance commitment with lower involvement than higher involvement customers

*E. Data Analysis*

The analysis of non-financial value of the members to the company was conducted using two-step approach to SEM [12], measurement model assessment and structural model assessment. LISREL version 8.30 was used in this study.

*F. Pre-Test*

A pretest was conducted on FFP member samples (n=30) to provide validation that the questions were read and understood the same way by the respondents. The validity test was done by Pearson correlation, while the reliability test was conducted by cronbach alpha test. All indicators passed the validity test with results between 0.704-0.975, and reliability tests showed more than 0.7 of cronbach alpha. The results indicated that the validity and reliability of the questionnaire were acceptable. All of the questionnaires were positioned for full release in online survey to the respondent pool.

## III. RESULT & DISCUSSION

*A. Measurement Model Assessment*

The measurement model measured the validities and reliabilities of the observed variables. An observed variable was considered to have acceptable fit as measurement instruments of the latent variables if having construct Reliability (CR) more than 0.7, Variance Extracted (VE) more than 0.5, and a ratio of factor loadings to standard error more than 0.5 [10], [13].

The Confirmatory Factor Analysis (CFA) results showed that the factor loadings for each construct were statistically significant (i.e. ranging from 0.52 to 1.0) with reliabilities ranged from 0.72 to 0.94 and the variances extracted were above the threshold value from 0.56 to 0.83. These results indicate that the measurement model is highly reliable and reasonably valid.

*B. Structural Model Assessment*

The structural equation model specifies the causal relationship among the latent variables and describes the causal effects and the amount of unexplained variances.

The measurement model demonstrated good fit with indices within the designated cutoff (RMSEA=0.075,GFI=0.96,AGFI=0.94,NFI=0.95, NNFI=0.94, CFI=0.96)

Table 2. Result of hypotheses H1-H8 testing

| Hypho-tesis | Hypothe-sized Direction | Standardized Beta Coefficient | t-value |
|---|---|---|---|
| H1 | - | 0.37 | 7.37 |
| H2 | + | 0.45 | 5.91 |
| H3 | - | 0.28 | 2.58 |
| H4 | + | 0.28 | 2.31 |
| H5 | - | 0.35 | 7.80 |
| H6 | + | 0.40 | 5.82 |
| H7 | - | 0.28 | 6.40 |
| H8 | + | 0.27 | 4.07 |

All the interactions indicated positively significant results. On the two-way interaction, reward policy enhanced the relationship between social and economic rewards to all type of commitments to become much stronger. This suggested that FFP members considered social rewards (special privileges, making consumer feel as a special customer, personal recognition, customized treatments and priority reservation) and economic rewards (award ticket, upgrading ticket and other non-air redemption transactions) that are offered in flexible and easy policy or condition would enhance emotional-based, obligation-based, and investment-based bonds of the relational to the airline. The informational reward policy involves the manner in which FFP' members feel of having flexibility and or no limitation in getting the members' benefit, perceived few limitations governed by the airline in acquiring the member's benefit, and easy to redeem the benefit.

This finding implies that social rewards of FFP play important role for the members in engaging and strengthening the relationship with the airline by means of emotional bonds (affective commitment), obligation feelings (normative commitment) and also intention to maintain the current level of benefits (continuance commitment). The study found that social reward on the policy circumstances result in higher level of affective and continuance commitments to the airline than economic rewards. Involved customers appear to influence on the same level of commitments on the three-way interactions. Referring decision making behavior literature, consumers would highly involved on decision making on acquiring product with brand image, high price, high risk, emotional engagement or social norms [14].

Involvement of the FFP members moderated these two-way interactions such that the impact of social and economic reward in a given reward policy produced a stronger relationship between customer and organization. Behavioral learning theory suggests that involvement varies depending on the relationship between the individual relevances and benefits or reward offered. Under high-involvement, the product and not the reward can become the primary reward [15]. High-involvement consumers are likely to process information more thoroughly than those of low-involvement [8]. Essentially, referring to behavioral learning theory the FFP members are characteristic by high-involvement consumers whom more concerned with the congruency between reward and the product being consumed [16]. The FFP members contribute to high involvement on the relationship with the airline by means of prioritizing the associated airline' flight, regularly visiting the FFP website to get new information or check the mileage balance, and using the FFP membership card for any relating transaction.

Hypothesis H1, H2, H5, H7 predicted the interaction will have a negative influence on relationship quality with the customer. The result found that the interactions were positively related to affective commitment. One of the reasons might due to the perceived controlling reward policies of FFP were not considered as tightening and threatening such enhancing feeling of emotional bounding of the relationship. Customers feel their autonomy still preserved. Furthermore, the relationship between members and the associated airline is considered mutual relationship in which no party is highly dependent to the other.

The study implies that controlling reward policy enhanced the influence of social and economic reward on customer commitments. Moreover, involvement is proven to enhance the influence of rewards in term of type and policy on customer commitment.

*C. Managerial Implication*

Results indicate that informational reward policy and high customer involvement have an enhancing effect to customers on all commitment types, regardless of reward type. As a managerial recommendation, the goal would be for airline to govern the reward policy for the easiness and flexibility of FFP members in obtaining and or redeeming the reward. The associated FFP' issues of the difficulty and restriction of the redemption policy could be exempted by means of clear and transparent rules communicated to customer and also offering reward benefits likely preferred by customer.

Using social rewards with flexible reward policy can be particularly helpful in increasing the level of customers' commitment. The impact of social rewards on the two-way and three-way interactions to consumers' commitment is greater than that of economic rewards. Considering that social reward is not costly but producing significant outcomes in strengthening customer commitment,

the company is suggested to focus on the level of social rewards than that of economic rewards.

## IV. CONCLUSION

Economic reward on the policy circumstances result in higher level of affective and continuance commitments to the airline than social rewards. Involved customers appear to influence on the same level of commitments on the three-way interactions.

The study implies that controlling reward policy enhanced the influence of social and economic reward on customer commitments. Moreover, involvement is proven to enhance the influence of rewards in term of type and policy on customer commitment.

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