

**An Empirical Study on the Impact of Penalty
Charges to Customer Repurchase Behaviour –
Airlines Penalty Cases in South Korea**

**A Thesis Submitted for Degree of Doctor of
Philosophy**

by

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Dedication

I dedicate the degree of PhD to my honourable parents, my brother, and my sister for their endless love and constant support that encourage me to achieve my dream.

Declaration

I declare that this thesis is wholly written by me, and in substance, this work has not previously been accepted for any degree, or qualification, to any other university, or institution of academic learning and is not concurrently submitted in candidature for any degree.

The thesis conforms to the British Standard BS 4821: 1990, the 'British Standard Recommendation for the Presentation of the thesis and Dissertations', and follows the Harvard referencing system.

Namkyu Baik

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Working at London Heathrow Airport as the station manager of my company, I could not imagine studying for a PhD as a student in London. In particular, it seemed to be an almost impossible thing to study at Brunel University London rather than a university in Seoul, Korea at the time of beginning. I, however, decided to study the PhD course here at Brunel, and I am approaching the last stage to complete the PhD course at Brunel University. It is surely regarded as one of greatest event to achieve my dream in my life. Every time I have been tempted to give up the course, my principal supervisor and family members have encouraged me to continue and complete it. Eventually, it has led me to reach the final stage of the PhD research course.

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Abstract

Even though penalty policies have been adopted as airlines marketing strategies, little academic literature is found. Popular industries which were investigated for penalty policies include cell phone, credit card, hotel, airlines, bank, college, retail store, restaurant, and day care service companies. Notwithstanding the penalty policies commonly adopted in the airline industry, literature for airlines penalty policies is difficult to find and no literature exists to examine the impact of penalties based upon actual data from airlines. This study is the first research to investigate the impact of the penalty policy of airlines concerning the re-purchase behaviour of penalized customers by the actual data collected in the airline company. In this study, a total of 200 cases of data were collected from the airport authority and an international airline company in South Korea. The collected data were reviewed and categorized by demographic factors of customers including gender, and age; by the relationship with the airlines such as customer membership status of the airline loyalty programme; and by the results of the penalty resolution process such as whether the penalty was waived, the reasons for complaints concerning penalty charges, and the results of customers' repurchase behaviour. To identify the reasons for customer complaints concerning imposing a penalty, all cases of complaints were reviewed and categorized. Attributes of the penalty and concept of perceived justice theory composed of distributive, procedural, and interactional justice were used to understand which factors play a key influential role in customer re-purchase behaviour. According to coding the table, the categorized data were coded and tested by parametric analysis (logistic regression model) in SPSS 20 program and ANOVA. As a result of the research, the customers' loyalty programme membership status has been shown to positively influenced the re-purchase behaviour. The factors concerning penalty amount and severity (related to distribution justice) negatively affect customer re-purchase behaviour. The other factors are indicated as not significant to customer re-purchase behaviour. This study suggests that the valuable idea from the impact of penalty for the re-purchase behaviour should be considered by airline executives who should build more effective penalty policies. Especially, imposing a penalty amount is considered as one of the most significant factors affecting the perception of fairness and customer intention to raise complaints. In addition to the

penalty amount, the airline loyalty programme membership status has to be considered as a key factor to maintain customer loyalty where penalties have been imposed.

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CHAPTER 1 INTRODUCTION

1.1 Introduction

In this chapter, the overall description of this study is given. The study is concerned with the repurchasing behaviour as a result of the penalty conflict resolution process between a customer and the penalty-imposing airline. To investigate the impact of a penalty to a customer repurchase behaviour, the data used in this research includes the customer complaints for imposed penalty cases and resulting repurchase behaviour collected from an airline. The complaints cases are reviewed and categorized by the reasons for the complaints and the resulting repurchase behaviour as a customer response to the penalty imposing airline. In the process of review and categorization of the data, the airline executive in charge of the customer satisfaction department was interviewed. To examine the research, ANOVA (analysis-of-variance) and Logistic Regression Analysis in SPSS20 were performed with the categorized data.

The findings of this study will be of interest to airline executives who wish to improve the balance of their penalty policy between the achievement of its goals and customers' repurchase behaviour. The theoretical background, motivation and research gap, methodology, purpose and contributions of this thesis, and research scope are briefly illustrated in this chapter.

1.2 Background of the Study

In service industries, customer relationship marketing (CRM) is one of the most important strategies for company business. As a positive approach to attract customers, a service company's loyalty programme, such as an airline's frequent flyer programme or membership programme of mobile phone companies are used, whilst, as a negative approach to encourage customer compliance to the original agreement, penalty programmes such as a bank's late payment fee, restaurant no show charge, or airline cancellation charges are used as marketing tools.

Loyalty programmes are focused on encouraging customer loyalty by supporting

benefits from service companies when customers follow or repurchase a service companies' goods. Customer loyalty has been regarded as an important factor in order for service companies to increase revenue, and to increase competitive advantage; in addition customer attraction costs are, thus, reduced (Heskett *et al.*, 1997; Rust *et al.*, 2000; Woodruff, 1997; Reichheld, 1993; Reichheld and Sasser, 1990).

Penalties are a form of punitive action taken by companies on customers (Kim and Smith, 2005). In service companies, the penalty policy is related to a financial type of punishment imposed on customers who fail to comply with the terms of the purchase agreement (Fram, 1997; Fram and McCarthy, 1999; Kim and Smith, 2005). As a strategy of sales in a competitive marketplace, service companies have been seeking ways to maximize profits with pricing strategies which offer a relatively cheap price and restrictive penalty (Kim, 2007).

The organizational behaviour perspective, punishment, has been defined as a treatment by company to reduce the "frequency of undesirable behaviors" (Butterfield *et al.*, 1996). From the view point of service companies, penalty policies are considered as a preferable tool to prevent customers' undesirable behaviour and to obtain compensation for the potential losses when customers break their original purchasing agreements (Bitner, 1995; Kim, 2007). Kim and Smith (2005) argue that the service providers' rights to impose penalties should be considered as a tool for recovery from potential losses caused by customers' behaviour when breaking the terms and conditions of an agreement. When customers fail to comply with the purchase agreement, service providers may be required to monitor the status of their service products more effectively with additional transaction costs or risk. As a compensation for these companies' additional efforts, penalty policies are justifiable. The matter of over-charged penalty amounts should be considered as a compensation for the service company's additional transaction costs.

This point of view can support the justification of company penalty policies. Because of penalty policy role, companies are increasingly adopting penalty policies as marketing tools; simultaneously customer complaints concerning penalties are increasing (Kim

and Smith, 2005). Customers encounter various types of penalties in order for the service providers to cover any losses when customers break their original purchase agreements such as cancellation charges imposed by hotels; no-show charges by restaurants; refund charges and date change fees imposed by airlines; early repayment charges for bank loans, restocking fees imposed by retailers for returned goods, late payment charges for tax levied by governments.

From the view point of customers who receive penalties from service companies, penalty policies are not pleasant aspects, regardless of the reasons for imposing such a penalty. As such penalties are negative in nature, customers may feel them to be a punishment. That is, the penalized customer may have negative feelings towards the penalty-imposing company. Because of the negative nature of the penalty, a penalized customer's behavioural response to the service company is liable to be negative (Kim and Smith, 2005). Customers' negative feelings for penalty policies appear in the form of aggressive actions to recover from the penalty situations. Consequently, they are willing to redress the penalty situation by transferring to another service company or communicating with other people concerning the unpleasant experience (Blodgett *et al.*, 1993). Such resultant behaviour from customers is undesirable to the company's customer relationship marketing strategies.

Customers tend to consider penalties as either fair or unfair transactions (Fram, 1997). Customers' perceived fairness and perceived justice are examined as significant variables affecting complainants' resulting behaviour towards the service company (Blodgett *et al.*, 1993, 1997). Research on the effects of complainants' perceived justice concerning re-patronage intentions and bad communications from the situation of the service recovery process was conducted in the retail industry. The perceived justice can be drawn from customers' perceptions of fairness from the service failure and recovery process (Blodgett *et al.*, 1993). Perceived justice is considered to be a key factor of a customer's re-purchasing behaviour and negative-word-of-mouth communications (Blodgett *et al.*, 1993). Perceived justice has three dimensions: distributive, procedural, and interactional justice (Blodgett *et al.*, 1993,1997;McCarthy and Fram, 2000). Distributive justice concerns the perceived fairness of the equity and equality of the

outcome of the service failure recovery process (Blodgett *et al.*, 1993) and penalty policy (McCarthy and Fram, 2000). Procedural justice is related to the perceived fairness of the procedure and policies in a complaints resolution situation (Blodgett *et al.*, 1993) and penalty-imposing conditions such as flexibility or ability to control the decision (McCarthy & Fram, 2000). Interactional justice is related to the perceived fairness of the service company when handling intercommunications and explanations towards customers (Bies and Shapiro, 1987; Blodgett *et al.*, 1993).

Considering these trends of customers' responses to penalty policies, service companies need to evaluate the balance of penalty results that are the positive side including increased compliance rate of customers, recovery of losses from transactional cost and the negative side such as customers switching behaviour (avoidance of re-purchasing behaviour), and negative word of mouth communications. After evaluating the impact of penalties to customers' repurchase behaviour, penalty policies need to be aligned with the companies' marketing strategies.

1.3 Motivation and Research Gap

1.3.1 Penalty Evaluations and Repurchase Behaviour

In the last decade, the service industry seems to have increased adoption of penalty policies (Fram, 1997) and penalty amounts (Kim and Smith, 2005).

Some media report negative issues concerning customer penalties imposed by service companies. Reasons for complaints concerning customer penalty charges imposed by the airline industry have been illustrated on the BBC One Watchdog Daily Reports (Dec.5, 2012), the WALL Street Journal (July 30, 2009) and USA Today (Feb.10, 2014). The most common reasons for complaints include penalty over-charge, lack of flexibility when imposing a penalty regardless of the customer's unavoidable circumstances, lack of explanation of the penalty regulations applied to discounted tickets beforehand, penalty charges imposed when refunding the ticket cost even though there is enough time to re-sell the ticket before the original customer's travel date, and unreasonable complexity of the refund procedure of the ticket.

“Heavy Penalties – Airline change fees add up for travellers; Ticket penalties hit more than \$500 million the first quarter. Airlines raised domestic change fees last year, some to \$150 a ticket. Among major airlines, only Southwest doesn’t charge ticket penalties. Business travellers pay the bulk of fees for ticket changes and cancellations” (The Wall Street Journal-the middle east dated July 30,2009).

“Graham Cheale booked two flights from Southampton to Paris with Air France, via Lastminute.com in August-one for his colleague Andy Kassel; ...because I always call him Andy. I wrote his name down Andy on the booking form. But they need to have the name the same as what’s written in the passport, which is Andrew. In the morning I had a reminder email and realized there was a mistake. Although this was one small error it resulted in Graham paying £85 to change a ‘y’ to ‘rew’- £40 to Air France and £45 to Lastminute.com” (BBC One - Watchdog Daily–Airline Penalty charges dated on Dec 05, 2012).

Based on the definition of the penalty policy, Kim (2007) argues that the customer’s intention to re-purchase and bad communications are depending on the penalty imposing company intention. Penalties used by service companies can be categorized into two types of “intent” of penalty: defensive and offensive. Defensive penalties include the company’s efforts to protect its profit from economic losses and to encourage customer compliance. Offensive penalties include exploitation and punishment of customers. Depending on the service company’s intention, customer response can be affected by the feeling of fairness of the penalty and the response to the penalty. Penalty with defensive intent is considered fairer than penalty with offensive intent. In this literature, the author argues that a customer’s perceived fairness of penalty influences to customer’s feeling of perceived justice and re-patronage intention. The customer’s perception of fairness of penalty is suggested as an affecting factor to the customers’ behaviour (Fram, 1997; Fram and McCarthy, 1999; McCarthy and Fram, 2000; Fram and Callahan, 2001; Kim, 2007). The customer’s resulting behaviour towards the penalty is affected by the perception of the fairness based on the perceived justice and feelings of dissatisfaction. (Kim and Smith, 2005; Kim, 2007).

The purpose of a penalty is to encourage customers to comply with the original purchasing agreement and to preserve company profits from any losses caused by the customer's breach of agreement (Fram, 1997). Customer penalties are regarded as a way of not only improving revenue (Kim, 2007; Fram, 1997) but also changing customers' undesirable behaviour (Harrison, 2011).

Despite the increasing demand of the evaluations of the impact of penalty policies on customer responses to the penalty-imposing company, little academic literature on service industries is found (Fram, 1997; McCarthy and Fram, 2000; Kim, 2007; Harrison, 2011). More and more service companies are adopting penalty policies as marketing tools notwithstanding the negative nature of the resulting penalty (McCarthy and Fram 1999). At the first stage of research on penalty within the service industry, Fram (1997) raises an issue concerning the demand to understand the customer's perception of fairness for penalty policies adopted in 13 services industries. Since then, only seven academic literatures are found to investigate the penalty impact and relationship between imposing a penalty and the customer's resulting response to the service company. Fram (1997) defines the customer penalty as the imposition of an additional fee to a customer who fails to comply with the original purchase agreement. In addition to the definition of penalty, the author illustrates the nature of penalty that influences the customer's behaviour negatively. Fram and McCarthy (1999) conducted a research based on customer response to a questionnaire to identify penalties regarding financial transactions (37%), cancellations or changed reservations (16%), and relating to merchandise (9%), and to illustrate outcomes as positive, neutral, or negative types of customer reactions. In this research, customer perception of fairness of penalty emerged as a significant factor to customers' resulting response to penalty. McCarthy and Fram (2000) argue that the impact of a penalty to enhance customer compliance is limited and that customer loyalty decreases. In the research, however, the authors confess to having difficulty with data collection from service companies for the resulting customers' behaviour because the executives of service companies refused to talk about penalty policies as a public agenda, hence actual data of penalty conflicts could not be supported. Nonetheless, researchers have tried to identify the impact of penalty to

customers' response based on the data collected from survey methods. Fram and Callahan (2001) conducted a telephone survey to identify types of customer reactions to penalty and the impact of penalty to service companies in 13 industries including banks, airlines, retail and hotels. Using 66 different scenarios, the authors investigated customers' perceptions of fairness for penalty policy and the penalty amount respectively. The authors identified that the banking, airline and retail industries ranked as the top three industries which commonly adopted penalty policies. Banking penalties were regarded as an "unavoidable cost" not a penalty and airline penalties were considered as a reasonable policy and reasonable penalty amount because the penalty is a common practice in airline industry. However, not every customer accepted the airlines' penalties (Fram and Callahan, 2001). Most customers penalized by airlines used the penalizing airlines because there were no alternatives. Concerning retail penalties, the authors identified that customers were willing to accept the penalties (Fram and Callahan, 2001). To identify the impact of penalty to customer's response to service company, Kim and Smith (2005) conducted research to identify the influences of perceived justice to customer satisfaction and dissatisfaction that lead to the type of customer response. The authors argue that customers who are highly dissatisfied with the penalty tend to terminate business with the penalizing company (Kim and Smith, 2005). In the context of customer reaction to penalty, the perceived intention of a company's penalty policies is considered to play a key role in a customer's decision whether to accept the penalty policy (Kim, 2007). When companies use penalty policies in a defensive way to prevent potential losses from customers' undesirable behaviour, customers tend to cooperate (Kim, 2007). Customers repurchase behaviours depend upon the customers' positive emotions toward the companies' penalty intentions. Generally, imposing penalties on customers is caused by customer mistake (Harrison, 2011). To identify customer reactions to penalties, Harrison (2011) introduces the reasons for customer mistake and the attribution, entitlement theories in the research for cell phone industry and credit card industry. Depending on the attribution of responsibility for the mistake, customers' reactions to the imposing penalty differ. When customers feel the mistake is caused by the company, they may request a penalty waiver. When the companies rejects the request the customers are likely to switch to alternative

companies (Harrison, 2011). Customer feeling of gratitude has a stronger effect on customer behaviour than perceived fairness (Xia and Kukar-Kinney, 2013). In the penalty resolution process, customer feeling of gratitude is drawn from the company's response of penalty waiver to the customer. Xia and Kukar-Kinney (2013) argue that flexible treatment of penalty policies on selective loyal customers would enhance repatronage intentions and loyalty. Especially, after a penalty resolution process, how the customers' repurchase behaviour is affected by company's response for the penalty waiver request of customers.

As a summary of previous literature to identify the impact of penalty on customer response to the penalty-imposing service companies, attributes of penalty and attribution of penalty, feeling of entitlement, feeling of gratitude as a result of penalty resolution, perceptions of fairness, and the perception of justice including distributive, procedural, interactional justice were examined by researchers (Fram, 1997; Fram and McCarthy, 1999; McCarthy and Fram, 2000; Fram and Callahan, 2001; Harrison, 2011; Xia and Kukar-Kinney, 2013).

Among the major service industries of banking, airlines, and retail in which penalty policies are in common use, the retail industry has been well investigated, whereas airline penalty policies have not been fully investigated. Harrison (2011) has tried to examine airline penalties in line with the cell-phone and credit card industries but excluded airline penalties from the research subject because of lack of realism of the manipulated scenario. Fram (1997), Fram & McCarthy (1999, 2000), Fram & Callahan (2001) argue that airline penalties are regarded as "a resigned bitterness" as there is alternative choice. Recently, however, the entrance of low cost carriers to current travel destinations has given customers the opportunity of using alternative airlines if they so wish. Although, the airline industry is the earliest adopter of the loyalty programme, known as the "frequent flyer" programme (Bejou and Palmer, 1998), as a role of burden of switching cost and penalty policies as well (Fram and Callahan, 2001). Lack of research to empirically test the relationship between customer complaints towards penalties and customer repurchase behaviour in the airline industry is the reason for the current study, even though over 400 complaints concerning refund/cancellation penalty

cases were collected over the last six years.

1.3.2 Research Gap

Most previous literature on penalty policies argues that the nature of the penalty is negative to customers' feelings, word or mouth behaviour, and future purchase intentions. Customer-perceived fairness of penalty and a customer's feelings of gratitude following the waiver of a penalty are considered as moderating factors which improve the customer's resulting behaviour (McCarthy and Fram, 2000; Xia & Kukar-Kinney, 2013). In cases of penalty due to customer negligence, some customers accept the imposed penalty because they feel that the penalty is fair (Fram, 1997; Harrison, 2011). Previous literature argues that the purpose of a penalty policy is to encourage customer compliance to a purchasing agreement. This study focuses on the resulting behaviour of penalty conflict with penalty-imposing airlines. In particular, as a resulting behaviour, customer repurchase behaviour which is the most important aspect to be considered by airlines executives is evaluated. A research gap of this study is that this study examined the role of the reasons of complaints for penalty to penalized customer repurchase behaviour. Using justice theory, composed of three dimensions - distributive, procedural, interactional justice - the reasons for complaints concerning penalties were converted as applicable variables to each dimension respectively. As results of the process of penalty conflict with airlines, the customer feeling of fairness and repurchase behaviour can be determined. In addition, customer demographic factors, status of membership programme, and acceptance of a request for penalty waiver by airlines are considered as moderating factors influencing customers' resulting behaviour.

In this thesis, the following research questions are

- How many penalized customers do not buy the airlines ticket again?
- What is the most affecting variable of penalty causing customer complaints?
- As a dimension of justice theory, which is the key role of customer complaints?

- As moderating factors, which is the most influencing factor to customer repurchase behaviour?
- Is there any relationship between the penalty policy and customer repurchase behaviour?

1.4 Gap Purpose and Contributions of Thesis

1.4.1 Purpose of Thesis

This study aims to fill the research gap identified from the previous sections. At first, because of lack of literature concerning airline penalty policies and customer response intention, only one piece of literature was found. In the case of airline penalties, the previous literature argues that customers who responded to the research were becoming accepting of the policy as an unavoidable cost (Fram and Callahan, 2001). Based on customer perception of airline penalties and lack of available alternative airlines, the authors argue that customers are willing to remain with the penalty-imposing airlines. As illustrated in the previous section, the recent trend of the airlines market is becoming severely competitive with emergence of new airlines, and low cost carriers (LCCs). From the perspective of customers, there are many alternative airlines, instead of penalty-imposing airlines, that are available to transfer to if they so wish.

By examining the hypotheses suggested by previous research, this study suggests ideas for executives of airlines in order for them to understand the reasons for complaints concerning penalties and how they affect customer repurchase behaviour whilst also building a balanced penalty policy within the company's loyalty programme to maintain current customers. In addition, this study argues the importance of airlines' loyalty programmes in order to maintain re-patronage behaviour and customers react to the penalty sensitively. The effect of a flexible penalty policy is also investigated. The effect of loyalty programmes and the switching cost to penalized customers' repurchase behaviour are discussed as mediating factors. This study examines the impact of penalty on penalized customers and their reactions through the repeated purchasing attitude following penalty conflict with the company.

1.4.2 Contributions of Thesis

The major contribution of this study is to develop a comprehensive theoretical framework that examines the causal relationship between reasons for customer complaints concerning penalties and penalized customer repurchase behaviour from the perspective of justice theory.

Firstly, to the best of my knowledge, this is the first effort to develop a theoretical framework using justice theory for the analysis of the relationship between reasons for complaints concerning penalty and customer repurchase behaviour. Previous literature has examined the effect of the penalty amount, penalty flexibility, explanations of the penalty resulting from customer responses to the penalizing company and argues the importance of the feeling perceived fairness to customer responses (Fram and McCarthy, 1999; McCarthy and Fram, 2000; Fram and Callahan, 2001; Kim and Smith, 2005; McGovern and Moon, 2007). In addition, in this study, integrated factors of penalty and customer demographic factors, customer membership status, and feelings of gratitude following penalty waiver are examined to identify the impact of penalty on customer repurchase behaviour. The penalty amount, flexibility of penalty, and explanations are examined as three dimensions of justice (Deutsch, 1985; Adams, 1965; Folger & Greenberg, 1985; Fram & Callahan, 2001; Wang, 2011).

Secondly, this is the first study using an actual dataset collected from an international airline and an international airport authority to verify the factors of complaints affecting customer repurchase behaviour. This study performs the logistic regression analysis IBM SPSS20 and the analysis of variance (ANOVA) to examine the relationship between integrated factors of penalty and repurchase behaviour. This study reveals that the penalty flexibility and penalty amount are the factors most influencing customer repurchase behaviour. This study finds that customer membership status plays a key as an affecting factor concerning customer repurchase behaviour.

Consequently, the impact of penalty to repurchase behaviour is affected by the customer

membership status which is represented by the accumulated usage history of the airline. The reasons for complaints concerning penalty play a limited role in the impact variables. This study extends the research area of previous research by using actual data to identify influences of potential variables to customers' re-purchasing behaviour concerning penalty policies.

1.5 Research Scope

To identify the causal relationship between penalized customers' complaints and their resulting attitude, such as customers' re-purchase behaviour after penalty conflict, this study is conducted based on the actual data (241 cases) from the airport authorities and a national airline company in South Korea. The collected data were concerning the penalized customers' cases who sought redress from the penalty situation imposed by airlines. This study focuses on the customers' resulting behaviour with regard to re-patronage of the airline that imposed the penalty on the customer and conducted the study based on the data from the frontline of the airline and airport authority. To examine customer behaviour after receiving penalty, this study adopts several theories. At the stage of imposing the penalty, the customer evaluates whether the penalty is fair. In this study, the philosophy of perceived fairness of penalty is one of the key factors affecting customer loyalty. To determine the fairness of the penalty, the attributes of the penalty, attributions of responsibility, entitlement, and distributive justice towards the penalty amount can be considered. Customers are likely to ask the airline to waive the penalty if they think it is unfair, whilst customers are willing to accept to receive penalty if they think the penalty is fair. After that, there is a penalty resolution process between the customer and airline. As a result, some customers receive a penalty waiver, whilst others do not. In this process, the procedural justice and interactional justice can be adopted to mediate the conflict. The customer who receives a penalty waiver will be encouraged and the feeling of gratitude leads to airline loyalty (Xia & Kukar-Kinney, 2013). Conversely, customers who are rejected may look for another airline as an alternative. At this stage, customers can consider the cost/benefit theory (switching to another airline). If more benefits are given to customers from an alternative airline, they will transfer. If not, they will remain.

To evaluate customer response to penalty based on feelings of perceived fairness, justice theory is adopted as a tool of evaluation for the customer feeling of fairness of imposing penalty and penalty resolution process. Distributive justice is defined as justice for “the concept of equity and equality” (McCarthy and Fram, 2000). Procedural justice relates to the fairness of penalty flexibility and refund procedure/delayed refund. Interactional justice can be explained by the feeling of fairness in the interaction between airlines and customers; if an explanation for the penalty is given beforehand, or there is special treatment for specific customers who think that they have a right to special handling. The impact of the penalty amount, penalty/refund conditions, flexibility, and penalty due to the airline’s mistake towards customer loyalty are considered as variables.

1.6 Organization of Thesis

This thesis is organized as following order:

Chapter 1 Introduction

In this first section, a brief explanation of the thesis is illustrated including the background to the study, motivation and research gap, gap purpose and contributions of the thesis, and research scope.

Chapter 2 Literature Review

To understand the trend of current research related to customer penalty policy, and to identify the research gap, the researcher reviews a variety of literature concerning the philosophy of penalty, customer penalty policy imposed by a company, customers’ feelings of fairness, concept of justice theory contributing to fairness, attribution theory in the penalty resolution process, the potential effect of feelings of gratitude to customer loyalty and repurchase behaviour, the effect of loyalty programmes and switching cost to customer’s intention to transfer to other airlines following the penalty resolution process. As a result of the literature review, the research direction and research questions are presented.

Chapter 3 Theoretical Framework and Hypothesis

In this chapter, the theoretical framework and hypothesis are presented. Variables that may influence customer repurchase behaviour are considered as independent variables or moderating factors to the relationship between independent variable and dependent variable. Two deductive research frameworks are illustrated. In addition, the hypotheses of this thesis are presented.

Chapter 4 Research Methodology

In this chapter, the methodology of the research is illustrated. The philosophy of methodology, introducing the positivism model, Supported Vector Analysis Model, data collection process and the characteristics of collected data will be illustrated.

Chapter 5 Parametric Analysis

In chapter 5, the methods of Logistic Regression Model (LRM) and Analysis of Variance (ANOVA) are performed as a parametric analysis for the collected data. First, the concept of Logistic Regression is explained and, subsequently, the results of logistic regression model analysis are illustrated.

Chapter 6 Non-Parametric Analysis

In this chapter, as the non-parametric prediction model, the machine learning approach is illustrated and the results of analysis by this model are discussed. In addition, the prediction model and validation are demonstrated.

Chapter 7 Discussions

The findings of this study are discussed in this chapter. As the results of two approaches of deductive analysis, the empirically analysed results are compared with the statement of current literature for the affecting variables to customer loyalty or repurchase behaviour. Further, managerial implication is suggested.

Chapter 8 Conclusions

In this chapter, the research summary and limitations are illustrated. And, the author suggests a future research direction and further research regarding customer penalty policy in the services industry.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

As reviewed in the previous literature, some research agenda are emerging evaluating of penalty policy adoption in real situations. The impact of customer penalty on customer repurchase behaviour is illustrated as the imposing penalty, customer complaints having received the imposing penalty, the penalty resolution process, and the customer's evaluation concerning the response made by the company over the resolution process, and the customer's subsequent reaction to the company. To examine the impact of penalty on customer repurchase behaviour, some emerging issues which were discussed in the current literature concerning customer penalty are required to review the relationship between them. Customer perceived fairness is the key factor influencing customer repurchase behaviour (McCarthy and Fram, 2000). The feeling of fairness is derived from the feeling of justice of following the penalty (McCarthy and Fram, 2000). In this regard, perceived fairness and justice theory including three dimensions of justice - distributive, procedural and interactional are discussed. Following discussion of perceived fairness and justice, customer loyalty, airlines loyalty programs, the relationship between customer loyalty and switching cost, penalty waiver and feeling of gratitude, and customer penalty policy in airlines are illustrated.

2.2 Penalty Policy in Non-service Industries

Penalty scheme has been looked upon as the corrective measures in order to reduce or eliminate any costly undesirable results from violation of regulations (Landsberger *et al.*, 1982). As a regulatory measure, the efficient structure of a penalty scheme has been focused upon economists. In practice, a penalty policy is used to impose to the violation of income tax evasion, pollution of the environment, violation of antitrust laws, etc. Landsberger *et al.* (1982) suggest using a dynamic incentive scheme as an encouraging externality compliance with laws rather than a penalty. Concerning safety performance in India construction projects, incentives and penalty schemes have been studied by Hasan and Jha (2013). In this literature, the authors examine the impact of incentives

and penalty scheme to safety performance in the construction industry. As a result, the authors argued that the implementation of incentives and penalty schemes can improve safety performance. The authors suggest that the impact of such schemes on safety performance in the construction industry show improved results (Hasan & Jha, 2013; Aron & Olivella, 1994). In this study, incentives and penalty can be converted as loyalty program and penalty program respectively.

2.3 Customer Penalty Policies in Service Industries

In the financial industry, customer penalty, such as late payment penalty has been regarded as a common regulation for many years; furthermore, customer penalties are now more widely accepted in services industries including the car rental business, railroads, airlines, banks, restaurants for cancellations charges (Fram, 1997), etc. Service firms may impose penalties on customers when revenue loss occurs as result of the customer's dereliction of purchase obligation. In return, service firms have a negative reputation for imposing penalty as a tool for pursuing considerable amounts of profit and for improving competition power by using relatively low prices with penalty conditions. (Kim and Smith 2005). Penalty policies, however, are reasonable and acceptable if the penalty compensates the firms for loss caused by a customer's breach of obligation (Fram, 1997). Many of the prior research argues the negative nature of customer penalty such as negative impact to customer loyalty, re-patronage intention, and word of mouth communications, whilst service firms are increasingly introducing a variety of penalty policies to their business (McCarthy and Fram, 2000).

Fram (1997) suggests some ideas to service firms who want to keep both customer loyalty and their penalty policies by analysis of penalty samples. The study was conducted using qualitative method (collected penalty examples) from 13 service industries including airlines, automobiles, banks, car rentals, child daycare, cellular phones, credit and debit cards, cruisers, hotels, restaurants, and retail stores. The author also defines the customer penalty as a fee imposed on customers who fail to keep the terms and conditions of their purchase agreement. As a result, the author argues that service firms have to understand that the nature of the penalty has a negative impact on

customer behaviour. In addition to the understanding of the nature of the penalty, the author found that factors concerning penalty amount, competitor penalty policy, customer reaction, customer relationship management (CRM) and the service firm's potential profit from penalties should be considered by the service firms.

Fram and McCarthy (1999) investigated the impact of penalty on customer buying behaviour based on the same service industry area as their previous study, published in 1997. The research was conducted using a qualitative (published articles) and quantitative method (714 responses). The authors found that customer acceptance of penalty when the penalty was imposed as a result of the customer's negligence in not completing the terms of the purchasing agreement and the customer's feeling of perceived fairness can be an important factor in their resultant behaviour. The authors suggest that taking out an insurance policy can be considered as a moderating factor to cover penalty charge.

McCarthy and Fram (2000) evaluated the potential impact of penalty on customer compliance, loyalty, and negative word of mouth communications. In addition, the authors identify the factors influencing the perceived fairness of penalty which was suggested as a key factor by previous researches. The authors collected data by a survey-based method (questionnaire mailing) and analysed the data by ANOVA. In the data collecting process, the authors failed to obtain any information from service firms for actual data because the executives of such firms do not want to discuss the penalty policy used. As a result, the authors argue that the basic purpose of penalty policy plays a limited role in encouraging customer compliance towards purchase agreements. Therefore, most customers seemed unwilling to return to the service firm; meanwhile, the impact of penalty on negative word of mouth is considerable. In this regard, the service firm should evaluate the balance of the two methods as a benefit to the company and a negative impact on the customer behaviour. The authors argue that the customer feelings of perceived fairness concerning imposed penalty are considered as an important variable to customer behaviour. The authors suggested that the three dimensions of justice theory could be adopted in future research to evaluate the feeling of perceived fairness of penalty as well.

Lastly, Fram and Callahan (2001) conducted a research to identify the types of customer reaction to penalty and the impact of penalty to the service industries by case study. The authors examined 66 cases related to service industries. The cases were derived from a telephone survey to 44 randomly selected participants in New York. In this literature, the authors investigated the customers' intentions concerning the penalty policy and a penalty amounts, respectively. The results of the research showed that 38 of 66 cases considered the penalty policy and penalty amount to be unfair. Among the remaining, nine of the 66 considered only the penalty policy to be fair, and the others considered that the penalty policy and penalty amount are fair. Interestingly, for the airline industry, only 14 cases were collected and few customers received a penalty waiver from the airline. The authors argue that in spite of their difficulty obtaining a penalty waiver from the airline, the customers bought tickets again because of the absence of an alternative choice. In addition, the authors suggest that flexibility in the penalty policy can be considered as an important factor to build customer relationships. Fram and Callahan (2001) argue that approximately half of penalty-imposed customers raised complaints to reverse the penalty. To identify the relationship between customer penalty and penalized customer response, some literature was reviewed as follows.

Fram (1997) examining the role of penalty for encouragement of customer compliance, use the case of a restaurant's penalty policy. Penalty was imposed on the no-show customers who booked seats on a specific date, to examine if the no-show rate fell the following year. The results indicate the impact of the penalty policy imposed on the no-show customers. Subsequently, the no-show customers and no-show rate was significantly improved. The no-show rate reached as high as 65% before imposition of the penalty policy; after adoption of the penalty policy, however, only two small parties were recorded as no-shows. The restaurant owner saved 2,000 dollars in potential no-show losses by applying the penalty policy.

McCarthy and Fram (2000), further, argue that the impact of penalty on customer compliance was slightly higher than the mid-point scale as a result of conducting a survey on 13 scenarios within service industries. The result of the impact of penalty plays a limited role of effective factor to encourage customers to comply with the

agreement. Imposing penalty to encourage customer compliance with an original purchase agreement remains open when evaluating the balance of negativity towards re-purchasing.

Kim and Smith (2005) examine customer response to penalty by adopting concepts of “attribution theory”, “social justice theory”, and “expectancy disconfirmation” using a survey-based method, collecting 201 effective pieces of data which asked participants to describe their experiences of penalties. Kim and Smith (2005) argued that severity of penalty influences distributive justice, disconfirmation, and negative emotions. The role of explanation played as a positive factor to interactional justice. While the concept of flexibility has significant influence on the perception of the three justice dimensions and disconfirmation, no significance is found regarding negative emotions. Controllability of penalty affects the three types of justice positively. Stability influences interactional justice and disconfirmation positively. “Locus of causality” does not play an important role as a variable in the research (Kim and Smith, 2005). Perceptions of justice are important determinants to customer dissatisfaction. Emotion plays an important role in customer judgement of dissatisfaction. While disconfirmation has not important role to play.

2.4 Perceived Fairness and Penalty Policy

A strict penalty policy that has includes no exceptions for unavoidable situations, unfortunate or unforeseen family problems is not accepted as a reasonable or fair policy by customers. From the perspective, service companies are willing to follow the legal approach to customer penalty; however, customers receiving imposed penalty for unavoidable situations feel they are unfair (Fram, 1997). From this point of view, the concept of fairness is considered as a predictor variable to the response of penalty-imposed customers. In addition, Kim and Smith (2005) argue that customer’s perception of unfair penalty has been identified as a key factor influencing customer response. Berry (1995) and McCarthy and Fram (2000) argue that feelings of perceived fairness affects customer responses to penalty. If customers feel that a penalty is fair, they are likely to exhibit reduced negative reactions towards its imposition. Service companies

should consider the case that customers may feel the penalty is not justifiable. Berry (1995) argues that service companies have to find a way to build positive relationship with customers based on higher and more reasonable standard rather than legality. It is considered that the customer's feeling of fairness can be a key factor of influence these negative consequences occurrence. The principle of penalty policy should be considered the legality as well as the perceived fairness.

2.5 Perceived Fairness and Justice Theory

The philosophy of justice was integrated by much discussion and debate through history (Cohen, 1987). In recent decades, academic research of social science has been focused on the social movement occurring in the 1960s against injustice from government policy (Cohen, 1987). Folger (1987) argues the perception of fairness of treatment between the employer and employee in an organization. The matter of fair treatment is one of the most important aspects concerning loyal and dedicated employees. To clarify the meaning of fair or unfair treatment, the philosophy of justice, especially distributive justice should be considered. (Folger, 1986a, 1987). Distributive justice concerns the perceived fairness of amounts received (Adams, 1965). In the conflicts resolution process of legal disputes, the perception of fairness of the procedure is considered as a key factor for making decisions (Folger and Greenberg, 1985).

Especially, in the research of service failure and recovery, justice theory has been adopted as one of the main theories for research frameworks (Wang *et al.*, 2011) and applied to identify customer complaint behaviour (Bitner *et al.*, 1990; Goodwin and Ross, 1989; Tax *et al.*, 1998). Justice of service is illustrated as the level of a customer's feelings of perceived fairness concerning service failures and the recovery process treated by service provider using three dimensions of distributive, procedural, and interactional justice (Ha & Jang, 2009; McColl-Kennedy & Sparks, 2003). As a means of evaluation of previous research, we can adopt justice theory to develop and implement the penalty policy framework and to assess customer perceived fairness (McCarthy and Fram, 2000). In marketing literature, social psychology of justice was adopted as a base of evaluation for the disputes or customer complaints resolution of the

company (McCarthy and Fram, 2000). Justice theory in the marketing arena is also considered using the three theories. “Distributive justice deals with the allocation of benefits and costs in a transaction” (Deutsch, 1985). “Procedural justice is related to the perceived fairness of the process of determining the justice and interactional justice is related to the justice of the communications between company and customer and exchanges of the parties” (McCarthy and Fram, 2000). McCarthy and Fram (2000) suggest justice theory to develop and implement penalty policies tentatively. They have introduced definitions and possible questions of the three justice theories for penalty policies.

2.5.1 Penalty Amount and Distributive Justice

Several types of justice have been proposed and evaluated in academic research: “distributive justice” (Adams, 1965), “procedural justice” (Thibaut and Walker, 1975), and “interactional justice” (Bies and Moag, 1986). Distributive justice has been defined as the perception of fairness of outcome (Adams, 1965). Assessment of distributive justice can be performed by means of concept of evaluation, “equality”, “equity” or “need” (Deutsch, 1975). Distributive justice is related to “the fairness of resource distribution as well as transaction outcomes” (Deutsch, 1975). “It is what customers receive as an outcome of recovery efforts” (Ha and Jang, 2009). In this research, equity and quality will be investigated as the key constituent factors of distributive justice. In case of equity matters, the amount of penalty will be considered as a predictor variable in this research. Concerning terms of equality, without exception, all customers who fail to complete the purchase agreement are penalized the same amount regardless of the original purchase amount.

2.5.2 Refund Procedure and Procedural Justice

Procedural justice (Thibaut & Walker, 1975) is related to the fairness of the process of penalty or refund procedure. Novelli *et al.* (1995) argue procedural justice as “the perceived fairness of the methods or procedures used to determine who gets what outcomes, not the fairness of the outcomes themselves”. The process is regarded as fair when there is “adherence to fair criteria” (Leventhal, 1980) or when “the participants

have process control through voice or influence” (Folger, 1977; Lind and Tyler, 1988). Procedural justice is related to the procedures to gain results from an exchange (Lind and Tyler, 1988; Thibaut and Walker, 1975). It talks about perceived fairness of “the procedures and criteria used to arrive at the recovery outcomes” (Blodgett *et al.*, 1997). Chebat and Slusarczyk (2005) argue that “procedural justice includes formal policies and structural considerations related to service recovery such as refund policies, time to get the refund, and responsiveness and flexibility during the recovery process”. In the penalty and fairness constructs, procedural justice may be composed from the decision control of the customer being able to choose and the flexibility of the penalty policy (Fram and McCarthy, 1999). As the meaning of decision control, customers penalized can choose from options offered by the firm, such as payment method, like mileage deductions, or monetary payment. Furthermore, flexibility of the penalty policy is considered as a factor that can influence the degree of fairness perceived. Flexibility of the penalty policy means that, in some cases, if a customer is faced with an unavoidable situation such as an accident or illness, resulting in an inability to keep to the original purchase agreement the firm should consider a penalty waiver (Fram and McCarthy, 1999).

2.5.3 Explanations and Interactional Justice

Interactional justice (Bies & Moag, 1986) is illustrated by Novelli *et al.* (1995, p. 27) as the “perceived fairness of the interpersonal intervention received in a decision process”. Wetsch (2006) argues that interactional justice, rather than procedural justice, is more appropriate when explaining the responses of each customer to the penalty-imposing service company. Interactional justice deals with treatment of the service failure, along with exchanges between the service company and customer (Blodgett, Granbois, & Walters, 1993; McColl-Kennedy & Sparks, 2003). This may include “interpersonal sensitivity, treating people with dignity and respect, and providing appropriate explanations for the service failure in the context of service recovery” (Ha & Jang, 2009). Based on previous research concerning interactional justice, Fram (1997) argues that interactional justice on penalty and perceived fairness are related to concept of explanation. Explanation of interactional justice can define the communication between

the firm and customer regarding the need for the penalty and the regulations of the penalty policy, in order that the customer accept the penalty terms and conditions when they breach an agreement.

Even though these three dimensions of justice are relating with the different concerns, previous literature suggest that the three justices are not reciprocally exclusive but interrelated (Folger, 1984; Greenberg & McCarty, 1990).

2.6 Customer Compliance and Penalty Policy

The penalty policy may have a positive effect, though not much, on the customer's compliance with the purchase agreement, whilst having a negative effect, on the customer's emotional response, causing conflict, negative word of mouth, and a reduction in patronage (McCarthy and Fram, 2000). Therefore, in this study, we have to consider the balance of the two effects of penalty policy through investigation and then recommend some desirable practical suggestions to executive managers at the frontline of service engagement.

2.7 Customer Mistakes and Penalty Policy

Harrison (2010) examines the relationship between customer penalty occurring as a consequence of customer mistakes and customer response to the service company. In thesis "*Exploring penalties in services following a customer mistake, 2010*", Harrison (2010) argues that the resulting impact of the penalty caused by customer mistake depends upon the customer's perceived fairness of the penalty. In particular, to investigate the customer's reaction to the penalty, the author set up some situational hypotheses, penalties, penalty waivers, and penalty waiver refusals. From these situations, Harrison (2010) argues the major factors to determine the fairness of penalty include the attribution of responsibility, entitlement theory, and inter-personal rejection theory. Attribution of responsibility is defined as the degree of assigned responsibility of the customer or service provider when a mistake occurs.

Entitlement theory (Butori, 2010) is explained as loyal and long-term customers being

entitled to special treatment from service companies. As the third theory adopted by the author, interpersonal rejection theory can explain the emotional status when the penalty waiver request is rejected by the service company. This research was examined by survey and manipulation of scenario-based questionnaire for the cell phone and credit card service industries to the national consumer panel. The findings of this research highlight the gender effects such the stronger emotional reactions men exhibit in comparison to women, like anger, interpersonal rejection, and negative word of mouth.

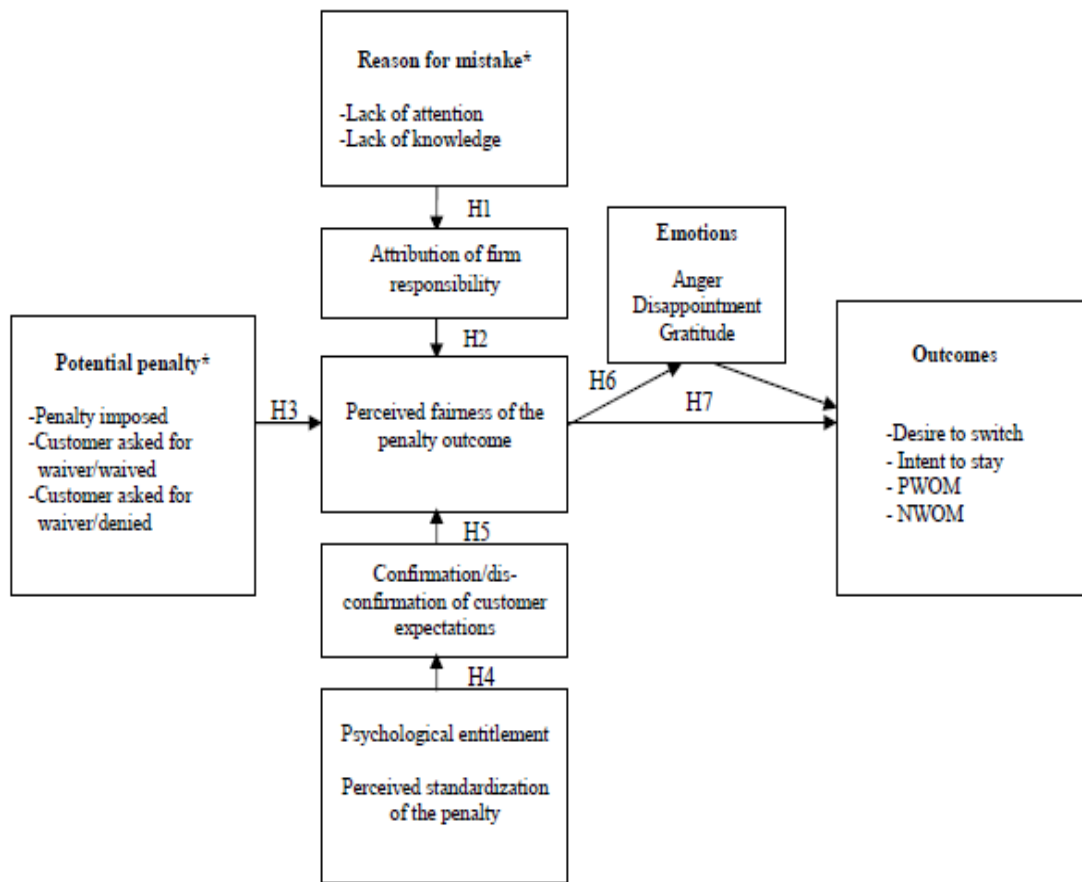


Figure 1. Research Model on Customer Mistakes and Penalties (Harrison, 2010)

2.8 Feelings of Gratitude and Repurchase Behaviour

“Gratitude is an emotion arising when an individual (beneficiary) perceives that another person (benefactor) or source (e.g., God, luck, or fate) has intentionally acted to improve the beneficiary’s well-being” (Fredrickson, 2004, Xia and Kukar-Kinney, 2013).

Feelings of gratitude is defined as “a feeling of thankfulness or appreciation, as for gifts or favors” (Collins English Dictionary 1991, 1994, 1998, 2000, 2003). During the complaint resolution process, Xia and Kukar-Kinney (2013) argue that a feeling of gratitude is induced from the interaction between company and customer if the company allows the customer a waiver as part of the company’s flexible handling process when considering the customer’s non-compliance with the original purchase agreement. Most previous literature for penalty situations, show that the customer’s feeling of perceived fairness is a significant factor in determining acceptance of the penalty. In line with concept of fairness, the feeling of gratitude also arises as a serious predictor variable of the customer’s response. When penalties are imposed on customers who fail to comply with the original purchase agreement, some customers will ask for the company to waive the imposing penalty for a variety of reasons. In such cases, if the company waives the penalty, forgiving the customer, or treating customers in flexible way, it induces feelings of gratitude, minimizing negative emotions. According to the research, feeling of gratitude has been considered a significant predictor affecting customer repurchase behaviour positively (Xia and Kinney, 2013). As a response to penalty waiver, customer repurchase behaviour might induce them to buy the airline’s ticket again in the future. Xia and Kukar-Kinney (2013) argue that customers who penalty waiver requests rejected feel the interpersonal rejection experience, desire to switch, and engage in negative word of mouth communication. Further to the above, the authors introduce two other mediations, feeling of gratitude and confirmation/disconfirmation. The relationship between the feeling of inter-personal rejection and resulting customer behaviour are partially mediated by feelings of gratitude from penalty waivers given by service companies. The relationship between the perceived standardization of the penalty and the results for the service companies is fully mediated by confirmation / disconfirmation of customer expectations. Lastly, perceived standardization of the penalty plays the role of moderation among the feeling of disappointment, the desire to switch and positive word of mouth communications.

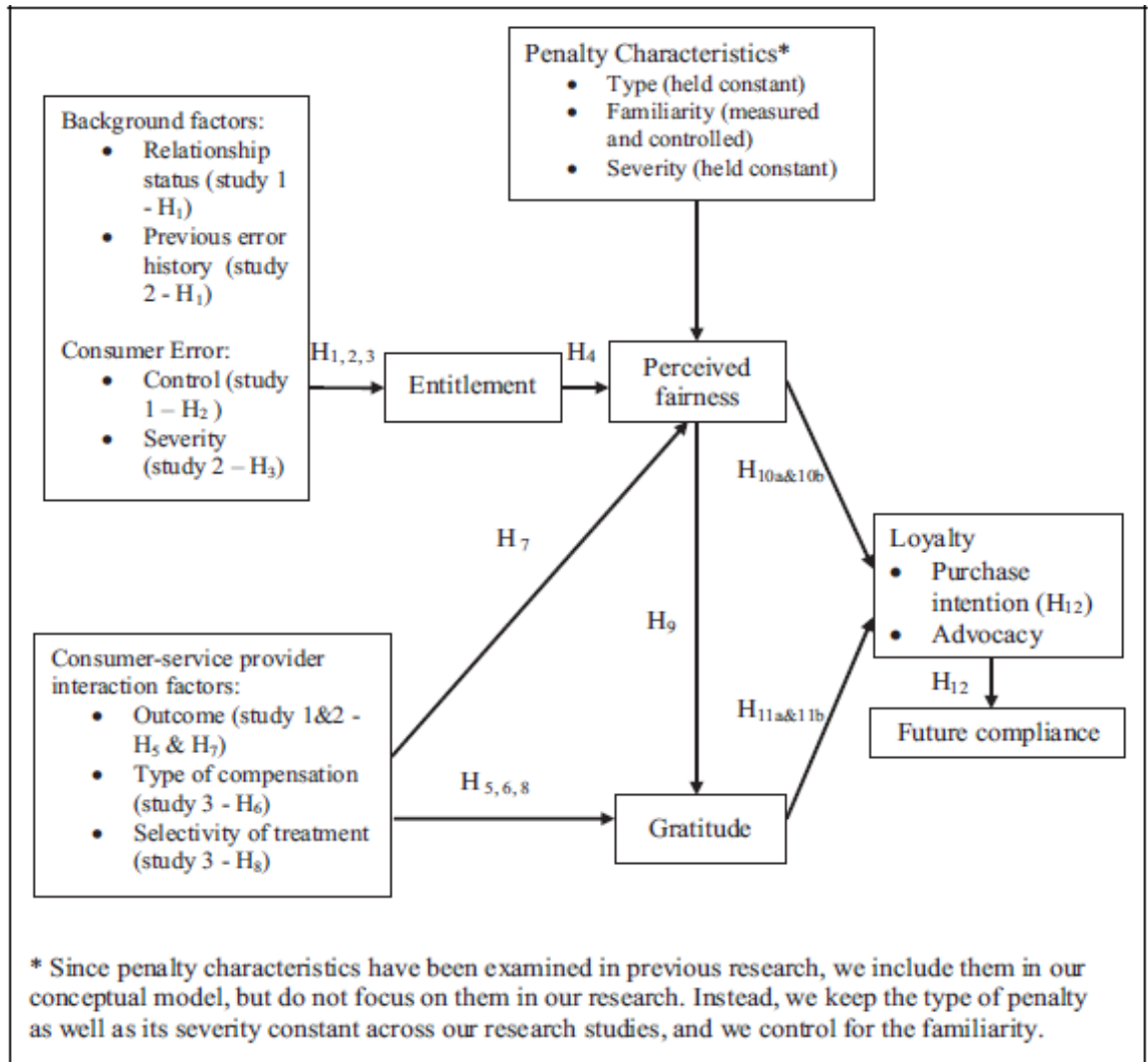


Figure 2. Research Model on Gratitude and Loyalty (Xia and Kukar-Kinney, 2013)

2.9 Customer Penalty / Loyalty Programmes within the Airline Industry

2.9.1 Customer Penalty Policy

The serviceable seats in the cabin of aircraft are the products of airlines (Sherali *et al.*, 2006). The unique characteristic of airline products is perishable; any unsold seats at the time of departure of the flight cannot be sold later (Sherali *et al.*, 2006). Because of this characteristic, airlines' marketing strategies focus on the entire sales of the serviceable seats before flight departure. To achieve this goal, airlines try to sell the

seats with a variety of airfare tickets from normal to discounted airfare tickets with penalty conditions. The object of the airlines' penalty policy is unique because of the characteristics of their products which are perishable under a variety of fare conditions. In this process, airlines place discounted tickets under some penalty conditions to enhance customers' intention to comply with the original flight schedule. Fram and McCarthy (1999) have noticed that many airlines are imposing the penalties because they have been suffering revenue loss and incurring substantial additional costs caused by customers' failure to comply with purchase agreements.

To increase their market share, airlines are using strategies such as cheap price competitiveness, offering discounted fare tickets with penalty conditions. The most common type of penalty is the ticket refund charge. The refund charge is a fee imposed upon customers who changes their mind and cancel or change the original schedule for a discounted ticket. The amount of refund charge varies from USD30 to the whole ticket amount. Even though airline penalty policies are generally accepted, there are still argued for the penalty as a customer's view of perceived fairness of penalty. Although, the basic purpose of a penalty policy is to encourage customers to comply with their original purchase agreement and to protect against the possibility of significant revenue loss, some customers still think the penalty is unfair such as penalty amount, or unavoidable situations due to injuries or accidents. In such situations customers feel that the penalty should be waived even though the penalty conditions are clearly noted. In this situation, customers ask for penalty waiver through penalty conflict with the airline. As a result, some customers receive waiver penalties and some do not. The customer's perceived fairness plays the role in their behaviour towards the penalty imposition (McCarthy and Fram 2000).

From an operations management perspective, on-time departure/arrival performance of flight, secure/safe flight performance, and maximized revenue controls for the goods (serviceable seats) are the most important goals that airlines pursue to achieve. To operate flights safely and on-time, all customers who have reservations on the flight should be at the airlines check-in counter and boarding gate in time. Normally, most customers are likely to be at the check-in counter or boarding gate in time of the flight

schedule; some customers, however, miss their flights because of late arrival at the counters or boarding gate. As result, customers who miss their flight expect a refund of the tickets or the opportunity to change to another available flight schedule. In such cases, penalty charges may be imposed on the customers such as gate no-show fee, refund charge or date change fee if they want to take an alternative flight. From a marketing perspective, to protect against any possible revenue loss, airlines tend to encourage passengers to keep to the purchase agreement and such a penalty policies are generally accepted by passengers, whereas, many consumer reports from consumer research institutions argues that the penalty is not fair. Actually, at the service front line such as airport counters and boarding gates, some penalized customers ask for a penalty waiver because of their feeling of unfairness of the penalty amount, which they consider to be severe and complex.

This study focuses on the following issues: how customers who are penalized behave towards repurchase intentions and how their loyalty to the airlines is affected. By imposing a penalty upon customers, any negative outcome may cause revenue loss due to reduced re-purchase by the customers in the long term.

2.9.2 Customer Loyalty Programme within the Airline Industry

Customer Relationship Management (CRM) focuses on the cost/benefit aspect. It is generally believed that more cost is incurred attracting new customers than maintaining current customers (Blodgett *et al.*, 1995). To understand service loyalty, Lee and Cunningham (2001) adopt the approach of cost and benefit. The authors introduced service costs as a non-monetary cost like service time, transactional cost and switching cost. Considering the benefit factors, the overall service quality and service benefit from the service provider are considered. Among these factors, in this study, switching costs are regarded as a moderating variable for the customer's resulting behaviour towards the airline. "Switching cost can be defined as the costs involved in changing from one supplier to another" (Heide and Weiss, 1995). "The domain of switching costs encompasses both monetary expenses and nonmonetary costs" (Dick and Basu, 1994). The switching cost may include the loss of benefits from the service companies by the end of relationship. Switching costs are related to the costs incurred when a customer

has an intention to change the service provider to another (Burnham *et al.*, 2003) even though the alternative service quality is equal (Klemperer, 1995). The concept of a switching cost is based on repeated purchases (Carlsson and Lofgren, 2006). A variety of previous research has defined the reasons for occurring switching costs as including the specification of the goods, attractions of firm, service company's strategies and investment in the product (Chen and Hitt, 2002) "consumer perceptions of the time, money and effort relationship with alternative service providers" (Chang and Chen, 2008). It is not easy to evaluate switching costs, whilst it can be happened when customer purchases the product repeatedly. If switching costs are affected by attractive strategies of firms, airline frequent flyer programmes could increase the switching costs. As a benefit factor for the customer, a frequent flyer programme can be considered. The concepts of the frequent flyer programme were introduced by USA. airlines at the beginning of the 1980s. When customers take flights then they can receive mileage points each time in this frequent flyer programmes. Customers who accumulate mileage points can use them to obtain free flight tickets or upgrades to higher class seats. As the airline loyalty programme, the frequent flyer programme, is designed so that customers can use the amount of accrued mileage for special services such as use of premium check-in counters, access to premium lounges, and more excess baggage allowances. So, the loyalty programme encourages the customer to stay with one airline rather transfer. In this way, the loyalty programme may increase the switching costs for customers. Therefore, the potential switching cost can be replaced by the customer's membership status programme in this study.

Customer loyalty is defined as "the strength of relationship between the customer relative attitude and repeat patronage" (Dick and Basu, 1994). Customer loyalty effectively increases the service company's revenue, reduces transaction costs to attract customers, lower costs involved in serving repeat purchasing customers and gives companies larger "profitability" (Reichheld, 1993; Reichheld and Sasser, 1990). Most of literature concerning loyalty towards service industries, in particular, airline business, focuses on customer satisfaction, loyalty, and penalty compensation in the recovery process of service failure situations. Most airlines have a loyalty programme such as

membership of a frequent flyer programme (FFP) which is categorized by accumulated flight mileage or history of use for partnership companies' goods. According to the standard for the ranking airline FFP in this study, the detailed categories of the ranks depend upon the accumulated mileage of the customers as the beginner status (up to 39,999 accumulated miles), middle status (between the range of 40,000-99,999 accumulated miles), and premier status (over 100,000+ accumulated miles). In the airline industry, there are two main customer categories: business and leisure. Loyalty programmes focus on "the behavioural loyalty for business travelers" / "for frequent travelers, but not for casual and leisure travelers" (Dolnicar *et al.*, 2011). The loyalty programme has an influence on customer satisfaction and choice of airline to use. The status of a customer's membership programme will be considered as a predictor variable to repurchase behaviour in this study.

2.9.3 Penalty Amount and Airline Profit

As argued in previous studies, when a customer fails to complete the purchase agreement, some additional costs and some possible revenue losses are incurred. From this viewpoint, firms and customers consider customer penalties are justifiable (Bitner, 1995). Conversely, Fram and Callahan (2001) argue that firms may misuse penalty policies to make a profit rather than cover costs. As evidence of airlines' profit from penalty, in an article in the Wall Street Journal (July 30 2009), McCartney introduces data from the Department of Transportation filing an estimated accumulated penalty amount paid by customers to airlines in the USA of \$2 billion a year. In academic literature, McGovern and Moon (2007) argued that penalty policies are used to as a potential profit-centre for the firm.

Table 1. Studies for Penalty Policy in Service Industry

Study	Target industry	Goal	Methods	Findings/Definitions
Fram.E.H. (1997)	13 Service Industries	To suggest ideas to service firms who wants to keep both loyal customer relationship and penalty policy.	Qualitative (penalty examples)	<p>Customer penalty is fee imposed on customers who fails to keep the terms and conditions of their purchase agreement. The nature of penalty negatively influences customer behaviour.</p> <p>Consideration points of penalty are</p> <ul style="list-style-type: none"> ➤ penalty amount/competitors penalty policy ➤ predictable customer's response ➤ evaluations of the results of penalty ➤ Customer relationship management ➤ (company profit should be considered).
Fram E.H. and McCarthy M.S. (1999)	13 Service Industries including Airlines	To investigate how consumer penalties impact buying behaviour and to develop a strategic framework	Qualitative (published article) + Quantitative (714 responses)	<p>Some consumers accept penalties for their own negligence in not completing the terms of a purchasing contract.</p> <p>Perceived fairness of the penalty is the important variable to customers' resulting responses.</p> <p>As a moderating factor, an insurance programme to cover possible penalty can be considered by the company.</p>
McCarthy	Nine service	Determine the impact of	Survey-based	None of the service companies provide any information about their penalty policies.

M.S. and Fram E.H. (2000)	industries including airline	penalty charge on customer compliance, loyalty, negative word of mouth communication	(Questionnaire mailing)	<p>Penalty has a limited influence for encouragement of customer's compliance. (reduces loyalty). Negative word of mouth communications: very high. Consumers perception of penalty fairness plays a key role in customers' resulting behaviour.</p> <ul style="list-style-type: none"> ➤ Higher fairness ratings: customer negligence, free choice, non-compliance with well established penalties and partial refund. ➤ Lower fairness ratings: Bad luck, family problems, more recent and less well established penalties. ➤ Effect of age, sex, income, education, prior penalty experiences are explained by the results of research. ➤ Justice theory is suggested as one possible base theory for the further research of penalty. ➤ Prospect theory based on gains and loss is suggested. ➤ Rewarding compliance instead of punishing penalty can be considered as an alternative. (incentives)
Fram E.H. and Callahan A. (2001)	13 service industries	To identify the types of customer reactions towards penalty and the impact of penalty imposing business.	Survey-based	<p>Mainly, four from 13 industries were focused upon by the participants including Banking, Airline, Retails, hotel and etc.</p> <ul style="list-style-type: none"> ➤ Unfair penalty policy and penalty amount (38 of 66). ➤ Fair penalty policy and penalty amount (28 of 66). ➤ Fair penalty policy and unfair penalty amount (9 of

				<p>28).</p> <p>For the airline industry, only 14 cases were collected and the authors found very few cases received penalty waiver from airlines.</p> <p>Future buying behaviour in the airline industry -, there is limited choice of airlines as alternatives of penalty imposing airlines. So, customers have difficulty transferring to other airlines. It is a resigned bitterness.</p> <ul style="list-style-type: none"> ➤ The flexibility of penalty policy is rising and important factor in building the customer relationship.
Harrison M.P. (2011)	Cell phone and Credit card industries	To determine how customers react to penalties from service providers after making a mistake, focusing on two factors: the reasons for the mistake and the effect of attributions, entitlement, and potential penalty to customers behaviour.	Survey-based	<ul style="list-style-type: none"> ➤ Gender effect: men are likely to report anger, experience interpersonal rejection, negative word of mouth. ➤ Rejected penalty waiver request: customers feel the interpersonal rejection experience, desire to switch, engage in negative word of mouth. ➤ Two other mediations: Gratitude and confirmation/disconfirmation of customer. - Gratitude: partially mediates between perceived fairness and outcomes for the service provider. ➤ Confirmation/Disconfirmation: fully mediates between perceived standardization of the penalty and the outcomes for the service provider. ➤ Perceived standardization of the penalty moderates between disappointment and the desire to switch; positive word of mouth.

<p>Xia L. and Kukar-Kinney M. (2013)</p>	<p>Late payment cases of Credit card</p>	<p>To develop a comprehensive theoretical model of the consumer response to penalties and the penalty resolution process through the perception of penalty fairness and feelings of gratitude.</p>	<p>Survey-based (total 290 participants in Northeastern college)</p>	<ul style="list-style-type: none"> ➤ “Gratitude is a stronger effect on the advocacy than perceived fairness”. ➤ “Imposing a penalty will indirectly negatively influence future compliance”. ➤ “When the penalty is lifted, consumers feel grateful to the company and may also perceive it as more fair. Loyalty is enhanced, leading to increased future purchase intentions and positive word of mouth, hence higher future compliance”. ➤ Depending on the situation of business, lifting penalty is not always good effect on the fairness or loyalty. ➤ “Meeting customer expectations will enhance fairness perceptions and minimize the negative effect on loyalty, but at the same time should not be cost-prohibitive for the company”. ➤ Flexible handling of penalties to selected consumers, loyal consumers, will enhance loyalty and future compliance intention, re-purchasing intention.
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Table 2. Study for Justice Theory (McCarthy and Fram, 2000)

Justice concepts and elements	Definitions	Examples
Distributive Justice		
Equity	“Outcomes are proportional to input in exchange”.	Perceived fairness of penalty amount considering the original purchase amount.
Equality	“Outcomes are equal and independent of other factors”.	The same amount of penalty regardless of original purchase amount is imposed.
Procedural Justice		
Decision control	“Ability of party to choose which offer to take”.	Customer has an ability to choose the penalty types or other options.
Flexibility	“Procedures adaptable to reflect specific situation”.	Exception policies regarding the reasons for unavoidable situations of customer’s failure to complete the purchase agreement.
Interactional Justice		
Explanation	“Providing reasons for action”.	Explanation for the penalty policies to help customer’s understanding and considerations beforehand.

Table 3. Study for Justice (Xia and Kukar-Kinney, 2013)

Justice concepts and elements	Definitions	Examples
Distributive Justice	“Fairness of outcome received”.	Perceived fairness of penalty amount
Procedural Justice	“Fairness of procedure used to determine the outcome”.	Perceived fairness of the procedure or severity of penalty policies
Interactional Justice	“Fairness of the interpersonal treatment received during the conflict resolution process”.	Giving penalty waiver as a result of interpersonal communication in the situation of penalty imposed. Customer handling with care regarding the status of customer or situations.

Table 4. Justice Theory in Service Failure and Recovery Situation

Author(s)/year	Theoretical frameworks	Dependent variable	Independent variable	Method	Findings
Lam et al. (2004)	Disconfirmation-of-expectations	Customer loyalty (Recommend, patronage)	Customer satisfaction, Customer value, Switching cost	Survey-based	Customer satisfaction, switching cost =positively related to loyalty (recommend, patronage) No mutual relationship between customer satisfaction and patronage intention No interaction effect of customer satisfaction, switching cost. To promote customer loyalty, the potential strategy of improving customer satisfaction and growing switching costs can be considered as an important strategy.
Wang et al. (2011)	Justice theory	Customer Loyalty	Service failure severity, Recovery Justice, Switching cost	Survey-based	Service failure severity strongly impacts on customer loyalty negatively. Interactional Justice and Procedural Justice affect customer loyalty in service recovery procedure positively. Distributive Justice in service recovery procedure is insignificant impact to customer loyalty. Switching costs have a significant positive relationship with customer loyalty.
Kim & Smith (2005)	Justice theory Attribution theory/	Customer dissatisfaction	Penalty attributes (“severity”, “flexibility”,	Survey-based	Severity of penalty and Adequacy of explanation effect on distributive justice, disconfirmation, negative emotion.

	Expectancy / Disconfirmation theory		“adequacy of explanation”) Attributions (“locus of causality”, “stability”, “controllability”), Perceived Justice (Distributive, Procedural, Interactional), Disconfirmation, Emotion.		Adequacy of explanation has positive influence on interactional justice. Flexibility has significant influence on the perception of three types of justice and disconfirmation, but no significant influence on negative emotion. Controllability affects three types of justice positively. Stability influences interactional justice and disconfirmation positively. Locus of causality is not significantly variable for any equations of valuation for hypothesis. Perceptions of justice are important determinants to customers dissatisfaction. Emotion plays an important role in customers judgement of dissatisfaction. Disconfirmation has not important role of customers judgement of dissatisfaction.
Bitner et al. (1990)	Interaction Justice/Customer satisfaction theory	Customer satisfaction / Service quality	The way employees respond to customers	Survey- based	Customer satisfaction is influenced by compensations, customized services, unprompted and/or unsolicited actions taken by employees. Employees’ behaviour to customers after service failure is very significant factor of customer satisfaction/dissatisfaction.
Blodgett et al. (1993)	Justice Theory	Customer complaining	Perceived justice	Survey- based	“Perceived justice was the main determinant of customer’s negative word of mouth

		behaviour (negative word of mouth and re-patronage behaviour)			behaviour and re-patronage behaviour and mediated the effects of likelihood of success, complaining behaviour”. Customer service/customer satisfaction is important in terms of cost for keeping current customer rather than attraction of new customer.
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2.10 Summary

Penalty policies in service industries are widely accepted as tools of encouragement for customers to comply with the original purchase agreement and for enforcement of the fare competition power of airlines. The number of companies who have adopted penalty policies has been increasing to protect their revenue loss; meanwhile customer complaints also are increasing concerning imposed penalties. Penalty is defined as a fee imposed upon a customer who fails to comply with the terms and conditions of the original purchase agreement (McCarthy and Fram, 2000). In marketing in the airline business, penalty policies are considered as an alternative way to support potential revenue loss because of severe competition from low cost carriers' fare strategies. As a consequence current, full service carriers should consider selling very low fare tickets to customers with penalty conditions. Hence, customers can enjoy the full service carrier's service at a cheap price but the risk of penalty. In previous literature concerning customer penalty policies, some variables have been used to investigate the customer response to the penalty- imposing company. The independent variables used in previous literature include "penalty attributes" (Kim and Smith, 2005), penalty attributions (Kim and Smith, 2005; Harrison, 2011), "the feeling of entitlement" (Xia and Kukar-Kinney, 2013), penalty fairness (McCarthy and Fram, 2000; Xia and Kinney, 2013), "Feeling of gratitude" (Xia and Kukar-Kinney, 2013), and the feeling of entitlement (Harrison, 2011, Xia and Kukar-Kinney, 2013).

As an outcome of the variables of the research concerning the customers' response to companies imposing penalties, loyalty- the intention of re-purchase (Lam *et al.* 2004), advocacy (Fram, 1997; McCarthy and Fram, 2000), and future compliance (Kim and Smith, 2005) are examined.

Fram (1997) suggests some potential strategies for companies who are willing to impose penalties upon customers. In 13 service industries, he introduced types of penalties and customer responses. Subsequently, Fram and McCarthy (1999) report

the national data analysis for the percentage of customers who have paid a penalty and the average penalty amount. They found that customers widely accept the penalty policies with a perception of fairness. Specifically, the customers who received penalties were willing to accept the penalties due to their mistakes, negligence, neglect or unavoidable situations. In cases of penalty for unavoidable circumstances, customers thought that the penalty should be waived by the company. McCarthy and Fram (2000) go on to argue that penalty encouraging customers to comply with the purchasing agreement are working to a limited extent. As a consequence, more debate and discussion about the effect of penalty are needed. Moreover, customers who received penalties generated some negative results concerning customer loyalty. The customer perception of fairness was examined in segments (gender, penalty type, age). The author suggests justice theory and prospect theory to examine the penalty policy as a further research.

Harrison (2011) highlights the lack of research regarding the reasons for customer mistakes. Depending upon the reasons, customers are willing to accept the responsibility of the penalty. To identify a fair penalty, the theory of attribution of responsibility is adopted, and entitlement theory was considered for the loyal and long term customer relationship, giving special benefits. As the most significant theory to investigate the customer response, interpersonal rejection theory was applied. The interpersonal rejection theory might explain the feeling of negative emotions when customers' requests are such as penalty waiver request from the company who imposed penalty are rejected. In general, most customers did not complain about the penalty. Feeling of gratitude, confirmation/disconfirmation of customer and standardization of penalty are mediating factors concerning perceived fairness and outcome.

2.11 Limitations of previous literature

Concerning the impact of the penalty on the penalized customer's resulting behaviour, previous literature illustrates the justification of a penalty policy together with the negative nature of such a policy. The basic purpose of a penalty policy is to encourage customer compliance with an original purchase agreement and to cover

potential company loss as a result of a customer's non-compliance with an agreement. As a result of previous literature, penalty plays a limited role in encouraging compliance with an agreement, whilst the company's intention to cover potential cost for any losses from the customer's non-compliance is regarded as unfair (Fram and Callahan, 2001). Considering this result, in particular, a penalized customer's negative response to the penalty-imposing company was mainly studied. Many researchers have sought to identify what is the most affecting variable of penalty to customer response to the company. A customer's perceived feeling of fairness towards the penalty was suggested as a key factor in the customer's response (Fram and McCarthy, 1999; McCarthy and Fram, 2000; Fram and Callahan, 2001; Harrison, 2011; Xia and Kukar-Kinney, 2013). As a customer's response to an imposed penalty, positive and negative responses were considered. As positive responses, improved loyalty, repurchase and positive word of mouth communication were considered. As negative responses, intentions to transfer to other company and negative word of mouth communication were studied. As moderating factors improving customer relationships even in a penalty situation, feeling of gratitude caused by penalty waiver and customer's mistake as a responsibility of penalty were suggested (Harrison, 2011; Xia and Kukar-Kinney, 2013). As a result of previous literature, the penalized customer's response to the company is emerging as an issue in penalty research. Nevertheless, there is a lack of literature found relating to the importance of customer response to penalty, in particular, customer repurchase behaviour to the company. In the process of reviewing of previous research, there appeared to be little research on the impact of penalty to customer repurchase behaviour in airlines industry. As mentioned earlier, no company was willing to discuss this topic publicly. Hence, most of the previous research has examined their hypotheses by manipulated scenarios. Actually, this study is the first to investigate the impact of penalty on customer loyalty with actual data collected by airlines and airport authorities. In this study, the collected data were used for the analysis of the results by demographic factors (gender, age), membership status, and reasons for complaint (penalty amount, flexibility of consideration, etc.). The data used in this study came from the database of an airline's customer satisfaction handling department. The resulting customer repurchase behaviour is affected by the airline's handling strategy. Tax *et al.* (1998)

argue that the method of complaint handling is a strategy of a service provider to establish the service provider's reliability. In this regard, the airline's employees' attitude and mistakes can be considered as an affecting variable to customers repurchase behaviour.

CHAPTER 3 CONCEPTUAL FRAMEWORK AND HYPOTHESES

3.1 Theoretical Framework

In this chapter, the theoretical research framework and hypothesis are presented. To identify the impact of penalty on customer repurchase behaviour, customer complaints data for penalties received and managed by airlines are used. As considering factors, reasons for complaint, customer demographic factors, customer membership status, and feeling of gratitude are using to identify the impact of the penalty on the customer.

3.1.1 Logistic Regression Model

In this research, I studied the relationship between considering variables and customer repurchase behaviour using the logistic regression model.

In the first model, I examined the relationship between all variables as independent variables and repurchase behaviour as a dependent variable. The research descriptions are included in chapter 4.

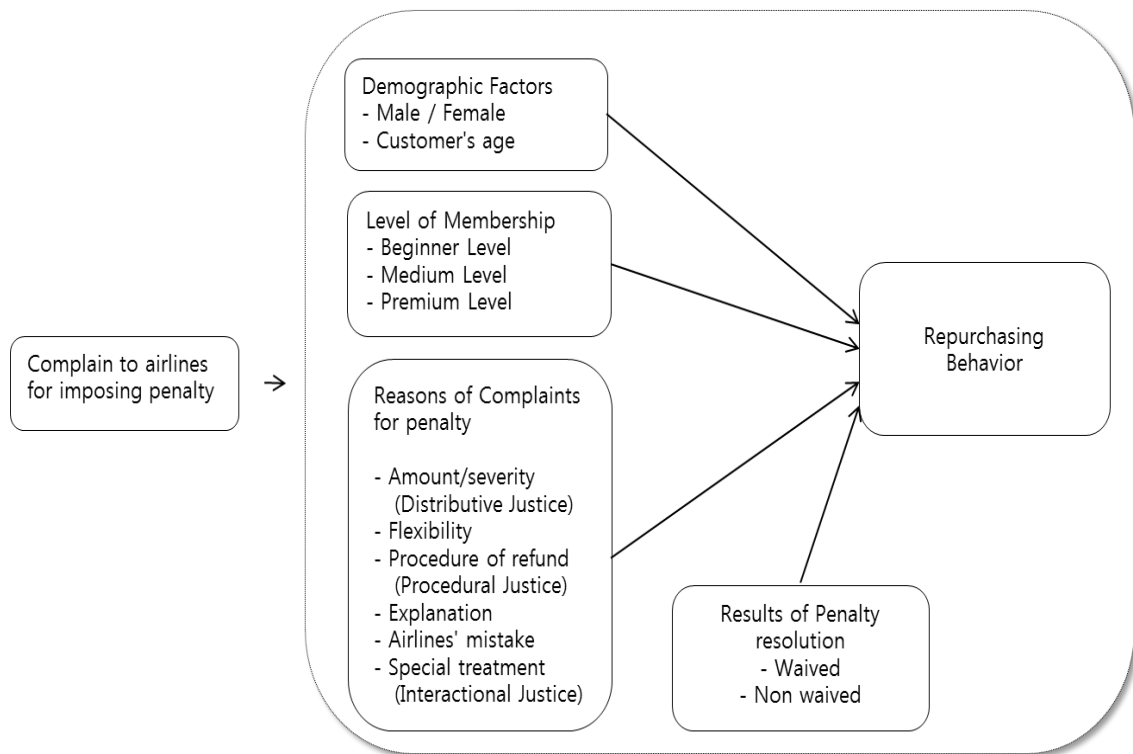


Figure 3. Research Model of Predictor variables and Repurchase Behaviour

3.1.2 Analysis of Variance Model (ANOVA)

In the second model, I studied the relationship between reasons for penalty complaint and customer repurchase behaviour with moderating factors including customer demographic factors, customer membership status, and customer feeling of gratitude.

Perceived feeling of justice and perceived feeling of fairness

In this study, justice theory is adopted to evaluate fairness perceived by the customer. Justice theory is composed of three concepts: distributive justice, procedural justice and interactional justice.

Distributive justice is defined by two factors: equity and equality of the penalty policy. Specifically, distributive justice can contribute to the fairness perceived by the customer to the penalty amount which is a main reason of penalty conflict.

Procedural justice is explained as the fairness of the penalty imposition and refund procedure. Customers wishing to review the penalty and refund conditions can do so through their travel agent or look on the airline's website. So, the customer is

considered to be advised of the penalty and refund conditions on the ticket. Although the penalty conditions are notified to the customer, some customers who require a refund may feel the procedure unfair because of its complexity or inconvenience.

Interactional justice depends upon the communication between the customer and the airline employee such as the explanation for an imposed penalty. After receiving complaints from customers, it is helpful for the airline to build a good relationship with customer by being courteous in their communications with the customer regardless of whether the penalty is waived. In this study, explanations concerning the penalty condition is considered as a predictor variable to the outcome of customers' resulting behaviour.

Table 5. Reasons for Complaints concerning Penalty and Justice Dimensions

Reasons of Complaints	Descriptions	References	Related theory
Penalty Amount	Penalty amount is the amount of money imposed upon the customer and is related to the concepts of Equity from the Distributive Justice perspective.	McCarthy & Fram (2000) Kim & Smith (2005)	Distributive Justice
	The level of punitive actions of the company upon customers. The penalty amount and customers responses may be affected by the penalty severity.	Kim & Smith (2005)	
Flexibility	Flexibility is related to the exceptions of penalty policy to customers' unusual situations.	McCarthy & Fram (2000)	Procedural Justice
	"Flexibility refers to the adaptability of procedures to reflect individual circumstances".	Tax. Brown. & Chandrashenkaran(1998), Kim & Smith (2005)	

Procedure of Refund	Procedure is related to the procedural injustice when a customer asks for a refund of a penalty.	Folger (1984), Tax <i>et al.</i> (1998) Chebat (2005)	Procedural Justice
Explanation	Explanation is used to help customers understand why the company has a penalty policy. Explanation is related to interactional justice.	McCarthy & Fram (2000)	Interactional Justice
Airline Mistakes	The cases of penalty imposed due to airlines' mistakes including refund system error, employee's misinformation and employee's bad attitude.	Bies & Shapiro (1987) Tax <i>et al.</i> (1998)	Interactional Justice
Special Treatment	A loyal customer who has a long term relationship with the company is entitled to be treated in a special way, such as penalty waiver.	Fram & Callahan (2001) Xia & Kukar-Kinney (2014)	Interactional Justice

3.2 Hypotheses of Research model

In this study, I examined the main effect and two-way ANOVA with moderating factors to identify the impact of penalty which is illustrated as reasons for complaints concerning a penalty to customer repurchase behaviour. To examine the suggested second research model, I performed ANOVA by the following hypotheses.

Hypothesis 1. Reasons for complaints include penalty amount, flexibility, procedure of refund, explanation, airlines' mistake, special treatment all of which affect the customer's feeling of perceived justice (Fram, 1997; McCarthy and Fram, 2000). Perceived justice is the main determinant of customer's re-patronage behaviour (Blodgett *et al.*, 1993).

Hypothesis 2. Customer demographic factors are likely to affect penalized customer repurchase behaviour. Harrison (2001) argues that men are more likely to show anger, experience interpersonal rejection, and use negative word of mouth.

Hypothesis 3. The membership level of the customer within the loyalty programme is based on the period of the relationship and accumulated flight mileage. It is considered as a switching cost and it may play a moderating factor to protect

customers from transferring to other airlines.

Hypothesis 4. Penalty waiver elicits a feeling of gratitude within the customer. Feeling of gratitude enhances loyalty, leading to increased future purchase intentions (Xia and Kukar-Kinney, 2013).

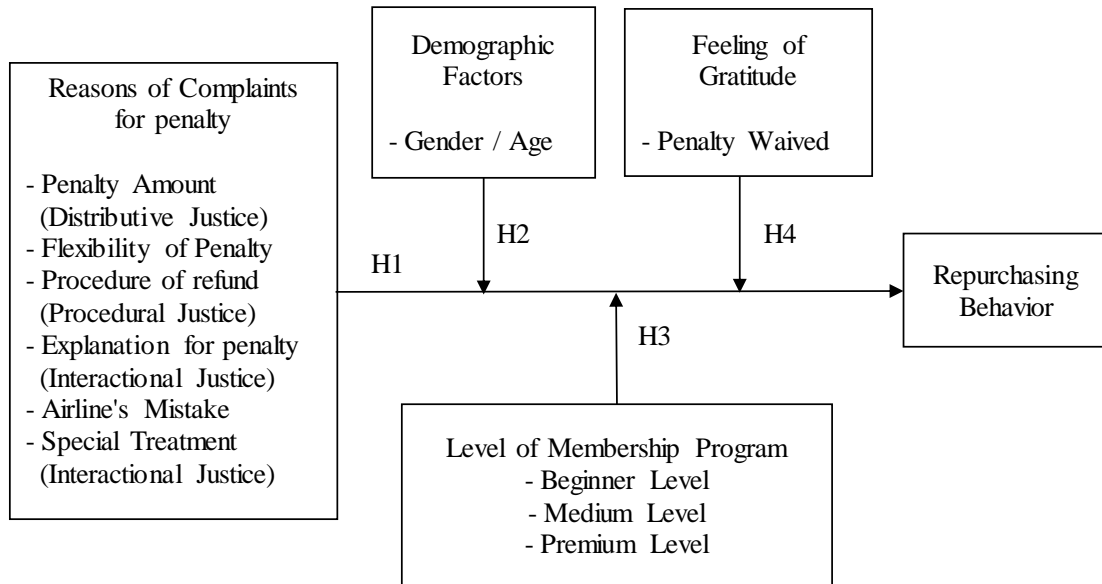


Figure 4. Research Model on the Relationship between Reasons of Complaints and Repurchase Behaviour

CHAPTER 4 RESEARCH METHODOLOGY

4.1 Introduction

In order to gain validated research results, it is important to choose an appropriate research methodology. Hence, the reasons for the choice of the specific research methodology and method of research require to be rationalized. In this chapter, the research philosophy and methodology are illustrated. Composed of four sections this chapter illustrates the philosophy for the research, research methodology, why the airlines industry has been selected as an objective industry of this study, and the data collection process. In the first section, the philosophy of the research is illustrated through the two approaches of positivism (quantitative) phenomenology (qualitative) (Shepard *et al.*, 1993). Secondly, the methodology adopted in this study is addressed and two different approaches are used. To identify the causal relationship among variables, as a parametric approach, the inductive research method is used. Subsequently, the reason for selection of the airlines industry as an objective industry is explained. Finally, the data collection process is described. At the stage of data collection, the collected data were reviewed and categorized according to the coding table which was categorized by the reasons for the customer complaint such as penalty amount, lack of flexibility of penalty policy, inconvenience (unfairness) of refund procedure, lack of explanation of penalty conditions, airline's fault causing imposition of the penalty and airline employees' rude attitude, and customer's confirmation or disconfirmation of expectation of special treatment. In addition, customer demographic factors such as age, gender, and membership status of the airline are considered as categorized factors. Based on these reasons of customer complaints and demographic factors, the coding table is established and applied to this study. The brief information of results of collected data analysis is demonstrated at the end of this chapter.

4.2 Research Philosophy

The research philosophy is the way that the researcher should consider how to conduct the research for the development of knowledge. Before beginning any

research, it is important to understand the research philosophy as well as the appropriate research methodology. Based on this understanding, the researcher can choose an appropriate research method and methodology. The validity of the results of the research depends upon the adoption of an appropriate methodology and the results of research can be rationalized by this methodology. There are two basic different philosophical paradigms to approach the research. These philosophical paradigms are the perspective of positivism (predominantly quantitative) and the perspective of phenomenology (predominantly qualitative) (Shepard *et al.*, 1993).

4.2.1. Deductive Approach – Confirmative research based on positivists' methods

“A deductive approach is concerned with developing a hypothesis based on existing theory and then designing a research strategy to test the hypothesis” (Wilson, 2010)”. The philosophy of positivism is based upon the assumptions of objectiveness of science and highlights strict measurement and hypothesis evaluations. As the deductive statistical research method, the model of positivism is based on “the verification theory of meaning of statements or propositions” that are empirically verified (Brown, 1977). This perception of positivism faced a problem whereby they could not accept the axiom system which could not be tested by empirical methods. Later, logical empiricism was developed as a moderating concept of positivism (Carnap, 1936). This paradigm is considered as the “received view” in philosophy of science (Suppe, 1977). Carnap suggests a more liberal concept of verification that could explain the problem of axioms for the verifiability principle (Bharadwaj, 2000). Carnap also proposes substituting verifiability with a term of “gradually increasing confirmation” (Bharadwaj, 2000). According to the concepts of logical empiricism, “the untainted observation of reality” was beginning to be applied in the research of science. Logical empiricism is expected to support that the researcher can obtain an image of a real situation from investigation of a cognitively created model of the process. In the case of the hypotheses and the data derived from the model being supported by the results of empirical testing, this case is regarded as a confirmed case (Baradwaj, 2000). Consequently, the repetition of this process could obtain accumulative confirmed cases under a variety of research environments (Anderson, 1983).

The limitations of the philosophy of positivism in social sciences are as follows: firstly, as a deductive statistical method, positivist philosophy makes a universal statement of truth as a generalized statement as a result of accumulated observations of positive cases. Second, the pure observation of the empiricist approach is impossible in social science research. Measurement errors are subject to exist in the observation process (Anderson, 1983). Lastly, the philosophy of positivism regards the knowledge from the objective interpretation of assumptions. The philosophy of a positivism approach shows that way of research of sciences is suggested by imitating the methods of research in the field of mathematic and natural science (Baradwaj, 2000).

The positivism paradigm is concerned with the characteristics of social science and is based on research of human behaviour. Through this positivist paradigm, researchers can gain an understanding of human attitudes and behaviour based upon data collection and data analysis.

The phenomenological paradigm is concerned with the qualitative approach in social science (Coolis and Hussey, 2003). This paradigm supports an argument against the positivism paradigm. Through this phenomenological paradigm, researchers can gain an understanding of human attitudes and behaviour originating from human mind change.

In terms of methodological aspects of deductive approach, it has some strengths in independency from misunderstood evidence and freedom from alternative conclusions while it has weaknesses in analytic truths due to its obviousness, as summarized in the table below.

Table 6. The Strengths and Weaknesses of the Deductive Approach (Creswell 2010)

Strengths	Weaknesses
<ul style="list-style-type: none"> • It does not depend on variable or misunderstood experience / evidence • It accepts that words and definitions have fixed and agreed meaning or are supported by theory • There are no alternative conclusions 	<ul style="list-style-type: none"> • They lead to apparently logically necessary conclusions • It depends on whether we accept the premises as analytically true. • It can say that if there is a God we might be able to make certain claims about Him.

4.3. Research Methodology Adopted in This Research

A goal of this research is to understand and suggest ideas for the impact of penalty policy on customer repurchase behaviour. The deductive approach is adopted based on the collection of actual data and analysis of the collected data as a quantitative approach. The behavioural model with a theoretical background is validated by statistical confirmation from a positivism approach. The statistical test provides scientific support for confirmation of a deductive approach.

The procedure of data collection and data analysis will be described in the following section. In this research, two data analysis methods are adopted. As a method of parametric analysis, the logistic regression analysis method is conducted and as a method of analysis of variance ANOVA is performed.

4.4 Selection of Service Industry

Among the service industries, the penalty policies of airlines are considered as “resigned bitterness” because there is no choice of alternatives (Fram and Callahan, 2001). Literature on the impact of penalty policies to customers’ repurchase behaviour in airlines is difficult to find. Fram (1997), Fram and McCarthy (1999), McCarthy and Fram (2000) show the penalty cases of an airline as a sample of explanation of the research on penalty policies in service industries. Fram and Callahan (2001) examine the justification of penalty policies and penalty amount in 14 cases of standard penalty charge (U\$75, refund penalty) in airline customers. Fram and McCarthy (1999) confess the difficulties in collecting data from airlines because of airlines’ executives’ avoidance of discussion of their penalty policies. Hence, research regarding the impact of penalty policies was based on data collected through the method of survey. Because of the lack of data and research for airlines’ penalty policies, the author selected the airlines case as the object service industry of this study. To understand the impact of penalty policies on customers repurchase behaviour more clearly, this study conducted a logistic regression analysis based on more than 200 actual penalty cases in the airline business.

4.5 Data collection procedure

As explained in the previous section, penalty policies are adopted by most airlines in the world. Hence, it can be expected that most air passengers have a basic knowledge about the existence of the penalty during the process of airline ticket refund. However, many airline customers still raise complaints about the imposed penalties for a variety of reasons. In this study, the data focus on complaints of imposed customer penalties taking place through the airline ticket refund procedure. The data, collected from the airline’s customer complaints database, focus on handling of the imposed customer penalty. Totally, 241 complaints cases on imposed penalty from the service providers- the airlines - were collected through the customer satisfaction department of an airport authority and airlines in South Korea during the period October 2009 to November 2014. To trace the resulting customer repurchase behaviour, the customers airline membership numbers were required as a tracing

reference of the customers' buying history. As a result of review and classification work, 200 cases of the collected 241 customer complaints cases were useful to examine. Using the C.I.T. (critical incident technique) method, the data were categorized by the reasons for complaints and then the data set was categorized as follows: 1) penalty amount (severity), 2) flexibility or lack consideration of the customer's unavoidable circumstances and, hence, reason for ticket refund request, 3) complexity of ticket refund procedure (inconvenience), 4) lack of explanation about penalty conditions beforehand, 5) airline's mistake or employee's bad attitude, and 6) disconfirmation of expectation for special treatment (entitlement).

Most complaints occurred during the ticket refund process requested by customers. To discover the proper variables affecting the customer's resulting behaviour, firstly, the data were reviewed and categorized as follows: the largest number of complaints is caused by the refund procedure such as delayed refund. In this case, customers who asked the airline for a refund might know of the existence of a penalty on the tickets. Nevertheless, the problem was the time taken for the refund procedure; for example, when a customer bought an airline ticket by credit card, the refund procedure of card payment was complex with steps required to refund between travel agencies and airline, bank, and the credit card company; there were 80 cases, including some feelings of unfairness for the penalty and penalty conditions of the ticket which was sold on SNS (ex. TMON, Coupang, etc.) with discounted fare. Among the 80 cases, only 10 cases had the penalty waived, and 70 requests were rejected.

Table 7. Descriptions of reason of Complaints for Penalties

Categorized Factor	Description	References	Related theory
Penalty Amount & Severity	Penalty amount is the amount of money imposed on a customer as a penalty. Penalty amount is related to the concepts of Equity from the Distributive Justice perspective.	McCarthy & Fram (2000) Kim & Smith (2005)	Distributive Justice

	The level of punitive actions of company to customers. The penalty amount and customers responses are may affected by the penalty severity.	Kim & Smith (2005)	
Flexibility	Flexibility is related to the exceptions of penalty policy to customer's unusual situations. (ex. "injury or illness to customers or a family member")	McCarthy & Fram (2000)	Procedural Justice
	"Flexibility refers to the adaptability of procedures to reflect individual circumstances".	Tax. Brown. & Chandrashenkaran (1998), Kim & Smith (2005)	
Procedure of refund	Procedure is related to the procedural injustice of refund procedure when customer asks for a refund with penalty.	Folger (1984), Tax <i>et al.</i> (1998) Chebat (2005)	Procedural Justice
Explanation	Explanation is used to understand customers the company penalty policies presence to be needed. Explanation is related to interactional justice.	McCarthy & Fram (2000)	Interactional Justice
Airline Mistake	The cases of penalty imposed due to airlines' mistakes including refund system error, employee's misinformation and employee's bad attitude.	Bies & Shapiro (1987) Tax <i>et al.</i> (1998)	Interactional Justice
Special Treatment	A loyal customer who has a long time relationship with the company is entitled to be treated as a special way, such as penalty waiver.	Fram & Callahan (2001) Xia & Kukar-Kinney (2014)	Interactional Justice

As a result of this complaints resolution, 43 customers had a positive behaviour (re-purchase) and 37 customers left the airline. The next aspect is that of flexibility

(penalty attributes) (Kim *et al.*, 2005). Flexibility is explained as reflection of each customer's circumstances within the penalty procedure appropriately (Tax *et al.* 1998). This means that the airline should listen to the customer's voice and their particular circumstances and apply the penalty policy more generously. The complaints for flexibility include 38 cases. As a result of review of these cases, nine customers were allowed a waiver of the penalty, whilst 29 customers had their waiver request rejected. There were 19 customers who showed a positive behaviour towards re-purchase whilst 19 cases were negative. The third aspect is that relating to penalty amount. Totally 40 cases were found from the data, none of which were allowed penalty waiver. As a consequence, all 40 cases received a penalty. Interestingly, although they received a penalty, 30 cases had a positive behaviour towards re-purchase. The remaining 10 cases had a negative behaviour towards re-purchase. The next complaints concerning penalty imposition were caused by the airline's mistake. In other words, the service provider, the airline, had its own problem. For example, the airline's refund system was unstable, so it caused a penalty if a customer asked for a refund on the same day as buying the ticket, at which time there should be no penalty. But the airline's system was unstable; the customer could not connect to the airline refund system, even after trying several times. Consequently, the customer could connect to the system on the next day, and a penalty was imposed. The airline's unskilled employee had caused the customer penalty. The misinformation given to customer by the unskilled employee caused the customer complaint and even the imposing penalty. Further to the above, the bad attitude of airline employees when dealing with customers' complaints caused the customers bad feeling and impacted on their subsequent negative behaviour. Relating to the airline problem, the website of the airline was, occasionally, not quick enough to respond to customers. So, some customers who wanted to buy tickets on the website of the airline paid the price twice as a system error occurred because there was no quick response for the receipt of payment from the airline. Subsequently, when the customer discovered the double payment on their bank statement, they requested the ticket refund. The airline then imposed a penalty for the ticket refund. It caused a feeling of unfairness in the customer and led to the complaint. Totally three cases were found, all of which were saved from the penalty. One had a negative

behaviour of re-purchase and the others had positive behaviour of re-purchase. Thirty-one customers received a penalty and 18 customers were saved from a penalty later on. The 13 cases received rejected. Among them, 20 customers re-purchased and 11 customers did not. The next aspect concerns the lack of an explanation of the penalty. The customers argued that there was no information about ticket refund regulations including the existence of a penalty. They pointed out the weak points of the airlines' information on the home pages regarding penalty and travel agencies negligence for the penalty explanations. Some were accepted by the airlines as a lack of information, others were rejected. Hence, three from eight cases received penalty exemptions; the remaining five cases were rejected. All eight complaints cases had positive re-purchase behaviour later.

Table 8. Analysis of Data for Customer Resulting Repurchase Behaviour

Detailed Customer Information		Resulting Repurchase Behaviour		
		Repurchased (Coded as 1)	Non-Repurchased (coded as 0)	Total
Status of membership	Beginner	86	76	162
	Medium	22	2	24
	Premium	14	0	14
Gender	Male	77	36	113
	Female	45	42	87
Age	18~39 years old	38	29	67
	40~59 years	70	45	115
	60+ years	14	4	18
Penalty waived	Waived	32	10	42

	Rejected penalty waiver	90	68	158
Reasons of complaints	Penalty amount (severity)	30	10	40
	Flexibility of policy	19	19	38
	Procedure of refund	43	37	80
	Explanation beforehand	8	0	8
	Airlines' mistake	20	11	31
	Special treatment	2	1	3
Summary		122	78	200

The last aspect of complaint concerns the entitlement of customers who claimed special treatment as a loyal customer. Only three cases were identified from 200 cases. One has their penalty waived; the others received a rejected penalty waiver request.

Table 9. Frequency of Occurrences of Variables Depending on Categories

Customer Details		Frequency	Percentage (%)
Age	18~39 years old	67	33.5
	40~59 years old	115	57.5
	Over 60 years old	18	9.0
Sub-total		200	100
Gender	Female	87	43.5
	Male	113	56.5
Sub-total		200	100

Status of Membership	Beginner level (up to 39,999 miles)	162	81.0
	Middle level (40,000~99,999 miles)	24	12.0
	Premium level (over 100,000 miles)	14	7.0
Sub-total		200	100
Reasons for Complaint	Penalty amount	40	20.0
	Flexibility	38	19.0
	Procedure	80	40.0
	Explanation	8	4.0
	Airlines' mistake	31	15.5
	Special Treatment	3	1.5
Sub-total		200	100
Penalty waived	Penalty waived	42	21.0
	Non penalty waived	158	79.0
Sub-total		200	100
Repurchase	Yes	122	61
	No	78	39
Sub-total		200	100

The airlines' frequent flyer programme status of membership was identified as an influential variable to customers' resulting repurchase behaviour. According to the standard for the ranks of membership programme of the airline under this study, 162 cases of beginner level (up to 39,999 miles), 24 cases of middle level (between the

range of 40,000~99,999 miles), and 14 customers of premium level (over 100,000+ miles) raised complaints concerning imposed penalties.

4.6. Summary

In this chapter, the methodology for this research and its philosophical aspects has been dealt with. By adopting a mixed approach based on two different research approaches, i.e., deductive and inductive, more comprehensive understanding concerning customer repurchase behaviour in the airline industry will be available. Based on the deductive approach, the theoretical premises will be confirmed based on rigorous statistics. Also, the inductive approach will reaffirm the theoretical background and derive the managerial implications by extracting the important features for the repurchase prediction model.

CHAPTER 5 PARAMETRIC ANALYSIS

5.1 Logistic Regression Model

In order to examine the impact of penalty concerning customer repurchase behaviour in the airline business, logistic regression analysis was conducted in this study. The basic mathematical concept of logistic regression analysis is the logit of an odds ratio. For the analysis of prediction of a binary dependent variable, logistic regression analysis was suggested as an alternative method to the ordinary least squares (OLS) regression or linear discriminant analysis (Cabrera, 1994). The ordinary least squares regression (OLS) or linear discriminant analysis is used for the analysis of continuous dependent variables. Logistic regression analysis is appropriate for evaluating the relationship between a categorical outcome (dependent) variable and one or more categorical predictor (independent) variables or continuous predictor (independent) variables (Peng *et al.*, 2002). In the case of dichotomous outcome analysis with continuous predictor variables, the outcome variable Y should be applied to logit transformation to transform the s-shaped curve to linear. That is, logistic model is used to predict the logit of dependent variable (Y) from predictor variables ($X_1, X_2, X_3 \dots$). “The logit is the natural logarithm (ln) of odds of Y, and odds are ratios of probabilities (p) of Y happening to probabilities ($1-p$) of Y not happening” (Peng *et al.* 2002). The basic logistic model is illustrated as follows:

$$\text{Logit}(Y) = \text{natural log (odds)} = \ln\left(\frac{p}{1-p}\right) = \alpha + \beta X$$

This equation can be applied to polytomous predictor variables with ordinal-scale,

$$\ln\left(\frac{p}{1-p}\right) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5.$$

hence,

$$p = \text{Probability (Y=outcome variable)} = \frac{e^{\alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5}}{1 + e^{\alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5}}$$

The value of the β is the slope of the direction of relationship between the variable X and the value of logit of Y. The positive value of β means that the relationship

between variable X and the value of logit Y is positive to each other. The negative value of β shows the relationship between them negatively. When the value of β equals zero, there is no linear relationship, which is the basic concept of a null hypothesis (Peng *et al.*, 2002). To reject this null hypothesis, at least one of the values of β should be not zero. In the above equation, α is intercept of Y, and β indicates the regression coefficient which can be obtained by the maximum likelihood method (ML) (Peng *et al.*, 2002). The collected data were coded as 1 or 0 for dichotomous outcome variable. For the categorical variables, dummy coding (1 or 0) was performed.

To identify the relationship between imposed penalty and repurchase behaviour, customer repurchase behavior was adopted as a dependent variable. The resulting data of customer repurchase behaviour after the penalty resolution process were identified by the repurchase date of ticket from the penalty imposing airlines. Customers' repurchase behaviour can be expressed as a binary outcome type (repurchase, yes=1 or no=0). The dependent variable means the repurchase behaviour of customers after the complaints resolution process when imposing a penalty.

Table 10. Coding of Outcome (Dependent) Variable

Variable	Description	Code of Variable
Repurchase Behaviour	Customers who received an imposed penalty buy airline tickets after the penalty resolution process.	Yes : 1 / No : 0

As predictor variables which may influence the customer repurchase behaviour, in this study, the results of the penalty resolution process (the results of penalty being waived), reasons for complaints for imposing a penalty, demographic factors, and customer membership status in the airline's loyalty programme are considered.

The data of results of penalty resolutions were defined as a result of asking for a penalty waiver, and whether the customer received waived waiver. It is coded as binary type (Waived = 1, Non-waived = 0). The data for reasons of complaints for

penalty are categorized by the descriptions of imposing penalty amount (severity), flexibility of penalty policy, refund procedure, explanation for penalty beforehand, airlines' mistake, and expectation for special treatment coded by the numbers 1 to 6, upward ordered, respectively.

The penalty amount is explained by the imposed penalty amount on the customer's request for refund or change to the original schedule with a penalty condition. The penalty amount is different depending upon the ticket fare and ticket conditions such as its effectiveness period; for example, any customers who do not know the penalty amount imposed on the tickets when they request the tickets to be refunded or change to the schedule. Sometimes, depending on the ticket conditions, there is nothing to refund, the whole amount of ticket is taken as a penalty. In that case, most customers could not accept the results of the refund request and could raise complaints. Actually, the customers had bought special fare tickets with discounted fare tickets and restrictions to use. The tickets have some restrictions such as shortened validated duration of effectiveness; no allowance for change to the original schedule; cannot be endorsed to another airline; or restriction of refund/cancel penalty charges. These kinds of tickets are mainly sold at a cheaper price through a social commerce network.

In this study, the penalty conditions are composed of two factors: the timing of the refund request when customers ask for a refund of special fare tickets; and, the complexity of the refund procedure. The penalty conditions are applied if the customer changes his mind and requests a refund of the ticket on the day following its purchase even though the departure date remains. In addition to the above, to receive a refund amount after asking for a refund, the customer who asks for refund of the ticket has to attend the place where the ticket was originally bought. After that, the request for refund can be accepted and carried out under the refund procedure. For example, a customer who bought the ticket at a travel agency in Bangkok has to contact the agency in Bangkok to make the refund. The ticket refund can take place in reversing the buying procedure.

Flexibility is considered as a factor affecting perceived customer fairness. Fram and

Callahan (2001) argue that flexibility of the penalty is the exception to the penalty policy to be considered only for customers' unavoidable situations; for example, if a customer cannot catch a flight because of his/her illness or injuries. From this point of view of the customer expects the airline to handle this situation with flexibility of the penalty conditions.

The airline's mistake and employee attitude are also key factors to build a good image of airlines in the mind of the customer who raises the penalty complaint. How the penalty conditions are explained after receiving the customer's complaint and how to handle a customer who already has a negative emotion also affects the customer's perception of fairness. A customer with a long relationship with the airline as a loyal customer and who has high frequent flyer miles may expect special treatment from the airline over complaints. In that case, the airline has to handle the customer with respect and dignity. Sometimes, the airline may consider compensation for the penalty imposition. Even if the penalty is imposed upon the customer, the airline may seek a way to satisfy the customer by a good gesture in order to maintain the loyal customer. If the airline tries to keep the customer, it would help to improve the customer's feeling towards the penalty.

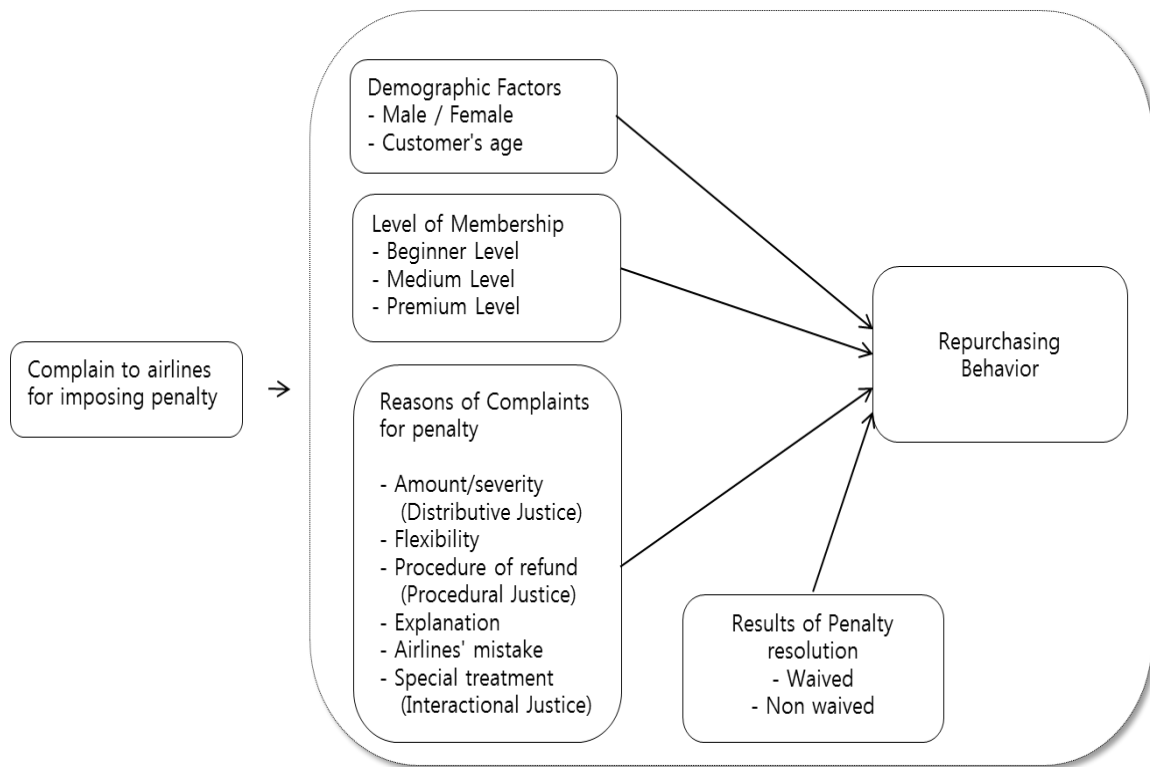


Figure 5. Research Model (1) - Predictor Variables and Repurchase Behaviour

To investigate customer re-purchase behaviour, some factors which affect the results of customer repurchase behaviour are considered as variables. Two demographic factors (gender, age) are adopted as variables affecting the results. The nationalities of most customers are Korean. So, the factor of nationality is not considered as an affecting variable.

The frequent flyer membership programme (FFP) is generally used in the airline industry as a loyalty programme. The status of FFP membership should be considered as an affecting variable to the results. Also, the amount of penalty charge is adopted as a variable. The amount of penalty charge is found as one of the reasons for complaints. Even though the customer may have bought a very cheap ticket, the penalty charge is more expensive than the customer's expectation. The procedure of ticket refund should be considered as an affecting variable concerning the customer's repurchase behaviour. However, the amount of penalty charge is dependent upon the ticket fare conditions. The amount of penalty charge is not equal but various. It is

difficult to measure the effect the amount of penalty charge will have on the resulting behaviour. The effect of penalty amount on the customers' behavior will be explained later.

Table 11. Coding of Predictor (Independent) Variables

Variables	Descriptions	Code of Variable
Results of penalty resolution	As a result of asking, the customer received/did not receive a penalty waiver.	Waived:1 Non-waived:0
Reasons for penalty complaints	Imposing penalty amount(severity), flexibility of penalty policy, refund procedure, explanation of penalty beforehand, airlines' mistake, expectation for special treatment	Penalty amount: 1 Flexibility: 2 Procedure :3 Explanation: 4 Airlines' mistake: 5 Special Treatment: 6
Gender (Male/Female)	Customer gender	Male:1 / Female: 0
Age	Customer age	18~39 years old: 1 40~59 years old: 2 60+ years old : 3
Level of Membership	Customer membership status of airline's loyalty programme based on mileage accumulations	0~39,999 miles: 1 40,000~99,000miles: 2 100,000miles + : 3

Concerning the refund procedure, it is difficult to identify its effect on the resulting behavior as it is not the airlines' procedure but the refund procedure between the airlines and the credit card company. Also, it is not a matter to be identified as a variable but a factor to be considered to improve the customers' feelings of justice concerning the transactions.

As a summary of the predictor variables, the descriptions and coding of independent variables used in this study are illustrated as follows.

To examine this study, the SPSS statistics 20 program is adopted to perform logistic regression analysis. As a dependent variable, the data of repurchase behaviour are recorded. As covariates, the independent variables are recorded. Among these independent variables, reasons for complaints, status of membership, and age are

defined as categorical variables in the SPSS statistics 20 program. The reference category is last and the regression method is selected as backward-LR.

5.2 Analysis of Logistic Regression Model

For a five-predictor logistic regression analysis, the hypothetical data set was constructed. The data were composed of five predictor variables including status of membership, gender, age, the results of the penalty resolution process (penalty waived or not), reasons for complaints and the 200 customers who raised complaints to the airlines. Of these customers, 122(61%) customers repurchased an airline ticket following the penalty resolution process and 78 (39%) customers did not. A justifiable hypothesis considered for the data set is that the predictor variables have a relationship with customer repurchase behaviour. Thus, the outcome variable is the customers' repurchase behaviour (repurchase =1, non-repurchase = 0) and predictor variables are status of membership (X_1 = beginner, medium, premium), gender (X_2 = male, female), age (X_3 = 18~39, 40~59, 60 +), the results of the penalty resolution process (X_4 = waived, non – waived), reasons for complaints (X_5 = amount, flexibility, procedure, airline mistake, special treatment). Logistic regression analysis was performed by the IBM SPSS 20. The results are indicated as below:

$$\text{Logit of (repurchase behaviour)} = -0.673 + (2.305)*\text{status of membership} + (0.224)*\text{gender} + (0.280)*\text{age} + (0.637)*\text{penalty waived} + (-0.149)*\text{reasons of complaints}.$$

According to the above logistic regression model, the logit of the odds of customer repurchase behaviour was positively related to status of membership ($p < 0.05$: Table 4.1.2.). The higher level of status of membership customers are more likely to repurchase than the lower level. The odds ratio of status of membership related with repurchase behaviour were 2.305 times more than the lower level. The other predictor variables, however, were not significantly related to the logit of the odds of customer repurchase behaviour ($p > 0.05$).

5.2.1 Evaluations of the logistic regression model

To assess of the logistic regression Model, I performed an overall model evaluation, statistical tests of individual predictors, and goodness-of-fit of this model.

As a result of testing for goodness-of-fitness, this model is fit enough to this research because the resulting values are small. Overall results of cox & snell R square are very low.

In addition to assessment of the goodness of fit of this logistic regression model, the Hosmer and Lemeshow Test was conducted for the 200 data set. The results show that the research model fits well for this research excluding model step 3. The p-value of the other steps is shown as bigger than .05, indicating that the model is good enough for this research.

5.2.2 Analysis of Logistic Regression Model

In the test of step 1, the p-value of membership (.001) is shown as smaller than .05. And the value of OR (odds ratio) of 95% C.I for EXP(B) indicates 2.474 to 40.650. Therefore, this result demonstrates that the variable of membership affected customer repurchase behaviour. The p-value of other variables are larger than the significant level (.05). The results of p-value of variables are Gender (.508), Age (.327), Nationality (.066), the results of penalty resolution process (penalty waiver or not) (.209), Reasons of complaints (.395), Distributive Justice (.493), Procedural Justice (.481), and Interactional Justice (.716). The results of this analysis indicate that the status of membership plays a key role in affecting customers resulting behaviour. In addition, the variable of nationality has a certain level of influence on customers' resulting behaviour. The other variables do not affecting customers' resulting behaviour. From the perspective of feeling of gratitude, the expected affecting variable to customer repurchase behaviour is the result of the penalty resolution process, that is, penalty waiver or not.

However, the result of penalty waiver is not an affecting variable to customer repurchase behaviour even though given to customers from airlines. This result seems not to be considered a favour from airlines but as a trophy of conflict. In the

case of the reasons for penalty complaints, the significant value (p-value) was larger than .05. indicating that whatever the reason for the complaint it is not affecting the customer's resulting behaviour. Three concepts of Justice – distributive, procedural, interactional- relating to the reasons for complaint are indicated not as affecting variable to customer repurchase behaviour.

5.3 ANOVA-Reasons for complaints and Repurchase Behaviour

To examine this analysis, the customer's age, and membership status converted to a three-level category respectively (Table 4.3) were observed. The gender category consisted of 113 men and 87 women.

Table 12 Category on customer's age and membership status

Category	Low	Medium	High
Age	18~39	40~59	60+
	(n = 67)	(n = 115)	(n = 18)
Membership Status	0~39,999 miles	40,000~99,000 miles	100,000miles +
	(n = 162)	(n = 24)	(n = 14)

There were 42 customers from a total of 200 who received a penalty waiver from airlines after penalty conflict. The remaining 156 customers did not receive a penalty waiver. The reasons for complaints are categorized below:

Table 13 Frequency of Reasons for Complaints of Penalty

Reasons for complaints	Frequency	Percent(%)
Penalty amount	40	20
Flexibility	38	19
Procedure	80	40
Explanation	8	4
Airline's mistake	31	15.5

Special treatment	3	1.5
Total	200	100

With this number of factors, the main effects of reasons for complaints and two-way interactions were examined in this study.

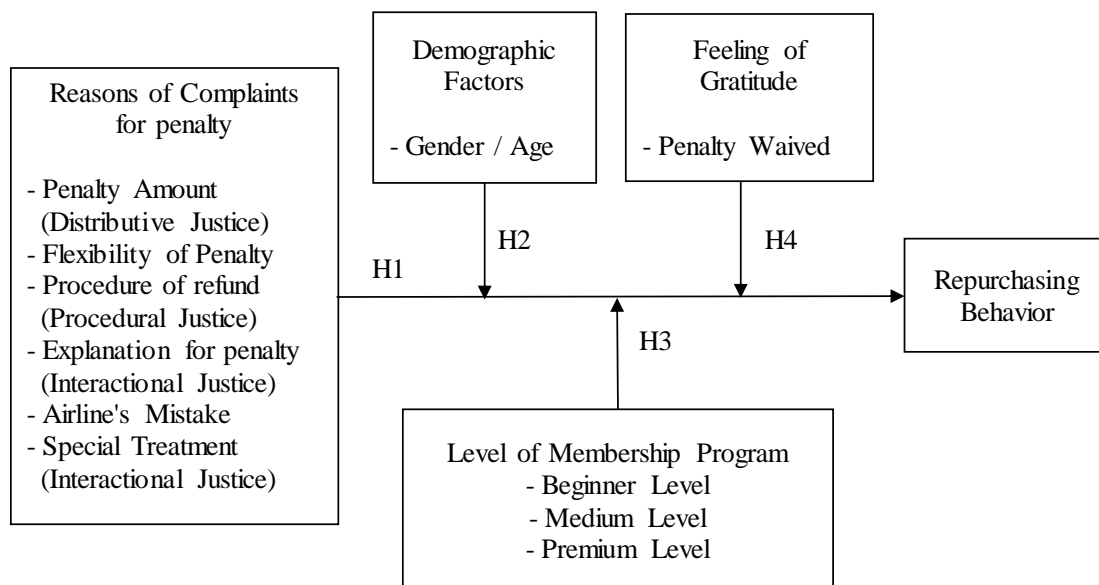


Figure 6. Research Model (2) - Reasons of complaints and Repurchase Behaviour

5.3.1 Analysis of variances (ANOVA)

To evaluate the main effects of reasons for complaints to repurchase behaviour, the data of customer repurchase behaviour was coded (1=repurchased, 0=not repurchased) by each reasons for complaint to the penalty. Hypothesis 1 was evaluated.

Hypothesis 1. Reasons of complaints include penalty amount, flexibility, procedure of refund, explanation, airlines' mistake, special treatment, all of which affect the customer's feeling of perceived justice (Fram, 1997; McCarthy and Fram, 2000). Perceived justice is the main determinant of customer's re-patronage behaviour (Blodgett *et al.*, 1993).

As a results of analysis of the main effect, a total of 61% of complaints customers purchased the airline’s ticket again. According to the reasons for complaints, mean values have slight differences. In the case of explanation, eight complaint customers repurchased tickets from the penalty- imposing airline again. Concerning flexibility of penalty, only half of the complaints customers (19 of 38) repurchased a ticket from the same airline. The factors of flexibility of penalty and procedure of penalty are played as influential variables to customer repurchase behaviour because the the mean value showed just midpoint (.50 and .54). In the case of penalty amount, the mean value was higher than the rest of the variables. It showed that reason for penalty amount when compared with other variables was not a sensitive factor.

Table 14. Main Effect of Analysis on the Reasons for Complaints and Repurchase Behaviour

Reasons of complaints	Frequency	Re-purchased	Mean Value
Penalty amount	40	30	.75
Flexibility	38	19	.50
Procedure	80	43	.54
Explanation	8	8	1.00
Airlines problem	31	20	.65
Special treatment	3	2	.67
Total	200	122	.61

To evaluate the interaction effect between moderating factors and repurchase behaviour, I performed a two-way ANOVA to hypotheses 2, 3, 4. The suggested hypotheses are described as below:

Hypothesis 2. Customer demographic factors are likely to affect the penalized customer repurchase behaviour. Harrison (2001) argued that men are more likely anger, experience of interpersonal rejection, negative word of mouth.

As a result of the gender effect on repurchase behaviour, the mean value of men

(.778) is higher than that of women (.525). In particular, the factors of flexibility and procedure, the mean value of men (.64 and .62) exhibit a big difference to the mean value of women (.37 and .40) indicating that women's repurchase behaviour was more affected by the factor of flexibility and penalty policy procedure of than men. The details are below:

Table 15. Gender Effect to Reasons for Complaints and Repurchase Behaviour

Reasons for complaints	Women (Mean value)	Men (Mean value)
Penalty Amount	.75	.75
Flexibility	.37	.64
Procedure	.40	.62
Explanations	1.00	1.00
Airlines problem	.64	.67
Special treatment	1.00	1.00
Total	.52	.68

The interaction effect of gender and reasons for complaints to penalty was not a significant effect in customer repurchase behaviour ($p=.469$).

In the case of age on the reasons for complaints and repurchase behaviour, the mean value of all categorized ages are ages of 60+ (.78) > 40~59 years (.61) > 18~39 years (.57). For the age of 60+ years, the mean value of age to the repurchase behaviour of each of the reasons for complaints showed higher than the other age bands indicating that the age of 60+ is not sensitive to the penalty policy except concerning the factor of flexibility.

The flexibility factor and penalty procedure affected customer repurchase behaviour negatively. The explanation effect influenced customer repurchase behaviour. The

details of analysis of ages and reasons of complaints are as below:

Table 16. Age Effect to Reasons for Complaints and Repurchase Behaviour

Reasons of complaints	18~39 years (Mean value)	40~59 years (Mean value)	60+ years (Mean value)
Penalty amount	.75	.71	1.00
Flexibility	.40	.55	.50
Procedure	.48	.52	1.00
Explanation	1.00	1.00	-
Airlines problem	.61	.70	.67
Special treatment	-	.67	-
Total	.57	.61	.78

The interaction effect of age and reasons for complaints to penalty was not significant effect to customer repurchase behaviour ($p=.818$).

Hypothesis 3. The membership level of the customer within the loyalty programme is based on the period of the relationship and accumulated flight mileage. It is considered as switching cost and it may play a mediating factor to protect customer from transferring. As a result of membership status to repurchase behaviour, the mean value of premium level (1.00) is higher than the medium level (.92) and the beginner level (.53). In particular, the factors of flexibility and procedure influenced beginner level customer repurchase behaviour. The interaction effect of status of membership and reasons for complaints to penalty was not a significant effect to customer repurchase behaviour ($p=.737$) indicating that effect of membership status to repurchase behaviour played an important role in affecting variable regardless of

reasons for complaints to penalty.

Table 17. Effect of Membership status to Reasons for Complaints and Repurchase Behaviour

Reasons of complaints	Beginner Level (Mean value)	Medium Level (Mean value)	Premium Level (Mean value)
Penalty amount	.70	.80	1.00
Flexibility	.41	1.00	1.00
Procedure	.45	.91	1.00
Explanation	1.00	1.00	-
Airlines Problem	.61	1.00	1.00
Special Treatment	-	-	1.00
Total	.53	.92	1.00

Hypothesis 4. Penalty waiver elicits a feeling of gratitude within the customer. Feeling of gratitude enhances loyalty, leading to increased future purchase intentions (Xia & Kukar-Kinney, 2013). Penalty waiver is likely to affect the penalized customer repurchase behaviour. Only 42 customers received penalty waiver from the airlines as a result of the penalty conflict process. As a result of the effect to repurchase behaviour, the mean value of non-waived cases (.57) is lower than the mean value of waived cases (.76). Meanwhile, in the cases of flexibility, procedure, and special treatment, the mean value of waived cases was approximately double of the mean value of non-waived cases indicating that the feeling of gratitude from penalty waiver influenced customer repurchase behaviour very strongly. The interaction effect of penalty waiver and reasons of complaints for penalty is not a

significant effect to customer repurchase behaviour ($p=.158$).

Table 18. Effect of Penalty Waiver to Reasons for Complaints and Repurchase Behaviour

Reasons of complaints	Non-waived (Mean value)	Waived (Mean value)
Penalty Amount	.77	0.00
Flexibility	.41	.78
Procedure	.49	.90
Explanations	1.00	1.00
Airlines Problem	.62	.67
Special treatment	.50	1.00
Total	.57	.76

5.3.2. Results of Analysis of Variance (ANOVA)

This research was conducted to identify the effect of reasons for complaints to penalty concerning customer repurchase behaviour with moderating factors including customer demographic factor, status of membership, feeling of gratitude (penalty waived or not). At first, I examined the main effect between reasons for complaints for penalty to customer repurchase behaviour. As a result, the total mean value showing just over midpoint (.61), indicates that the effect of reasons for complaints to penalty is not strong. In the meantime, the cases of explanation showed a very strong effect towards customer repurchase behaviour (1.00). Hypothesis 1 for effect of reasons for complaints to customer repurchase behaviour is accepted.

The gender effect to customer repurchase behaviour showed that men score higher

than women. In particular, flexibility and procedure of penalty are more sensitive to women than men. The age effect to customer repurchase behaviour indicated that the procedure of penalty affects to customer repurchase behaviour. Hypothesis 2 for the effect of demographic factor to customer repurchase behaviour is partially accepted.

The effect of status of membership to customer repurchase behaviour is fully accepted. Premium level customer repurchase behaviour was shown to be higher than the beginner and medium level. Hypothesis 3 concerning the effect of status of membership is fully accepted.

The effect of feeling of gratitude (penalty waived) to customer repurchase behaviour showed a very strong influence to flexibility, procedure and special treatment. In the cases of airlines problems such as airlines system problems or rude attitude of airlines, customers do not think that the imposing penalty is fair. In this case, penalty waiver does not lead customer to the feeling of gratitude. Because the imposing penalty was the airline's problem, it was an erroneous imposing penalty. Customer might feel that the penalty should be cancelled. Penalty waiver was regarded as a reasonable result. Hypothesis 4 concerning the effect of feeling of gratitude to customer repurchase behaviour is fully accepted.

CHAPTER 6 NON-PARAMETRIC ANALYSIS

6.1. Non-parametric prediction model using machine learning approach

To build a prediction model for customer repurchase, we adopt a non-parametric analysis based on a machine learning (ML) approach. While the parametric approach has as its aim confirmation of the impacts of variables on the repurchase behaviour, the ML approach can develop the prediction model for potential customers who are likely to repurchase in the future. The collected empirical data can be used to develop a prediction model.

In this research a machine learning approach was adopted to build a prediction model for repurchase forecasting; a Support Vector Machine (SVM) was chosen as prediction model. SVM, which was first introduced in 1992 (Boser *et al.*, 1992), is a kind of supervised learning methods used for classification and belonging to a family of generalized linear classifiers. SVM has been considered as a prediction tool that uses machine learning theory to maximize predictive accuracy while automatically avoiding over-fit to the data (Shin *et al.*, 2005).

SVM is a statistical classification method based on the structural risk minimization principle of the computational learning theory. In a binary classification case, SVM seeks a classification surface that can separate two classes from a training dataset as depicted in the Figure 7 below.

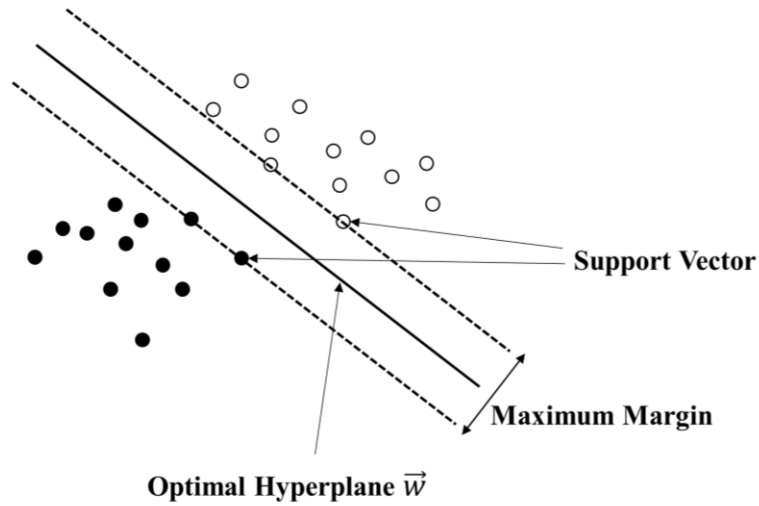


Figure 7. Illustration of SVM approach

The process for finding a hyperplane, presented by vector \vec{w} in Fig 1, corresponds to a constrained optimization problem to maximize the margin and the solution can be written as:

$$\vec{w} := \sum_j \alpha_j c_j \vec{d}_j, \alpha_j \geq 0,$$

where α_j 's are obtained by solving a dual optimization problem and $c_j \in \{1, -1\}$, which means two different classes. Those \vec{d}_j such that α_j is greater than zero are called *support vectors*, since they are the only document vectors considered to find the hyperplane \vec{w} . Classification of test data consists simply of determining which side of the \vec{w} 's hyperplane they fall on.

In this study, we apply kernel trick using radial basis function (rbf) as a kernel function for the classifier. If data is linearly separable, hyperplane can divide the data without further manipulation of feature space. However, it is often the case that the data is far from linear so the datasets are inseparable linearly. To allow the linearly inseparable datasets to be divided with hyperplane, kernels can be used to non-linear map the training data to a high-dimensional space so that new mapping can be linearly separable (Michalski *et al.*, 2013). This mapping can be defined by the

kernel:

$$K(x, x') = \Phi(x) \cdot \Phi(x')$$

We select the Gaussian Radial Basis Function (rbf), which is a popular kernel function used in SVM classification.

$$K(x, x') = \exp(-\gamma \|x - x'\|^2)$$

where $\|x - x'\|^2$ is the squared Euclidean distance between two feature vectors. For this approach, we can tune two parameters with regard to the classification performance. The first parameter is gamma (γ), this parameter defines how far the influence of a single training example reaches, with low values meaning ‘far’ and high values meaning ‘close’. The gamma parameters can be seen as the inverse of the radius of influence of samples selected by the model as support vectors (Konar & Chattopadhyay, 2011). The second parameter is the cost or penalty parameter C, which trades off misclassification of training examples against simplicity of the decision surface. A low C makes the decision surface smooth, while a high C aims at classifying all training examples correctly by giving the model freedom to select more samples as support vectors (Huang & Dun, 2008). To verify the robustness of the proposed model, we conduct the Grid Search (Oza *et al.*, 2005). The Grid Search method takes less time to find an optimal parameter than other advanced iterative methods. Also, the Grid Search can be easily parallelized because two parameter gamma and C is independent of each other (Hsu *et al.* 2003).

6.2. Building a Prediction Model and its Validation

To build a repurchase prediction model, the 200 members’ sales record data of ABC airline was collected. This data includes each member’s basic information such as gender, age, and nationality. Also, their ticket purchase data and Airline Company’s response history during the purchase and complaints are included. Customer complaint records has detail context regarding how the customer service centre

responded to the customers' complaints and the customers' responses accordingly. The detail specification of datasets is shown in the Table 17.

Table 19. Data Specification

Total number of the observed (# of customer)	200
Observation period/duration	October 2009 to April 2015
Variables and Recorded Data	Gender Age Nationality Penalty Waived Route of Registration Status of Membership Complaint Record

Using the data specified in the above table, 200 data instances were created with 10 features and one classification label: Gender, Age, Penalty Waived, Status of Membership, Reason for Complaint, and three variables coded from the complaints record based on justice theory literature (procedural, interactional, and distributive justice) and repurchase for classification label. Status of Membership and age were coded as ordinal variables and others coded as categorical variables.

The prediction model of repurchase was built with SVM approach with kernel trick based on rbf kernel. The prediction model is validated by 10-fold cross validation using the 200 observed data. To verify the robustness of the model's prediction performance and best parameters for its accuracy, a Grid Search was conducted by turning both parameter gamma and C values. The grid search result is depicted in Figure 8.

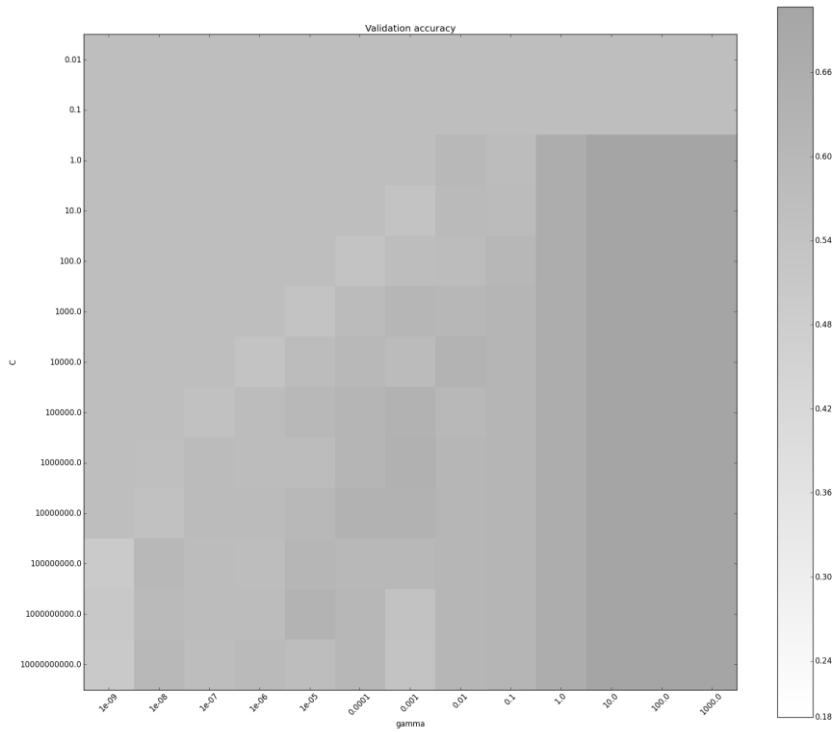


Figure 8. Grid Search Result with regard to the change of two parameter gamma and C

As we can see from the **Error! Reference source not found.**, the region where C is smaller than 1.0 and gamma is larger than 10.0 can obtain a consistent prediction accuracy level higher than 0.7. The average performance indicator within the optimal region can be found in the table. The accuracy is calculated based on the results from every pair of parameter combination in the optimal region.

Table 20. Average accuracy measure within the optimal region in Grid Search

Accuracy Measure	Value
Precision	0.7103
Recall	0.8442
F-measure	0.7715

The result of the experiment shows that the SVM-based prediction model can have an accuracy higher than 0.7 and also higher F-measure than 0.77 with high recall so

we can verify the robustness of the proposed prediction model within the optimal parameter region.

To discover which variables are more informative for repurchase prediction, we conduct the linear SVM without any kernel trick. This analysis can provide the information about the contribution of each variable to classification accuracy without any manipulation of data such as dimension adjustment and application of kernel function. While it is hard to interpret the SVM weights for a general kernel approach, the linear SVM provides useful interpretation regarding the informative features (Guyon *et al.*, 2002). We are dealing with a nine dimensional feature space to find a hyperplane and the weight for each of the features show how they are contributing to find a support vector and hyperplane for classification. The weight for the nine features can be found in table 19, below.

Table 21. Weights for each Feature in Linear SVM Analysis

Feature	Weight
Status of Member ship	1.1038
Gender	-0.0494
Age	0.1470
Penalty Waived	0.3814
Reasons for Complaint	-0.1148

The result of linear SVM is also validated by 10-folded cross validation showing a slightly lower performance than result from SVM with kernel trick (Precision: 0.7076, Recall: 0.7359, F-measure 0.7215).

CHAPTER 7 DISCUSSION

In this chapter, the findings from the two analyses are discussed. Then, the theoretical and managerial implications of this research are considered. Finally, the limitations of the research and directions for future research are suggested.

Behavioural Model to investigate the repurchase intention

The previous research on the customer repurchase intention in the airline industry has mainly focused on finding and verifying the impact of variables on the purchase intention based on relevant theoretical background. As the research on repurchase intention has been conducted in both service and product domain, the theoretical aspect of repurchase intention and its corresponding behavioural research model has been tested by many studies.

Hellier *et al.* (2003) developed a general service sector model of repurchase intention. Based on the consumer theory literature, they adopted a structural equation modelling approach by developing the model containing the main variable such as perceived value, loyalty, satisfaction, and brand preference. The proposed model has become a basis model for research on repurchase intention in various application domains. Kuo *et al.* (2009) adopted Hellier *et al.*'s model and tested it within the mobile service context and Lai *et al.* (2009) applied the model to a telecommunications industry context. Hutchison *et al.* (2009) also modified Hellier *et al.*'s model in the golf travel context.

The research on repurchase intention in the airline industry has paid more attention to the service perspective of the airline industry. Saha and Theingi (2009) investigated the impact of service quality and customer satisfaction on repurchase intention in a low-cost airline context in Thailand. Their model adopted the SERVPERF (Cronin and Taylor, 1992) instrument to measure the service quality. Nikbin *et al.* (2011) investigating the effects of perceived justice in service recovery on firm reputation and repurchase intention in the airline industry, particularly focus on verifying a moderating role of firm reputation on behavioural intentions. Park *et al.* (2004) also paid attention to service

quality on passengers' behavioural intention. They hypothesized the relationship among service expectation, service perception, service satisfaction, airline image, and behavioural intention and analyzed using path analysis based on the results from a customer survey.

The studies discussed above adopt the behavioural model to find variables that have an impact on repurchase intention. However, most approach that test the behavioural model such as structural equation model or path analysis based on survey data has critical limitation as they can only measure the customers' repurchase intention indirectly. Survey-based analysis solely depends on the response from respondents so it can only verify the respondents' intention that can affect the future behaviour. For this reason, the derived result can be only "tentative results."

As a consequence, we track and collect the customers' transaction data for investigating the variables that can have an impact on the repurchase of customers. Using this data, this research can be conducted using a two-stage analysis approach: testing the behavioural model and building a prediction model.

Two stage analysis – Logistic regression and SVM-based prediction model

Two-stage analysis consists of two different data analysis methods. Firstly, as a parametric approach, logistic regression is conducted to validate the impact of variables on the repurchase. The aim of this approach is to verify the impact of each variable in a statistical manner so that the result can confirm or revisit the past studies about customers' repurchase intentions. The results derived from the statistical approach might be similar to the result from past studies; however, the data used for this thesis is directly collected from customers' transaction record, which is more accurately measure than the data collected from survey.

In the second approach, as a non-parametric approach, a machine leaning-based prediction model is built using a support vector machine. While the aim of the first stage is the verification of the impact of relevant variables to repurchase, the second stage tries to build a prediction model, which can forecast which customer is more likely to

purchase the ticket again.

Discussion of the findings of this research

The research was conducted in two stages of analysis with a total data set of 200 in order to investigate the impact of penalty policies to customer repurchase behaviour in the airline business. In the airline business, penalty policies are widely adopted and considered a common regulation as a marketing tool based on pricing strategies. The nature of penalty is considered to have a negative impact on customers' loyalty and repurchase behaviour. In recent years, the airline business circumstances have become difficult because of the low cost carriers' aggressive fare strategies in marketing.

Table 22. Comparison of previous literature and Findings of this Research

Predictor	Current Literature	Findings of this Research
Perceived Fairness	The key variable to customer response to penalty (Fram, 1997; McCarthy & Fram, 2000)	Partially accepted. Important variable of customer complaints but not much affecting customer repurchase behaviour.
Perceived Justice	The main determinant of customer's re-patronage behaviour (Blodgett <i>et al.</i> , 1993)	Partially accepted. Most penalized customers considered as main reasons for complaint are perceived justice. However, perceived justice did not play a key role of affecting variable to customer repurchase behaviour.
Purpose of Penalty	Limited influence to customer compliance to purchase agreement (McCarthy & Fram, 2000)	Accepted. 122 of 200 repurchased.
Penalty Waiver	Few cases waived penalty in airline (Fram & Callahan, 2001)	Partially accepted. 42 of 200 were waived.
Flexibility of Penalty	Important factor to build customer relationship (Fram & Callahan, 2001)	Accepted. Flexibility of penalty is one of the most frequent reasons for customer complaints concerning penalty. However, it is not affecting the customer's repurchase behaviour.
Gender Effect	Men are more likely to be angry, experience interpersonal rejection,	Accepted. Number of men's complaints is 113

	use negative word of mouth (Harrison, 2011)	> number of women 87
Gratitude	Gratitude enhanced loyalty, leading to increased future purchase intentions (Xia and Kukar-Kinney, 2013)	Partially accepted. Penalty waived: 32 of 42 repurchased (76%) Rejected penalty waiver: 90 of 158 repurchased (57%)
Loyalty / switching cost	Switching costs positively related with loyalty	Accepted. As loyal customers are likely to stay with penalty imposing airlines. In airlines, status of membership of loyalty programme is played as a switching cost.

In this situation, understanding the impact of penalty to customer repurchase behaviour is important to balance between airlines' revenue improvement and penalty policies. The goal of this research is to identify the impact of penalty to customer repurchase behaviour. To identify the impact of penalty, this research collected a useful dataset of 200 from actual customer complaints cases for the imposing customer penalty from airlines. The collected data were examined by parametric analysis methods including logistic regression analysis and non-parametric analysis, and machine learning. As predictable variables, customers' demographic factors (gender, age, nationality), the status of customers' membership within the loyalty programme, the results of customers' requests for penalty waiver (waived or denied), reasons for complaints for imposed penalty are considered. As a dependent variable, customers' repurchase behaviour is considered. As the first analysis by parametric method, the logistic regression analysis was performed in the IBM SPSS 20 program. As a result, the status of customers' membership of loyalty programme is identified as a significant influential variable to customers' repurchase behaviour. The results indicate that customers who were categorized in the premium level (high miler) of membership status tended to buy the airlines ticket even though a penalty had been imposed. This result showed that the airlines loyalty programme can be used as a potential switching cost when customers considered transfer to other airlines as an alternative to the penalty-imposing airline. The customers' demographic factors are not indicated as significantly influential factors

to customers' repurchase behaviour. The results of analysis of reasons for complaints to penalty as a predictable variable indicated that they are not key influential factors to customers' repurchase behaviour.

The second analysis focused on building a prediction model that can forecast future repurchase using customer data. The prediction model has a moderate prediction performance when the kernel trick method is applied (precision, recall, and f-measure was higher than 0.7). The importance of status of customers' membership has been re-affirmed. This variable has highest weights on the SVM-based prediction model. Also, nationality has a negative weight to predict the repurchase behaviour.

All the findings from the two stage analysis have a significant contribution to academia as well as industry. While past studies have focused on measuring repurchase intention using questionnaire and conceptual model, this thesis provides direct evidence that refers to the factors affecting customer repurchase by using customer records data.

Managerial Implications

There was no empirical research on the impact of penalty to customer repurchase behaviour based on actual data in the airline business. Previous literature conducted research to understand the customer response to imposing penalty by collecting survey-based data. As potentially influential variables to customer resulting behaviour, feeling of fairness and justice (Blodgett *et al.*, 1993; Fram, 1997; Fram and McCarthy, 1999; Kim and Smith, 2005), feeling of gratitude (Xia and Kinney, 2013), flexibility of penalty policy and penalty amount (McCarthy and Fram, 2000) and penalty attributes and attribution, expectancy (Kim and Smith, 2005), loyalty (Wang *et al.* 2011) and switching cost (Lam *et al.*, 2004) are considered.

As a result of this study, firstly, the status of the customer membership programme is demonstrated as a key factor affecting on repurchase behaviour following the penalty resolution procedure indicating that the airline's loyalty programme plays a role in its competitive marketing advantage. To attract more customers to the airline, a certain marketing effort is required that more aggressively recommends new customers join the

loyalty programme and airlines should take care of membership customers as part of their relationship marketing.

Secondly, many complaints are related to penalty flexibility and the inconvenient refund procedure. From the perspective of airlines, it is required to make a simple, clear and flexible imposing penalty process. At this moment, the imposing penalty amount of airlines is fixed not flexible to ticket fare amount. The executives of airlines are able to explain the rational reasons of calculation of the penalty amount. Concerning the refund procedure, it should be simplified the proving documents and procedure between customer and airline and procedure between airline and travel agency or bank.

Third, in the case of airline's problem, customers are willing to argue the justification of penalties with airlines. As a result of penalty conflict, penalty waiver is considered a reasonable response by customer. In this case, penalty waiver did not encourage customer feeling of gratitude and did not affect customer repurchase behaviour. Nevertheless, Harrison (2011) investigating the imposing penalty by customer mistakes, notes that airline mistakes should be regarded as large portion of customer complaints for penalty.

To identify the impact of penalty to customer repurchase behaviour, a logistic regression analysis, two-way ANOVA, and SVM was performed. As a result, I found that the feeling of justice from responsibility of penalty and feeling of gratitude from penalty waiver played an important role in encouraging customer repurchase behaviour. Lack of flexibility and inconvenience of procedure of penalty are considered as negative effect factors to customer repurchase behaviour. Feeling of gratitude has a strong effect in customer repurchase behaviour.

CHAPTER 8 CONCLUSION

8.1 Research Summary

Penalty policy has been widely adopted as a tool of customer relationship marketing in service industries; in the meantime, customer complaints to the penalty-imposing companies are increasing. Customer penalties are considered to cause negative emotions and negative repurchase behaviour. Some scholars have conducted research to identify customer repurchase behaviour after receiving a penalty from a service company; however, they have had difficulty collecting actual data from service companies such as airlines because the executives of the airlines did not want to discuss their penalty policies as a public topic. Therefore, current literature examined the data collected from participant responses by survey method.

In this thesis, the author contacted the service satisfaction executives of airlines and collected actual data from airlines to understand the actual customer's resulting repurchase behaviour after the penalty resolution process. To understand the impact of penalty to customer repurchase behaviour, the collected data were categorized by demographic factors, reasons for complaints concerning penalty, and customer status of the membership programme of airlines as predictor variables and repurchase behaviour as a resulting outcome variable.

In this thesis, the logistic regression analysis model (binary regression) and the Support Vector Machine (SVM) model were adopted as theoretical framework. As a result of the categorizing process for collected data, the main reasons for customer complaints for penalty are identified as: 1) excessive penalty amount, 2) lack of flexibility of penalty policy, 3) inconvenience of refund procedure, 4) lack of explanation of penalty conditions beforehand, 5) airline's mistake, 6) disconfirmation of expectations(entitlement). In addition to the above, demographic factors of customers and customer's membership status of airlines are considered as predictor variables.

The results of this thesis showed that the customer's membership status is a key affecting variable to customer's repurchase behaviour and the other variables are not significantly influential factors to the customer's repurchase behaviour. Another finding from this empirical study shows that 42 of 200 cases received penalty waiver from the airlines as a results of the penalty resolution process. According to gratitude theory (Xia and Kukar-Kinney, 2013), customers who receive penalty waiver have induced feelings of gratitude towards the airline and take a positive repurchase behaviour compared to the other customers who did not receive a penalty waiver. Ten of 42 cases (24%) were indicated as having a positive repurchase behaviour and the remaining 42 cases were not. The 24 % of repurchase behaviour of penalty waiver cases were lower than the average percent of repurchase behaviour of collected data (78 of 200 cases, 39%) indicating that the role of feelings of gratitude from penalty waiver are not played as a significant factor to customer repurchase behaviour.

The customer's feeling of entitlement was adopted as a predictor variable, only three of 200 cases, however, were found and two of three cases repurchased. Therefore, the customer's feeling of entitlement is not considered a significant variable to customer repurchase behaviour.

In particular, the perceived fairness based on the concept of justice theory is not the key factor of customer's resulting repurchase behaviour to the airlines. As the main reasons of customers' complaints for the imposing penalty, customers' perceived fairness as a key role of customer complaints behaviour. From the perspective of resulting repurchase behaviour, however, perceived fairness is not a significantly affecting factor to customers' repurchase behaviour.

The first contribution of this study is that it is the first empirical study using actual data from airlines and airport authorities for customers' complaints for penalty and resulting repurchase behaviour after the penalty resolution process between customers and the airline. In general, research for customer penalties in the service industry is conducted from a scenario-based questionnaire survey experiment. The use of actual data from airlines and airport authorities provides more practical suggestions and valid results.

Secondly, this thesis provides the theoretical contribution into the reasons for complaints for customer penalty. Considering most of the imposing penalties take place in the process of ticket refund or itinerary schedule change, complexity of refund procedure can be added to reasons for customer complaints. As a result of this research, the complexity of the refund procedure is shown to contribute to customer complaints concerning penalty.

Thirdly, the importance of loyalty programmes such as airlines' membership programmes emerged as a key role in customer repurchase behaviour. This loyalty programme (status of membership) played a role to protect customers' complaints for penalty and to protect customers' from transferring to competitor airlines as a switching cost.

Fourthly, from the research methodologies perspective, this thesis was conducted using two analysis models, a logistic regression model as a parametric method and the support vector machine (SVM) model as a non-parametric method.

8.2 Research Limitations

This study was conducted to understand the impact of penalty policy to customers' repurchase behaviour in the airline industry in South Korea. This study was focusing on the penalty policy of the airline industry because of lack of empirical literature. To make clear the understanding, the author collected actual data for customer complaints cases for imposing penalty during the airline ticket refund or change schedule procedure. Eventually, 200 useful items of data were collected to be categorized as predictor variables and outcome variable. Furthermore, the research was conducted based on these data, whereas, customers who have no airline loyalty programme membership number were excluded. To trace the resulting repurchase behaviour of penalized customers, the loyalty membership number was used as a reference of customer buying history indicating that this research has a limitation in that it represents the results of the impact of penalty to customer repurchase behaviour.

Second, this study has a limitation to evaluate the changes of customer emotion towards penalty. This study examined the data collected from the results of the penalty resolution process. A survey-based questionnaire was not performed. There were no customers' explanations concerning their intentions. The author determined the customers' intentions by the resulting repurchase behaviour.

Third, this research focused on the penalty from ticket refund or schedule change situations in the airline industry only. In the airlines market, several types of penalties exist such as excess baggage fees rather than free baggage allowance. Adopting a variety of penalties could demonstrate more widely applicable research results for customer repurchase behaviour.

Lastly, this research was based on the data collected from airlines and airport authorities in South Korea. Most of customers are Korean indicating that there was a specific Korean culture and atmosphere as the background to customer emotions and reactions to imposing penalty. The extent to which the results of this research demonstrate the impact of penalty to customer repurchase behaviour, however, is limited to adopting the results of this research to the general situation because of culture differences.

8.3 Future Research Direction

There are some agenda for future research concerning penalty policy in the airline industry. Firstly, in addition to this research, it will be interesting to understand the impact of culture differences of customers to perceived feelings of penalty policy and repurchase behaviour. Under the same penalty conditions, the possibility of whether any response differences happened between customers from different cultures can be considered as a factor of building effective airline penalty policies. Secondly, if there are any differences of customer response to penalty-imposing airline, it should be considered as culture difference, because the airlines penalty policy is adopted by different conditions depending upon different regions of culture and regulations. Thirdly, the South Korean airlines research object should be extended to worldwide airlines. To do so, the results of extended research can be regarded as more externally valid.

Furthermore, research should be performed to determine the reasonable penalty amount. Fram and Callahan (2001) argue that airlines' penalty policy was accepted as a fair policy with a justified penalty amount. However, in this study, many customer complaints are related to the imposing penalty amount. As a future research topic regarding penalty, the balance of the fare strategy and the penalty policy in airline should be examined. Recent trends in airline marketing, such as low cost carriers (airlines), are emerging as new competitors by discounted air-fare ticket to current full service carriers(airlines). With a more discounted fare, severe penalty conditions are applied on the offered fare. From the view point of airlines, they have to know the balance of a customer's preferred conditions such as cheap air-fare with severe penalty or normal air-fare with almost no penalty conditions. Understanding the customer's preferences can be helpful in building and performing a more profitable penalty policy in the airline business.

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Appendix A: Variables (Predictor and Outcome)

Table 1. Definitions of Variables

L/I	Categorized Factor	Definition	Reference	Related theory
1	Penalty Amount & Severity	Penalty amount is the amount of money imposed to customer as a penalty. Penalty amount is related to the concepts of Equity from the Distributive Justice perspective.	McCarthy & Fram (2000) Kim & Smith (2005)	Distributive Justice
2		The level of punitive actions of company to customers. The penalty amount and customers responses are may affected by the penalty severity.	Kim & Smith (2005)	Penalty attributes
3	Flexibility	Flexibility is related to the exceptions of penalty policy to customer's unusual situations. (ex. injury or illness to customers or a family member)	McCarthy & Fram (2000)	Procedural Justice
		“Flexibility refers to the adaptability of procedures to reflect individual circumstances.”	Tax. Brown. & Chandrashen karan(1998) , Kim & Smith (2005)	Penalty attributes
4	Procedure(Refund)	Procedure of refund means that the procedure of refund ticket. Most of refund procedure	Ticket refund conditions and	Procedural Justice

		followed by imposing penalty should be asked by customer to begin ticket refund.	procedure regulated by airlines.	
5	Explanation	Explanation is used to understand customers the company penalty policies presence to be needed. Explanation is related to interactional justice.	McCarthy & Fram (2000)	Interactional Justice
6	Special Treatment	A loyal customer who has a long time relationship with the company is entitled to be treated as a special way, such as penalty waiver.	Fram & Callahan (2001) Xia & Kukar-Kinney (2014)	Interactional Justice
7	Airline Mistake	The cases of penalty imposed due to airlines' mistakes including refund system error, employee's misinformation and employee's bad attitude.	-	Attribution
		This is considered as an uncontrollable factor from customer's prospective.	Kim & Smith (2005)	Attribution theory

Table 2. Categorized of Variables

	Subject			Code	Etc.
1	Customer	Repurchase	Yes	1	

	reaction for Penalty		No	0	
2	Status of Membership	Beginner Level	0~39,999 Mileage	1	
		Middle Level	40,000~99,999	2	
		High Level	100,000~	3	
3	Gender	Male		1	
		Female		0	
4	Age	18~39	Year of Birth 1977~1998	1	
		40~59	Year of Birth 1956~1976	2	
		60 ~	Year of Birth ~1955	3	
5	Nationality	Korean		1	
		Others		0	
6	Results of Penalty waiver request	Penalty Waived	Yes	1	
			No	0	
7	Reasons of complaints for penalty	Penalty Amount		1	
		Flexibility of penalty policy		2	
		Procedure of refund (inconvenience)		3	
		Explanations		4	
		Airlines Problem (system problem, employee's bad attitude)		5	
		Special treatment(entitlement)		6	
8	Route of Registration of complaints	Airline's home page(Internet)		1	
		Telephone		2	
		Etc.		3	
9	Distributive	Equity / Equality		Related: 1	

	Justice	(penalty amount & conditions)	/ Not- related: 0	
	Procedural Justice	Flexibility / Procedure		
	Interactional Justice	Explanation for penalty beforehand		

Appendix B: Data Coding Table

Table 1: Data Coding sheet of 200 collected data set

L/I	Status of Membership	Gender	Age	Nationality	Penalty Waived	Reasons of Complaints	Distributive Justice	Procedural Justice	Interactional Justice	Resulting Behaviour (Repurchase)
1	1	0	1	1	0	1	1	0	0	1
2	1	1	2	1	0	1	1	0	0	0
3	1	0	1	1	0	5	0	0	1	1
4	1	1	2	1	0	2	1	1	0	1
5	2	1	2	1	1	3	0	1	0	1
6	1	0	2	1	1	1	1	0	0	0
7	1	1	2	1	0	2	1	1	0	0
8	1	0	1	1	0	3	1	0	0	0
9	1	0	2	1	0	3	0	1	0	1

10	1	1	3	1	0	1	1	0	0	1
11	2	1	2	1	1	3	0	1	0	1
12	1	0	1	1	0	3	1	0	0	0
13	1	1	1	1	0	3	1	0	0	0
14	1	0	1	1	1	5	0	0	1	0
15	1	1	1	1	0	3	0	1	0	1
16	2	1	2	1	1	2	0	1	0	1
17	1	1	2	1	0	3	0	1	0	0
18	1	0	2	1	0	2	0	1	0	1
19	1	0	2	1	0	2	1	1	0	0
20	1	0	3	2	0	2	0	1	0	0
21	1	0	2	1	0	3	1	0	0	0
22	1	0	1	1	0	2	1	1	0	1
23	1	1	1	1	0	2	1	0	0	1
24	1	1	2	1	0	3	1	0	0	1
25	1	0	1	1	1	5	0	1	1	1
26	1	1	2	1	0	1	1	0	0	1
27	1	0	2	1	0	3	1	0	0	0

28	1	0	2	1	0	6	1	0	0	0
29	1	0	2	1	0	2	0	1	0	1
30	1	1	2	1	0	3	1	0	0	0
31	1	1	2	1	0	2	1	1	0	0
32	1	1	2	1	0	3	0	1	0	1
33	3	1	3	1	1	2	0	1	0	1
34	1	0	1	1	0	3	0	1	0	0
35	1	1	1	0	0	3	0	1	0	1
36	1	1	1	1	0	1	1	0	0	0
37	1	1	1	0	0	1	0	1	0	1
38	1	1	2	1	0	3	1	0	0	1
39	1	1	2	1	0	2	1	1	0	0
40	1	1	1	1	1	3	1	0	0	1
41	1	0	2	1	0	5	0	1	0	1
42	1	0	2	1	0	1	1	1	0	0
43	1	1	3	1	0	2	0	1	0	0
44	1	1	3	1	0	2	1	1	0	1
45	2	0	2	1	0	1	0	1	0	0

46	1	1	1	0	1	3	1	1	0	1
47	2	1	2	1	0	1	1	0	0	1
48	3	0	1	1	0	1	1	0	0	1
49	1	1	2	1	0	3	1	0	0	1
50	1	0	2	1	0	3	1	0	0	0
51	1	0	3	1	0	1	1	0	0	1
52	1	0	1	1	0	5	0	1	0	1
53	1	1	2	1	0	3	1	0	0	0
54	1	1	1	1	0	3	1	0	0	0
55	2	1	3	1	0	3	1	1	0	1
56	1	0	1	1	1	2	0	1	0	1
57	1	0	2	1	0	3	1	0	0	0
58	1	1	2	1	0	3	0	1	0	1
59	1	0	2	0	1	2	1	1	0	0
60	1	1	1	1	0	1	1	0	0	0
61	1	0	3	1	1	2	1	1	0	0
62	1	0	2	1	0	3	0	1	0	0
63	2	1	2	1	0	3	0	1	0	1

64	1	0	2	1	0	3	1	0	0	0
65	1	0	1	1	0	1	1	0	0	1
66	1	1	2	1	0	3	1	0	0	0
67	1	0	1	1	0	3	0	0	0	1
68	2	0	1	1	0	3	0	1	0	1
69	2	1	2	1	0	1	1	0	0	1
70	1	0	1	1	0	5	0	1	0	1
71	1	1	1	1	1	5	0	0	1	0
72	3	0	1	1	0	3	1	0	0	1
73	1	0	2	1	0	1	1	0	0	0
74	1	0	1	1	0	3	1	0	0	0
75	1	1	2	1	0	1	1	1	0	1
76	3	0	2	1	0	1	1	0	0	1
77	1	1	1	1	1	5	0	0	1	1
78	1	1	2	1	1	2	0	1	0	1
79	1	0	1	1	0	3	1	0	0	1
80	2	1	1	1	0	3	0	1	0	0
81	2	1	2	1	1	5	0	0	1	1

82	1	0	2	1	0	1	1	0	0	1
83	1	1	2	1	1	5	0	0	1	0
84	2	1	2	1	1	2	1	1	0	1
85	1	1	3	1	1	3	1	0	0	1
86	1	0	2	1	0	2	0	1	0	0
87	1	1	2	1	0	5	0	0	1	0
88	1	0	2	1	0	3	1	0	0	0
89	1	1	2	1	0	3	1	0	0	1
90	1	1	3	1	0	1	1	0	0	1
91	1	0	1	1	0	5	0	0	1	0
92	1	1	1	1	0	3	1	0	0	0
93	1	1	2	1	0	3	1	0	0	0
94	1	1	3	1	0	5	0	1	0	1
95	1	0	1	1	0	3	1	1	0	0
96	1	1	2	1	1	4	0	0	1	1
97	1	0	1	1	0	5	0	0	1	0
98	1	0	2	1	0	2	1	0	0	0
99	1	0	1	1	0	3	1	0	0	1

100	1	1	2	1	0	3	1	0	0	0
101	2	0	2	1	1	3	0	1	0	1
102	1	1	2	1	0	2	1	1	0	1
103	1	1	3	1	0	3	1	0	0	1
104	1	0	3	1	0	5	0	0	1	0
105	1	0	2	1	0	4	0	0	1	1
106	1	1	2	1	0	1	1	0	0	1
107	1	1	1	1	0	3	0	0	1	0
108	3	1	2	1	0	2	1	1	0	1
109	1	0	1	1	0	5	1	0	0	0
110	2	1	2	1	0	3	1	0	0	1
111	1	0	2	1	1	5	0	0	1	1
112	1	0	2	1	0	1	1	0	0	1
113	2	1	2	1	0	3	1	0	0	1
114	1	1	1	1	1	3	1	1	0	1
115	3	1	1	1	1	5	0	0	1	1
116	3	1	2	2	1	6	1	0	1	1
117	2	1	2	1	0	1	1	0	0	1

118	1	1	2	1	0	3	1	0	0	0
119	2	1	2	1	1	2	0	1	0	1
120	1	0	2	1	0	3	1	0	0	1
121	1	1	3	1	1	5	0	0	1	1
122	1	0	1	1	0	1	1	0	0	1
123	1	0	2	1	0	3	1	0	0	1
124	1	1	2	1	0	3	0	1	0	0
125	1	0	1	1	0	2	0	1	0	0
126	1	1	2	1	1	5	0	0	1	0
127	1	0	1	1	1	5	0	0	1	1
128	1	0	1	1	0	2	0	1	0	0
129	1	0	1	1	0	1	1	0	0	1
130	1	1	2	1	0	1	1	0	0	1
131	1	0	2	1	0	2	0	1	0	1
132	1	1	2	1	0	1	1	0	0	0
133	1	1	1	0	0	3	0	1	0	1
134	1	1	2	1	0	1	1	0	0	1
135	1	1	2	1	0	3	1	0	0	1

136	2	1	2	1	1	5	0	0	1	1
137	1	1	1	0	0	5	0	0	1	1
138	1	0	1	1	0	2	0	1	0	0
139	1	1	1	1	0	3	1	0	0	0
140	1	0	1	1	1	5	0	0	1	0
141	3	1	2	1	0	1	1	0	0	1
142	1	0	2	1	0	3	0	1	0	0
143	2	1	2	1	0	1	1	0	0	1
144	3	1	2	0	0	6	1	0	1	1
145	1	0	2	1	1	4	0	0	1	1
146	1	0	2	1	0	1	1	0	0	1
147	1	0	3	1	1	2	0	1	0	1
148	1	1	2	1	0	3	0	1	0	1
149	1	1	2	1	0	1	1	0	0	0
150	1	1	2	1	0	1	1	0	0	0
151	1	1	2	1	0	3	1	0	0	0
152	1	1	2	1	0	3	0	1	0	0
153	1	1	1	1	1	3	1	0	0	1

154	1	0	1	1	1	5	0	1	1	1
155	1	0	1	1	0	3	1	0	0	1
156	1	0	2	1	0	2	1	0	0	0
157	1	0	2	1	1	5	0	0	1	1
158	1	1	2	1	0	2	1	1	0	0
159	1	0	1	1	0	2	1	1	0	0
160	1	1	2	1	0	1	1	0	0	1
161	1	1	1	1	1	4	1	0	1	1
162	1	1	2	1	0	1	1	0	0	1
163	1	1	2	1	0	2	1	0	0	1
164	1	1	2	1	0	4	0	0	1	1
165	3	1	2	1	0	3	1	0	0	1
166	1	1	2	1	0	3	1	0	0	0
167	1	1	1	1	0	2	1	1	0	1
168	2	1	1	1	0	4	1	0	1	1
169	1	1	2	1	0	3	1	0	0	0
170	1	0	2	1	0	3	1	0	0	0
171	1	1	1	1	0	4	0	0	1	1

172	1	1	3	1	0	1	1	0	0	1
173	1	0	2	1	0	3	1	0	0	1
174	1	1	2	1	0	3	1	0	0	1
175	2	1	2	1	0	3	0	1	0	1
176	1	0	1	1	0	2	0	1	0	0
177	1	0	2	1	0	3	1	0	0	0
178	1	1	1	1	0	3	1	0	0	0
179	1	1	2	1	0	2	0	1	0	0
180	1	1	1	1	0	2	0	1	0	0
181	1	0	1	1	0	5	0	0	1	1
182	2	0	2	1	0	2	0	1	0	1
183	1	0	2	1	0	1	1	0	0	1
184	1	0	2	1	0	1	1	0	0	1
185	1	0	1	2	0	3	0	1	0	0
186	1	1	2	1	0	3	1	0	0	1
187	3	1	2	1	0	1	1	0	0	1
188	3	1	2	1	0	1	0	1	0	1
189	1	0	2	1	0	5	0	1	0	1

190	3	1	2	1	0	3	0	1	0	1
191	1	0	1	1	1	5	0	0	1	1
192	1	1	2	1	1	5	0	0	1	1
193	3	1	3	1	0	3	0	1	0	1
194	1	0	1	1	1	3	1	0	0	0
195	1	0	1	1	1	5	0	0	1	0
196	1	0	2	1	0	3	1	0	0	0
197	2	1	1	1	0	4	1	0	1	1
198	2	1	3	1	1	3	0	1	0	1
199	1	0	2	1	0	3	1	0	0	1
200	1	1	2	1	0	3	1	0	0	1

Appendix C. Results of Logistic Regression (IBM SPSS20)

Appendix C. Block 1: Method = Backward Stepwise (Conditional)

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	42.231	10	.000
	Block	42.231	10	.000
	Model	42.231	10	.000
Step 2 ^a	Step	-.133	1	.716
	Block	42.098	9	.000
	Model	42.098	9	.000
Step 3 ^a	Step	-.487	1	.485
	Block	41.612	8	.000
	Model	41.612	8	.000
Step 4 ^a	Step	-.617	1	.432
	Block	40.995	7	.000
	Model	40.995	7	.000
Step 5 ^a	Step	-.431	1	.511
	Block	40.564	6	.000

	Model	40.564	6	.000
Step 6 ^a	Step	-.388	1	.533
	Block	40.176	5	.000
	Model	40.176	5	.000
Step 7 ^a	Step	-1.008	1	.315
	Block	39.168	4	.000
	Model	39.168	4	.000
Step 8 ^a	Step	-1.839	1	.175
	Block	37.329	3	.000
	Model	37.329	3	.000

a. A negative Chi-squares value indicates that the Chi-squares value has decreased from the previous step.

Appendix C. Research Model Summary in Logistic Regression (SPSS20)

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	225.268 ^a	.190	.258
2	225.401 ^a	.190	.257
3	225.888 ^a	.188	.255

4	226.504 ^a	.185	.251
5	226.935 ^a	.184	.249
6	227.323 ^a	.182	.247
7	228.331 ^a	.178	.241
8	230.170 ^a	.170	.231

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Appendix C. Hosmer and Lemeshow Test in Logistic Regression (SPSS20)

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	13.352	8	.100
2	6.320	8	.611
3	16.239	8	.039
4	5.299	7	.623
5	4.810	7	.683
6	6.957	7	.433
7	2.008	5	.848
8	1.344	3	.719

Appendix C. Contingency Table for Hosmer and Lemeshow Test

		Repurchase = .00		Repurchase = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	11	12.893	8	6.107	19
	2	17	12.567	5	9.433	22
	3	13	11.688	9	10.312	22
	4	13	12.250	12	12.750	25
	5	3	9.210	17	10.790	20
	6	9	8.195	11	11.805	20
	7	8	6.667	12	13.333	20
	8	3	3.323	17	16.677	20
	9	1	1.119	19	18.881	20
	10	0	.088	12	11.912	12
Step 2	1	12	13.400	8	6.600	20
	2	15	12.029	6	8.971	21
	3	12	10.607	8	9.393	20
	4	11	10.443	10	10.557	21
	5	7	9.337	13	10.663	20
	6	7	8.556	13	11.444	20

	7	7	7.603	14	13.397	21
	8	4	4.339	16	15.661	20
	9	3	1.453	17	18.547	20
	10	0	.230	17	16.770	17
Step 3	1	11	13.156	9	6.844	20
	2	13	10.283	5	7.717	18
	3	15	10.828	5	9.172	20
	4	3	6.953	11	7.047	14
	5	11	9.808	9	10.192	20
	6	9	9.442	12	11.558	21
	7	5	7.746	14	11.254	19
	8	8	6.251	12	13.749	20
	9	1	2.694	19	17.306	20
	10	2	.840	26	27.160	28
Step 4	1	14	13.521	7	7.479	21
	2	10	10.571	9	8.429	19
	3	15	13.624	10	11.376	25
	4	5	6.801	9	7.199	14
	5	18	15.004	14	16.996	32

	6	5	8.167	15	11.833	20
	7	8	6.544	12	13.456	20
	8	2	2.798	18	17.202	20
	9	1	.969	28	28.031	29
Step 5	1	11	12.259	8	6.741	19
	2	15	13.542	9	10.458	24
	3	10	9.510	8	8.490	18
	4	8	8.099	8	7.901	16
	5	18	15.207	15	17.793	33
	6	5	8.504	15	11.496	20
	7	8	7.011	13	13.989	21
	8	2	2.939	18	17.061	20
	9	1	.929	28	28.071	29
Step 6	1	11	12.246	8	6.754	19
	2	12	10.019	6	7.981	18
	3	12	11.940	10	10.060	22
	4	1	1.973	3	2.027	4
	5	26	22.045	20	23.955	46
	6	5	9.171	17	12.829	22

	7	7	6.992	14	14.008	21
	8	3	2.932	19	19.068	22
	9	1	.682	25	25.318	26
Step 7	1	2	1.738	0	.262	2
	2	22	22.532	17	16.468	39
	3	40	38.040	38	39.960	78
	4	7	9.381	17	14.619	24
	5	5	4.776	16	16.224	21
	6	2	1.370	19	19.630	21
	7	0	.162	15	14.838	15
Step 8	1	2	1.723	0	.277	2
	2	64	64.255	62	61.745	126
	3	9	9.401	19	18.599	28
	4	3	2.085	18	18.915	21
	5	0	.536	23	22.464	23

Appendix C. Classification Table^a

	Observed		Predicted		
			Repurchase		Percentage Correct
			.00	1.00	
Step 1	Repurchase	.00	45	33	57.7
		1.00	25	97	79.5
	Overall Percentage				71.0
Step 2	Repurchase	.00	44	34	56.4
		1.00	26	96	78.7
	Overall Percentage				70.0
Step 3	Repurchase	.00	41	37	52.6
		1.00	23	99	81.1
	Overall Percentage				70.0
Step 4	Repurchase	.00	39	39	50.0
		1.00	26	96	78.7
	Overall Percentage				67.5
Step 5	Repurchase	.00	44	34	56.4
		1.00	30	92	75.4
	Overall Percentage				68.0

Step 6	Repurchase	.00	35	43	44.9
		1.00	24	98	80.3
	Overall Percentage				66.5
Step 7	Repurchase	.00	24	54	30.8
		1.00	17	105	86.1
	Overall Percentage				64.5
Step 8	Repurchase	.00	66	12	84.6
		1.00	62	60	49.2
	Overall Percentage				63.0

a. The cut value is .500

Appendix C. Variables in the Equation in Logistic Regression (SPSS20)

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1 ^a	Membership	2.305	.714	10.424	1	.001	10.029	2.474	40.650
	Gender	.224	.337	.439	1	.508	1.251	.645	2.423
	Age	.280	.286	.960	1	.327	1.323	.756	2.316
	Nationality	-2.001	1.088	3.385	1	.066	.135	.016	1.139
	Penalty Waived	.637	.507	1.578	1	.209	1.891	.700	5.112
	Reasons of Complaints	-.149	.176	.724	1	.395	.861	.610	1.215
	Distributive	-.374	.546	.469	1	.493	.688	.236	2.006
	Procedural	-.345	.490	.496	1	.481	.708	.271	1.849

	Interactional	.278	.764	.132	1	.716	1.321	.295	5.909
	Constant	-.673	1.554	.188	1	.665	.510		
Step 2 ^a	Membership	2.312	.714	10.495	1	.001	10.093	2.492	40.873
	Gender	.234	.336	.487	1	.485	1.264	.654	2.442
	Age	.270	.284	.905	1	.342	1.310	.751	2.287
	Nationality	-1.993	1.083	3.388	1	.066	.136	.016	1.138
	Penalty	.707	.471	2.255	1	.133	2.029	.806	5.107
	Reason	-.126	.163	.599	1	.439	.882	.641	1.213
	Distributive	-.478	.464	1.062	1	.303	.620	.250	1.539
	Procedural	-.439	.415	1.121	1	.290	.644	.286	1.453
	Constant	-.604	1.535	.155	1	.694	.547		

Step 3 ^a	Membership	2.380	.710	11.224	1	.001	10.804	2.685	43.478
	Age	.305	.280	1.192	1	.275	1.357	.784	2.348
	Nationality	-2.121	1.070	3.933	1	.047	.120	.015	.975
	Penalty	.711	.472	2.268	1	.132	2.035	.807	5.130
	Reason	-.127	.162	.613	1	.434	.881	.641	1.210
	Distributive	-.447	.461	.940	1	.332	.639	.259	1.579
	Procedural	-.445	.415	1.151	1	.283	.641	.284	1.445
	Constant	-.528	1.523	.120	1	.729	.590		
Step 4 ^a	Membership	2.396	.713	11.299	1	.001	10.975	2.715	44.368
	Age	.332	.278	1.426	1	.232	1.393	.808	2.402
	Nationality	-2.146	1.080	3.949	1	.047	.117	.014	.971

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 4 ^a	Penalty	.620	.455	1.852	1	.174	1.859	.761	4.538
	Distributive	-.259	.394	.431	1	.512	.772	.357	1.672
	Procedural	-.336	.390	.740	1	.390	.715	.333	1.536
	Constant	-1.104	1.358	.661	1	.416	.331		
Step 5	Membership	2.396	.714	11.247	1	.001	10.976	2.706	44.512
	Age	.310	.276	1.267	1	.260	1.364	.794	2.342
	Nationality	-2.139	1.087	3.876	1	.049	.118	.014	.990
	Penalty	.721	.430	2.815	1	.093	2.057	.886	4.776

	Procedural	-.212	.341	.387	1	.534	.809	.414	1.579
	Constant	-1.267	1.338	.896	1	.344	.282		
Step 6	Membership	2.357	.708	11.092	1	.001	10.559	2.638	42.267
	Age	.311	.276	1.269	1	.260	1.364	.795	2.342
	Nationality	-2.085	1.079	3.731	1	.053	.124	.015	1.031
	Penalty	.734	.430	2.918	1	.088	2.083	.897	4.834
	Constant	-1.319	1.333	.980	1	.322	.267		
Step 7	Membership	2.331	.704	10.975	1	.001	10.286	2.590	40.841
	Age	.363	.270	1.804	1	.179	1.437	.846	2.441
	Nationality	-1.990	1.064	3.499	1	.061	.137	.017	1.100
	Penalty	.776	.427	3.305	1	.069	2.173	.941	5.019

	Constant	-1.017	1.288	.624	1	.430	.362		
Step 8	Membership	2.364	.704	11.277	1	.001	10.638	2.676	42.286
	Nationality	-1.790	1.050	2.905	1	.088	.167	.021	1.308
	Penalty	.722	.421	2.945	1	.086	2.059	.903	4.696
	Constant	-.615	1.256	.239	1	.625	.541		

a. Variable(s) entered on step 1: Membership, Gender, Age, Nationality, Penalty, Reason, Registration, Distributive, Procedural, Interactional.

Appendix C. Correlation Matrix

		Constant	Membership	Gender	Age	Nationality	Penalty Waiver	Reasons for complaints	Distribution	Procedural	Interaction
Step 1	Constant	1.000	-.425	-.059	-.175	-.583	.062	-.395	-.394	-.307	-.126
	Membership	-.425	1.000	-.127	-.010	-.085	-.047	.029	.011	-.069	-.014
	Gender	-.059	-.127	1.000	-.182	.167	.030	.037	-.130	-.033	-.086
	Age	-.175	-.010	-.182	1.000	-.164	.004	.068	.025	.025	.094
	Nationality	-.583	-.085	.167	-.164	1.000	.049	-.012	-.011	.059	-.023
	Penalty Waiver	.062	-.047	.030	.004	.049	1.000	-.075	-.091	-.136	-.377
	Reasons for complaints	-.395	.029	.037	.068	-.012	-.075	1.000	.220	.074	-.369

	Distributive	-.394	.011	-.130	.025	-.011	-.091	.220	1.000	.681	.524
	Procedural	-.307	-.069	-.033	.025	.059	-.136	.074	.681	1.000	.529
	Interactional	-.126	-.014	-.086	.094	-.023	-.377	-.369	.524	.529	1.000
Step 2	Constant	1.000	-.426	-.070	-.169	-.590	.013	-.476	-.385	-.284	
	Membership	-.426	1.000	-.131	-.004	-.088	-.051	.016	.012	-.072	
	Gender	-.070	-.131	1.000	-.173	.164	-.002	.007	-.100	.016	
	Age	-.169	-.004	-.173	1.000	-.160	.043	.110	-.028	-.029	
	Nationality	-.590	-.088	.164	-.160	1.000	.044	-.021	.001	.081	
	Penalty Waiver	.013	-.051	-.002	.043	.044	1.000	-.250	.135	.081	
	Reasons for complaints	-.476	.016	.007	.110	-.021	-.250	1.000	.521	.341	
	Distributive	-.385	.012	-.100	-.028	.001	.135	.521	1.000	.557	

	Procedural	-.284	-.072	.016	-.029	.081	.081	.341	.557	1.000	
Step 3	Constant	1.000	-.439		-.183	-.584	.020	-.475	-.388	-.281	
	Membership	-.439	1.000		-.029	-.071	-.055	.012	-.006	-.072	
	Age	-.183	-.029		1.000	-.141	.046	.114	-.043	-.023	
	Nationality	-.584	-.071		-.141	1.000	.035	-.025	.009	.074	
	Penalty Waiver	.020	-.055		.046	.035	1.000	-.251	.140	.087	
	Reasons for complaints	-.475	.012		.114	-.025	-.251	1.000	.522	.339	
	Distributive	-.388	-.006		-.043	.009	.140	.522	1.000	.562	
	Procedural	-.281	-.072		-.023	.074	.087	.339	.562	1.000	
	Step 4	Constant	1.000	-.499		-.140	-.685	-.113		-.185	-.145
Membership		-.499	1.000		-.038	-.057	-.051		-.006	-.082	

	Age	-.140	-.038		1.000	-.140	.074		-.124	-.067	
	Nationality	-.685	-.057		-.140	1.000	.027		.023	.091	
	Penalty Waiver	-.113	-.051		.074	.027	1.000		.328	.186	
	Distributive	-.185	-.006		-.124	.023	.328		1.000	.484	
	Procedural	-.145	-.082		-.067	.091	.186		.484	1.000	
Step 5	Constant	1.000	-.511		-.164	-.694	-.048			-.062	
	Membership	-.511	1.000		-.038	-.054	-.050			-.097	
	Age	-.164	-.038		1.000	-.141	.122			-.004	
	Nationality	-.694	-.054		-.141	1.000	.007			.090	
	Penalty Waiver	-.048	-.050		.122	.007	1.000			.042	
	Procedural	-.062	-.097		-.004	.090	.042			1.000	

Step 6	Constant	1.000	-.519		-.168	-.693	-.047				
	Membership	-.519	1.000		-.034	-.047	-.041				
	Age	-.168	-.034		1.000	-.140	.126				
	Nationality	-.693	-.047		-.140	1.000	.002				
	Penalty Waiver	-.047	-.041		.126	.002	1.000				
Step 7	Constant	1.000	-.520		-.231	-.734	-.075				
	Membership	-.520	1.000		-.022	-.051	-.035				
	Age	-.231	-.022		1.000	-.151	.116				
	Nationality	-.734	-.051		-.151	1.000	-.003				
	Penalty	-.075	-.035		.116	-.003	1.000				
Step 8	Constant	1.000	-.543			-.801	-.052				

	Membership	-.543	1.000			-.049	-.044				
	Nationality	-.801	-.049			1.000	.025				
	Penalty Waiver	-.052	-.044			.025	1.000				

Appendix C. Model if Term Removed^a

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	Membership	-126.326	27.384	1	.000
	Gender	-112.853	.439	1	.508
	Age	-113.120	.972	1	.324
	Nationality	-115.060	4.851	1	.028
	Penalty Waiver	-113.448	1.628	1	.202
	Reasons of Complaints	-113.000	.733	1	.392
	Distributive	-112.868	.468	1	.494
	Procedural	-112.882	.496	1	.481
	Interactional	-112.700	.133	1	.716
Step 2	Membership	-126.494	27.587	1	.000
	Gender	-112.944	.487	1	.485
	Age	-113.158	.915	1	.339
	Nationality	-115.124	4.846	1	.028
	Penalty Waiver	-113.874	2.346	1	.126
	Reasons of complaints	-113.002	.603	1	.437
	Registration	-113.158	.915	1	.339

	Distributive	-113.233	1.065	1	.302
	Procedural	-113.265	1.129	1	.288
Step 3	Membership	-128.072	30.256	1	.000
	Age	-113.548	1.208	1	.272
	Nationality	-115.824	5.760	1	.016
	Penalty Waiver	-114.125	2.362	1	.124
	Reasons of Complaints	-113.252	.617	1	.432
	Distributive	-113.415	.942	1	.332
	Procedural	-113.523	1.159	1	.282
Step 4	Membership	-128.704	30.904	1	.000
	Age	-113.976	1.448	1	.229
	Nationality	-116.176	5.847	1	.016
	Penalty Waiver	-114.212	1.920	1	.166
	Distributive	-113.468	.431	1	.511
	Procedural	-113.624	.744	1	.388
Step 5	Membership	-128.841	30.746	1	.000
	Age	-114.110	1.285	1	.257
	Nationality	-116.324	5.712	1	.017
	Penalty Waiver	-114.947	2.958	1	.085

	Procedural	-113.662	.388	1	.533
Step 6	Membership	-128.791	30.259	1	.000
	Age	-114.306	1.288	1	.256
	Nationality	-116.396	5.468	1	.019
	Penalty Waiver	-115.196	3.070	1	.080
Step 7	Membership	-129.083	29.834	1	.000
	Age	-115.086	1.841	1	.175
	Nationality	-116.711	5.090	1	.024
	Penalty Waiver	-115.913	3.495	1	.062
Step 8	Membership	-130.721	31.272	1	.000
	Nationality	-117.177	4.185	1	.041
	Penalty Waiver	-116.634	3.097	1	.078

a. Based on conditional parameter estimates

Appendix C. Variables not in the Equation

		Score	df	Sig.	
Step 2 ^a	Variables	Interactional	.132	1	.716
	Overall Statistics		.132	1	.716
Step 3 ^b	Variables	Gender	.488	1	.485
		Interactional	.180	1	.671

	Overall Statistics		.619	2	.734
Step 4 ^c	Variables	Gender	.502	1	.479
		Reasons of complaints	.615	1	.433
		Interactional	.013	1	.911
	Overall Statistics		1.230	3	.746
Step 5 ^d	Variables	Gender	.393	1	.531
		Reasons of complaints	.107	1	.744
		Distributive	.432	1	.511
		Interactional	.271	1	.603
	Overall Statistics		1.665	4	.797
Step 6 ^e	Variables	Gender	.457	1	.499
		Reasons of complaints	.083	1	.773
		Distributive	.076	1	.783
		Procedural	.388	1	.534
		Interactional	.446	1	.504
	Overall Statistics		2.053	5	.842
Step 7 ^f	Variables	Gender	.565	1	.452

		Reasons of complaints	.188	1	.665
		Distributive	.068	1	.794
		Procedural	.255	1	.614
		Interactional	.284	1	.594
	Overall Statistics		3.038	6	.804
Step 8 ^g	Variables	Gender	1.052	1	.305
		Age	1.821	1	.177
		Reasons of complaints	.460	1	.498
		Distributive	.014	1	.907
		Procedural	.232	1	.630
		Interactional	.084	1	.772
	Overall Statistics		4.821	7	.682

- a. Variable(s) removed on step 2: Interactional.
- b. Variable(s) removed on step 3: Gender.
- c. Variable(s) removed on step 4: Reasons of Complaints
- d. Variable(s) removed on step 5: Distributive.
- e. Variable(s) removed on step 6: Procedural.
- f. Variable(s) removed on step 7: Registration.
- g. Variable(s) removed on step 8: Age.

Table 4.3 Test for goodness-of-fitness (Cox & Snell R square, Nagelkerke R Square)

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	225.268 ^a	.190	.258
2	225.401 ^a	.190	.257
3	225.888 ^a	.188	.255
4	226.504 ^a	.185	.251
5	226.935 ^a	.184	.249
6	227.323 ^a	.182	.247
7	228.331 ^a	.178	.241
8	230.170 ^a	.170	.231

Table 4.4 Test for Goodness-of-Fitness (Hosmer and Lemeshow)

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	13.352	8	.100
2	6.320	8	.611
3	16.239	8	.039
4	5.299	7	.623

5	4.810	7	.683
6	6.957	7	.433
7	2.008	5	.848
8	1.344	3	.719

Appendix D. Analysis on Variances (ANOVA)

Between-Subjects Factors

		Value Label	N
Status of Member ship	1	Beginner Level	162
	2	Medium Level	24
	3	Premium Level	14
Penalty Waived	0	Non-waived	158
	1	Waived	42

Descriptive Statistics

Dependent Variable: repurchase

Status of Member ship		Mean	Std. Deviation	N
Beginner Level	Non-waived	.50	.502	132
	Waived	.67	.479	30
	Total	.53	.501	162
Medium Level	Non-waived	.87	.352	15
	Waived	1.00	0.000	9
	Total	.92	.282	24
Premium Level	Non-waived	1.00	0.000	11
	Waived	1.00	0.000	3
	Total	1.00	0.000	14
Total	Non-waived	.57	.497	158
	Waived	.76	.431	42
	Total	.61	.489	200

Tests of Between-Subjects Effects

Dependent Variable: repurchase

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6.119a	3	2.040	9.642	.000
Intercept	48.194	1	48.194	227.829	.000
Status of Membership	4.892	2	2.446	11.563	.000
Penalty Waived	.718	1	.718	3.393	.067
Error	41.461	196	.212		
Total	122.000	200			
Corrected Total	47.580	199			

a. R Squared = .129 (Adjusted R Squared = .115)

Descriptives

REPURCHASE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Penalty Amount	40	.75	.439	.069	.61	.89	0	1
Flexibility of Penalty	38	.50	.507	.082	.33	.67	0	1
Procedure of Penalty	80	.54	.502	.056	.43	.65	0	1
Explanation	8	1.00	0.000	0.000	1.00	1.00	1	1
Airlines' Problem	31	.65	.486	.087	.47	.82	0	1
Expectation for special treatment	3	.67	.577	.333	-.77	2.10	0	1
Total	200	.61	.489	.035	.54	.68	0	1

Test of Homogeneity of Variances

REPURCHASE

Levene Statistic	df1	df2	Sig.
30.900	5	194	.000

ANOVA

REPURCHASE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.929	5	.586	2.545	.029
Within Groups	44.651	194	.230		
Total	47.580	199			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: repurchase
Scheffe

(I) Reasons of Complaint		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Penalty Amount	Flexibility of Penalty	.250	.109	.385	-.12	.62
	Procedure of Penalty	.213	.093	.392	-.10	.52
	Explanation	-.250	.186	.874	-.87	.37
	Airlines' Problem	.105	.115	.975	-.28	.49
	Expectation for special treatment	.083	.287	1.000	-.88	1.05
Flexibility	Penalty Amount	-.250	.109	.385	-.62	.12

of Penalty	Procedure of Penalty	-.038	.095	.999	-.36	.28
	Explanation	-.500	.187	.213	-1.13	.13
	Airlines' Problem	-.145	.116	.905	-.54	.25
	Expectation for special treatment	-.167	.288	.997	-1.13	.80
Procedure of Penalty	Penalty Amount	-.213	.093	.392	-.52	.10
	Flexibility of Penalty	.038	.095	.999	-.28	.36
	Explanation	-.463	.178	.244	-1.06	.14
	Airlines' Problem	-.108	.101	.951	-.45	.23
	Expectation for special treatment	-.129	.282	.999	-1.08	.82
Explanation	Penalty Amount	.250	.186	.874	-.37	.87
	Flexibility of Penalty	.500	.187	.213	-.13	1.13
	Procedure of Penalty	.463	.178	.244	-.14	1.06
	Airlines' Problem	.355	.190	.627	-.28	.99
	Expectation for special treatment	.333	.325	.958	-.76	1.43
Airlines' Problem	Penalty Amount	-.105	.115	.975	-.49	.28
	Flexibility of Penalty	.145	.116	.905	-.25	.54
	Procedure of Penalty	.108	.101	.951	-.23	.45
	Explanation	-.355	.190	.627	-.99	.28
	Expectation for special treatment	-.022	.290	1.000	-1.00	.95
Expectation for special treatment	Penalty Amount	-.083	.287	1.000	-1.05	.88
	Flexibility of Penalty	.167	.288	.997	-.80	1.13
	Procedure of Penalty	.129	.282	.999	-.82	1.08
	Explanation	-.333	.325	.958	-1.43	.76
	Airlines' Problem	.022	.290	1.000	-.95	1.00

Homogeneous Subsets

repurchase
Scheffe

Reasons of Complaint	N	Subset for alpha = 0.05
		1
Flexibility of Penalty	38	.50
Procedure of Penalty	80	.54
Airlines' Problem	31	.65
Expectation for special treatment	3	.67
Penalty Amount	40	.75
Explanation	8	1.00
Sig.		.323

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 10.822.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.