Consumer innovativeness and new product adoption: The case of payment card

Irfan Firmansyah 8406103 83080

Marketing & Consumer Behaviour

Name: Irfan Firmansyah
Study: Management, Economics and Consumer Studies
Specialisation: Marketing & Consumer Behaviour
Registration number: 840610383080
Date: August 2016
Supervisor: Ivo van der Lans
Second reader: Andres Trujillo Barrera
Course code: MCB-80433

Abstract

Purpose - The purpose of this research is to analyze the influence of motivated consumer innovativeness and financial risk tolerance on consumers' intention to adopt a payment card and consumers' evaluation of the relative importance of payment card attributes.
Design/methodology/approach – The influence of motivated consumer innovativeness and financial risk tolerance on consumer adoption intention was tested using discrete choice experiment. The sample consists of 153 Indonesian consumers, and the data is collected through an internet-based survey.
Findings – The results from discrete choice experiment shows that consumer innovativeness and financial risk tolerance have a significant influence on consumer intention to adopt a payment card. Consumers evaluate certain attribute to be more important according to their consumption value and financial risk tolerance level.
Practical implications – The results of this research can be used as guidelines for bank product managers to develop a payment card product according to the specified target market and increase the adoption of a payment card in the Indonesian market.
Originality/value – This study investigates consumer innovativeness in term of its level and source which is individual goals and value.

Keyword: Consumer innovativeness, product adoption, financial risk tolerance

Table of Contents

Chapter I: Introduction

Consumers in Indonesia are still heavily relied on cash payment although it is not hard to gain access to cashless payment instruments since there are 62 debit card issuers and 23 credit card issuers in Indonesia. There is more than 130 million payment card in Indonesia which consist of 113.6 million debit card and 16.8 million credit card (Bank Indonesia, 2016). According to Indonesian Central Bank, cashless payment in Indonesia is only account for 0.6 % of the total retail transaction in 2014 (Bank Indonesia, 2014). Unbanked population in Indonesia is also very high where only 36 % of Indonesian adult population have a bank account (Institute of International Finance, 2015).

High cash usage could significantly influence a country's national economy. High cash usage will lengthen business conversion cycle because it required extra effort process the cash which includes additional security to securing the money, deposit preparation, armoured car service and bank visit (Chakravorti & Mazotta, 2013). Aware of the importance of cashless payment, Indonesian central bank launched 'National cashless program" to increase cashless transaction, which leads to increase in efficiency and security by tackling two major problems in Indonesia payment industry: infrastructure and security. The program has been implemented through collaboration with major Indonesia state-owned bank by facilitating payment infrastructure, POS terminal and card security (Bank Indonesia, 2014). To attract and retain customers, Indonesian bank offers various rewards for payment card such as discount, gift and point rewards.

Several efforts in increasing adoption of cashless payment instrument have been taken by key players in the Indonesian payment industry. However, there is a need for theory-based research to get a deeper understanding of consumer's payment card adoption behaviour and what factors play a role in the process. Previous studies in the domain of consumer's adoption mentioned two important factors that affect consumer's adoption intention: product attributes and consumers' characteristic (Hirschman, 1979; Kara et al. 1996; Kennickell & Kwast, 1997).

Previous research on the topic of payment card focused on basic consumer characteristics such as socio-demographics and product attributes such as issuing bank, brand name, interest rate, card type and credit line as factors that influence consumer product adoption (Kara et al. 1999; Pulina, 2010, Qi & Yang, 2003). According to Babakus et al. (2004), consumer choice of a financial product is multi-faceted and requires models with more than basic attribute approach to gain a deeper insight that can provide strategic direction.

This research will focus on consumer innovativeness and financial risk tolerance as two important consumer characteristics that influence consumer's adoption as both concepts indicate consumers' predisposition to embrace change. Consumer innovativeness transforms consumer's routinized actions to a dynamic behaviour. Financial risk tolerance is relevant because security is still a major concern for consumers in Indonesia payment industry and one of the main reason of high cash usage (Prabowo, 2012). Literature in product adoption shows financial risk tolerance as important factors that drive consumers' adoption behaviour. Financial risk tolerance reflects consumers' willingness to accept uncertainty when making a financial decision (Hirschman, 1980; Grabble, 2008).

This study will investigate the influence of consumer innovativeness and financial risk tolerance on consumer's payment card adoption intention and attributes evaluation. This will lead to the following research questions:

1. What is the influence of consumer innovativeness and financial risk tolerance on consumers' payment card adoption intention?
2. What is the influence of consumer innovativeness and financial risk tolerance on the relative importance of payment card attributes?

The report will begin with consumer adoption theories. Next, consumer innovativeness, financial risk tolerance, and payment card attributes are discussed. A model based on the theory of consumptions value and approach-avoidance theory and will be used to explain the influence of consumer innovativeness and financial risk tolerance on payment card adoption followed by research design and methodology. Then, the study results are presented and reviewed. The report ends with a conclusion and implication drawn from this study.

Chapter 2: Literature review

2.1 Consumer adoption theories

Several theories try to explain consumer's adoption behaviour. The Theory of Planned Behaviour is one of the most used theories in consumer attitude and behaviour. According to theory of planned behaviour, consumers' behaviour is determined by attitude which refers to consumers' evaluation of the outcome in performing the behaviour and subjective norms which refer to the perception of others about the behaviour (Ajzen, 1985; Pavlou & Fygenson, 2006). Both attitude and subjective norms are influenced by underlying belief which referred as attitudinal belief and normative beliefs.

The Economic choice theory explains that consumers' behavioural intentions to adopt a product are determined by consumers' values such as the importance of durability and consumers' perception such as quality. Furthermore, the theory explains that consumers' values are influenced by socioeconomic factor and historical experience while consumers' perceptions are influenced by product attributes and information related to the product that consumers acquired from marketing program. The combination of consumers' values and perceptions influence consumers' preference which is translated into behavioural intention (McFadden,1986).

Both theories of planned behaviour and economic choice theory show that consumers attitudinal belief and values as an important factor that drives consumers' behavioural intention. The theory of consumption values identifies five consumption values that influence consumer's choice that can be found in Table 1. According to this theory, consumer's choice behaviour is a function of one or multiple consumption values and consumers evaluate product attributes according to their consumption values (Sheth et al. 1991).

Table 1: Different consumers' consumption value

Value	Definition
Functional	Utilitarian, functional or physical performance
Emotional	Association with specific social groups
Social	Arousal and affective states
Epistemic	Arouse curiosity and provide novel knowledge
Conditional	Specific situations or conditions

Functional value refers to perceived utility obtained from product capacity to deliver functional and utilitarian capacity and it is theorized to be the primary driver of consumers choice decision according to economic utility theory which is famously expressed in a term "rational economic man". Consumers with functional value will emphasize more importance on product attributes that deliver more functional properties such as durability, versatility, and reliability (Sheth et al. 1991).

Emotional value refers to perceived utility obtained from product capacity to provide arousal and affective emotion. Emotional value is commonly associated with aesthetic and entertainment product which makes it less tangible. Consumers choices are driven by a cognitive and non-cognitive assessment of a product which suggests that a product may have cognitive and non-cognitive benefit. Emotional value refers to the non-cognitive assessment of a product (Sheth et al. 1991).

Social value refers to perceived utility obtained from product capacity to provide an association with particular social groups through association. Social value is theorized to be primary driver in consumers purchase of high visibility product such as designer clothes and services that can be shared with others such as an airline executive lounge. Product and service have more than just functional utility. They also possess symbolic meaning which act as non-verbal cues for others.

Epistemic value refers to perceived utility obtained from product capacity to provide novelty, curiosity and satisfy the need for knowledge. Conditional value refers to perceived utility derived from the product as a result of specific condition and circumstances faced. Product attractiveness and usefulness often varied depend on certain situations. Some products have a seasonal value such as winter jacket will have high utility value during the winter. Some products also have once in a life time association such as wedding ring and some have high value only during emergency situations such as fire extinguisher.

Further research on the topic of consumer adoption shows that epistemic value is not the only value that motivates consumers to adopt a new product. Functional, social and emotional value also found to

motivate and influence consumers' likelihood to adopt new product according to research from Vandecasteele & Geuens (2010).

2.2 Consumer innovativeness

The concept of epistemic value posits that consumers consistently try to maintain and seek a certain degree of stimulation which drives them to acquire new product. Consumers likelihood to adopt new product captured in the concept of consumer innovativeness (Hirschman, 1980; Sheth et al. 1991). Hirschman (1980) provide the basic foundations to understand consumer innovativeness and its importance through his statement "innovativeness is one of the few concepts that is so important to the consumer behaviour. The consumer's tendency to adopt new products, ideas, goods or services, plays an important role in the theories concerning brand loyalty, decision making, preferences, and communication. From the personal point of view, each consumer is, generally speaking, an innovator, each of us adopting some goods or ideas regarded as new by us through our lives".

There are two approaches in defining consumer innovativeness. The first one proposed by Rogers (1983) which defined consumer innovativeness as "degree which an individual is relatively earlier in adopting an innovation than other members of his system." This definition suggests that consumer's innovativeness as a practice of being the first users of a new product. The second definitions proposed by Steenkamp, Hofstede & Wedel (1999) defined consumer innovativeness as "consumer's predisposition to buy new and different products and brands rather than remain with previous choices and consumption pattern." This research will use the later definition as this definition propose that consumer's innovativeness reflect consumers' willingness to change their existing habits without having to be the first among others.

Several factors have been proposed as primary driver of innovativeness. The first driver is need for stimulation which suggests that consumers consistently try to maintain a level of stimulation. Need to maintain an optimum level of stimulation is theorized as the primary driver of new product adoption. Several pieces of research show that new product can help consumer to maintain their optimal stimulation level and validate this theory (Mittelstaedt et al., 1976; Etzel & Wahlers, 1984; Roehrich, 2004).

Novelty seeking as a driver on innovativeness was first proposed by Pearson (1970) which explain novelty seeking as a factor that motivates individual to search new information consistently and lead to new product adoption. Further research by Hirschman (1980) suggests novelty seeking as "*conceptually indistinguishable from the willingness to adopt new products*." Furthermore, the research explains novelty seeking an essential trait and linked to actualization and innovativeness.

Need for uniqueness drive individual to adopt new or rare products that can be used to socially distinguished himself/herself from others. Research from Burns & Krampf (1991) validates this proposition. The research shows a positive relationship between need for uniqueness and new product adoption. Need for originality plays an important role in innovativeness because new product adoption is a straightforward and practical way to satisfy individual needs for uniqueness and need for uniqueness

will lead an individual to be less sensitive to the opinion of others which is important in new product adoption.

A recent study from Vandecasteele & Geuens (2010) provides a more comprehensive explanation of innovativeness that is in line with the previously mentioned literature. The research recommends that the best way to understand consumer innovativeness is by understanding different consumer's consumption values and by doing so researchers can identify different motivations that underlie consumer innovativeness and deliver robust prediction on consumer's adoption. They investigated different motivation in consumer innovativeness by looking at previous research in the domain of consumer innovativeness and proposed four consumer's innovativeness motivation that can be found in Table 1. The first motivation is functional which relate to functional value that was proposed by Hirschman (1984) and Venkatraman (1991). Functional motivation explains that individual adopt a new product because it has the capacity to improve productivity or avoid threats. The second motivation is hedonic which relate to hedonic value such as leading a varied life and excitement that was proposed by Venkatraman & Price (1990) and Baumgartner & Steenkamp (1996). This motivation explains that individual adoption of a new product is driven by an intention to stimulate the senses. The third motivation is social that was proposed by Roechrisk (1994) and Tian et al. (2001) which explain that individual adoption of a new product is because it has the capacity to deliver social value such as public image and social power. The fourth motivation is cognitive which relate to epistemic value such as intelligence, skill and success and was proposed by Venkatraman & Price (1990).

The four different motivated innovativeness correspond with general theories of goals, values, and motivation. Motivations are the main driver of behaviour and these motivations heavily influenced by individual goals (Rositer & Percy, 1996). The taxonomy of human goals from Ford & Nichols (1987) identified different goals that motivate human behaviour. The first goal is task goal which focuses on management and accomplishment. This goal corresponds with functional motivated innovativeness. The second goal is the affective goal which focuses on happiness and arousal. This goal corresponds with hedonic motivated innovativeness. The third goal is social relationship goal which focuses on status and superiority. This goal corresponds with social motivated innovativeness. The fourth goal is the cognitive goal which focuses on exploration and mental stimulation. This goal corresponds with cognitive motivated innovativeness.

The four different motivated innovativeness also correspond with widely accepted value taxonomy proposed by Schwartz (1992) who defined value as "*beliefs pertaining to desirable end states that guide the selection and evaluation of behaviours*." Schwartz (1992) identified ten value types and four of them aligned with the four different motivated innovativeness. The first value is achievement which focuses on individual success and competence. This value aligned with functional motivated innovativeness. The second value is hedonism which focuses on pleasure and sensory stimulation. This value aligned with hedonic motivated innovativeness. The third value is power which focuses on prestige and social status. This value aligned with social motivated innovativeness. The fourth value is self-direction which focuses on exploring and knowledge. This value aligned with cognitive motivated innovativeness.

Combining innovativeness and motivation is theorized to provide more predictive power because it measures not only the level of innovativeness but also the origin of innovativeness. Research from Vandecasteele & Geuens (2010) provides empirical evidence for this by showing that combination of innovativeness and motivation have more predictive power in buying intention than just innovativeness alone. Furthermore, the research also suggests that not all of the four motivated innovativeness have the same predictive power of buying intention. Social motivated innovativeness may have less predictive power for cognitive product.

Table 2: Different motivation in consumer innovativeness

Motivation	Value	Definition	Based on
Functional	Functional	Innovativeness motivated by functional which focus on accomplishment and productivity	- Venkatraman (1991) - Voss et al. (2003) - Hirschman (1984)
Hedonic	Stimulation, variety, enjoyment	Innovativeness motivated by sensory stimulation affective and gratification	-Venkatraman & Price (1990) - Baumgartner & Steenkamp (1996)
social	Social power and public image	Innovativeness motivated by social needs such as differentiation, identity building and superiority	- Roechrisk (1994) - Tian et al. (2001)
Cognitive	Intelligence, skill, mental stimulation	Innovativeness motivated by cognitive need for mental stimulation	- Venkatraman & Price (1990)

2.3 Financial risk tolerance

New products provide new benefit and also risk or uncertainties which can decrease consumer intention to adopt the new product which suggests that risk is a major factor that influences consumer's product preference. Risk is defined as "subjective expectation of loss or adverse consequence arise from certain behaviour" (Peter & Ryan, 1976). The definition of risk suggests that when consumers make a decision, the outcome of the decisions will have some degree of uncertainty. One type of risk that have a substantial impact on consumers decision is the financial risk which refers to financial loss as a consequence of product adoption (Hirunyawipada & Paswan,2006).

Researchers interested in investigating the influence of risk on consumer behaviour often use the concept of risk attitude and risk tolerance. Risk attitude is defined as a person's standing on the continuum from risk aversion to risk seeking" (Weber et al., 2002). Risk tolerance is defined as "willingness of an individual to engage in behaviour where there is a desirable goal but attainment of the goal is uncertain and accompanied by the possibility of loss" (Kogan & Wallach 1964). Looking at the definition of risk attitude and risk tolerance, we can conclude that both concepts are closely aligned where risk-averse consumers will have a low-risk tolerance (Faff, et al. 2008). The concept of risk tolerance often followed by the concept of perceived risk. Perceived risk measured handled risk, which refers to consumers' subjective evaluation of risk that could arise from certain purchases. Consumer purchase also carried an inherent risk which refers to natural risk that is more objective (Bettman, 1973). This research will follow the second approach where inherent risk of a payment card is theorized to have an influence on consumers' adoption intention and attribute evaluation.

Researchers in consumers and finance shown that financial risk tolerance is a major factor that affects consumers decision-making in a financial product. Financial risk tolerance is defined as "the maximum amount of uncertainty someone is willing to accept when making a financial decision" (Grable, 2008). Financial risk tolerance is an important concept underlying consumer's financial decision making in several financial products. Financial risk tolerance influences consumer's decision on retirement saving (Jacobs-Lawson & Hershey, 2005), type or mortgage and the credit card used Campbell (2006) and accumulated assets (Finke & Huston, 2003).

Consumer purchase always followed by inherent risk and consumers decide to accept the risk because they expect that the positive outcome outweighs the negative outcome. Consumers with risk tolerance will be less sensitive to the possible negative outcome which makes them more likely to adopt a new product than consumer with low financial risk tolerance. When consumers confronted with risk, they will take risk-reducing strategies to decrease the probability of loss or by lessen the severity of loss. One of the most used risk-reducing strategy that consumers choose to take to minimize the risk is by selecting a product from a major and known brand (Roselius, 1971).

Risk tolerance is found to be one of the drivers of innovation and characteristic of consumer with high innovativeness. New products pose more risk, and their performance is not entirely tested compared to existing and established products. Consumers with high financial risk tolerance will have more curiosity and more likely to adopt new products that are less known (Steenkamp et al. 1999).

2.4 Payment card

Payment card is a financial instrument designed to solve a practical problem such as an ability to carry less physical money and to complete a transaction in more efficient manner. According to literature in product design, a product is a bundle of attributes and consumers evaluate a product based on its attributes. Product attribute can be classified into instrumental, symbolic and experiential. Instrumental attributes are attributes that provide functional purpose of solving a problem and provide means to an end. Symbolic attributes are attributes that provide self-identity, enhancing self-image and recognition. Experiential attributes are attributes that satisfy needs for stimulation and variety seeking (Park et al. 1986; Keller 1998).

Important payment card attributes and its classification can be found in Table 3. Issuer bank defined as a bank that creates and issued the card to the customers (Qi & Yang, 2003; Schmalensee, 2003). Issuer bank also settle consumer's transaction in the transaction process. Payment provider is a third party that bridge communication between issuing and acquiring bank in point of sale transaction (Schmalensee, 2003). The major payment providers are Visa, MasterCard, JCB and American Express. Type of card categorizes payment card according to its source of fund. When a customer settles a transaction with a debit card, the money used to settle the transaction will be instantly taken from the customer's account while when a customer uses a credit card, the customer's issuing bank will pay the money first and then billed it to the customers (Rysman, 2007). Both debit and credit card can be classified according to its spending limit, fees, and service level into three segments silver, gold and platinum (Pulina, 2010). Promotion type that can be divided into two categories based on its mechanism. The first on is direct discount promotion which gives discount directly to a consumer who use a certain payment card. The second one rewards program which gives rewards point every time customers use their card. This rewards point can be accumulated, and the consumers can redeem their reward point for a various item such as gift, shopping voucher, airplane ticket, etc. Fee is the amount of money that consumers have to pay annually or monthly (Kara et al., 1994).

According to its function, card attributes can be categorized into functional, symbolic and experiential attribute that can be found in Table 3. Several card attributes provide more than just functionality to the card. Consumers with a high card segment such as platinum will receive special privileges and higher service level from the bank which suggest that card segment not only serves as a functional attribute but also a symbolic attribute that provides self-identity and evoke recognition. Card promotions provide sensory stimulation and gratification by offering more variety which suggests that card promotion act as an experiential attribute.

Table 3: Payment card attribute and category

Payment card attributes	Literature	Category
Payment provider	Kara et al. 1999 ; Pulina, 2010	Functional
Card segment	Kara et al. 1999 ; Pulina , 2010	Functional and symbolic
Credit line	Kara et al. 1999 ; Qi & Yang, 2003	Functional
Type of card	Kara et al. 1999 ; Qi & Yang, 2003	Functional
Promotion type	Ching & Hayashi, 2010	Functional and experiential
Fee	Kara et al. 1999 ; Qi & Yang, 2003	Functional
Issuer bank	Qi & Yang, 2003	Functional
Interest rate	Calem & Mester,1995 ; Kara et al. 1999 ; Qi & Yang, 2003	Functional

2.5 Hypothesis development

This research proposed that consumer innovativeness and financial risk tolerance will have a positive relationship on consumer intention to adopt a payment card, and consumer's adoption of a payment card will be determined by congruency between consumer motivation and product attributes. Consumers will evaluate particular attributes to be more important than others according to their consumption value and adoption motivation. Consumers' financial risk tolerance will influence consumers' adoption intention and product selection through risk reduction strategies that consumers will follow. Consumers' choice behaviour is a function of one or multiple values in which the values are independent. Therefore, this research will focus on investigating the influence of functional, social and hedonic motivated consumer innovativeness on consumers' payment card preference as payment card categorized as a service product that emphasize easiness and convenience which is not cognitively challenging and not mentally stimulating.

Consumers with functional motivated innovativeness will put functional motive as more important than others. Functionality, compatibility, and reliability are important factors that determine their adoption intention (Vandecasteele & Geuens, 2010). Payment card functional attributes such as issuer bank and card type deliver a different level of functionality, compatibility, and reliability than other functional attributes. State State-owned banks dominate Indonesian banking industry and offer a more complete

financial services and extensive networks compared to private private-owned banks which make payment card from state-owned banks to have more functionality and compatibility and reliability (Ernst & Young 2015). Both debit and credit card offers the convenience of not having to carry much cash. Credit card offers additional purpose which is the ability to borrow money and provide grace period between the time of transaction and billing period. Credit card offers more functionality regarding spending power than a debit card. This will lead to the following hypothesis.

Hypothesis 1: Consumers with higher functional motivated innovativeness will have higher likelihood to adopt payment card that offers more functionality than consumers with higher social and hedonic motivated innovativeness

1a: Consumers with higher functional motivated innovativeness will have higher likelihood to adopt payment card with state-owned bank than consumers with higher social and hedonic motivated innovativeness

1b: Consumers with higher functional motivated innovativeness will have higher likelihood to adopt credit card than consumers with higher social and hedonic motivated innovativeness

Consumers with higher hedonic motivated innovativeness will look for a product that can give them variety and sensory stimulation (Vandecasteele & Geuens, 2010). Payment card experiential attributes such as promotion provide reward that act as stimulation and provide variety to consumers. Point rewards in payment card promotion program offer more reward variety than a direct discount. Direct discount promotion program offers discounts in selected retailers. Point Point-rewards programs do not limit the retailers where consumers could get the benefit and allow consumers to redeem their reward point with various items. This shows that point rewards offer more variety and provide more sensory stimulation than a direct discount. This will lead to the following hypothesis.

Hypothesis 2: Consumers with higher hedonic motivated innovativeness will have higher likelihood to adopt payment card that offers more variety and stimulation than consumers with functional and social motivated innovativeness

2a: Consumers with higher hedonic motivated innovativeness will have higher likelihood to adopt payment card with point rewards than consumers with functional and social motivated innovativeness

Consumers with higher social motivated innovativeness are motivated by social goals such as recognition, and they will look for a product that could help the to achieve their goals (Vandecasteele & Geuens, 2010). Payment card social attributes such as card segment reflects how much money that an individual can spend through the card act as a cue to consumer's social status. Social status refers to consumer's position in a social system and influence consumer's feels of distinctiveness. Social status is gained through possession of certain characteristic such as wealth that is considered to be worthy by particular society (Grier & Deshpande, 2001). This will lead to the third hypothesis.

Hypothesis 3: Consumers higher social motivated innovativeness are more likely to adopt payment card that offers recognition and admiration than consumers with functional and hedonic motivated innovativeness

3a: Consumers with higher social motivated innovativeness are more likely to adopt gold and platinum payment card than consumers with functional and hedonic motivated innovativeness.

One of the main characteristics of innovators is that they are risk tolerance, therefore, they are more sensitive to incentives offered by a new product. Innovators are less influenced by the uncertainty coming from a new product. Consumers with low-risk tolerance are less likely to respond to changes and lower their intention to adopt new product (Kelly et al. 2008; Pennings & Smidts, 2000). When facing with risk, consumers will try to accept the risk or reduce the risk by taking risk reduction strategy by choosing the most popular brand. This will lead to the fourth hypothesis

Hypothesis 4: Consumers with higher risk tolerance are more will have higher likelihood to adopt a payment card from less known brand than consumers with lower financial risk tolerance

4a. Consumers with higher financial risk tolerance are more likely to adopt a payment card from national and international private owned bank than consumers with lower financial risk tolerance

4b. Consumers with lower financial risk tolerance are more likely to adopt a payment card from state-owned bank than consumers with lower financial risk tolerance

2.6 Conceptual framework

The findings from literature review were used to develop a theoretical framework, which can be found in Figure 1. This framework draws on the economic choice theory and theory of consumers consumption values and posit that consumers adoption of a payment card will be determined by their evaluation of payment card product attribute and consumers value will influence consumers' evaluation of payment card attributes. Most of the previous research in the influence of consumer innovativeness use only one dimension of consumer innovativeness which has been found to be inconclusive (Hirunyawipada & Paswan,2006). This research uses different motivated consumer innovativeness as it promises to deliver better understanding on the influence of different consumption value on consumer intention to adopt a new product.

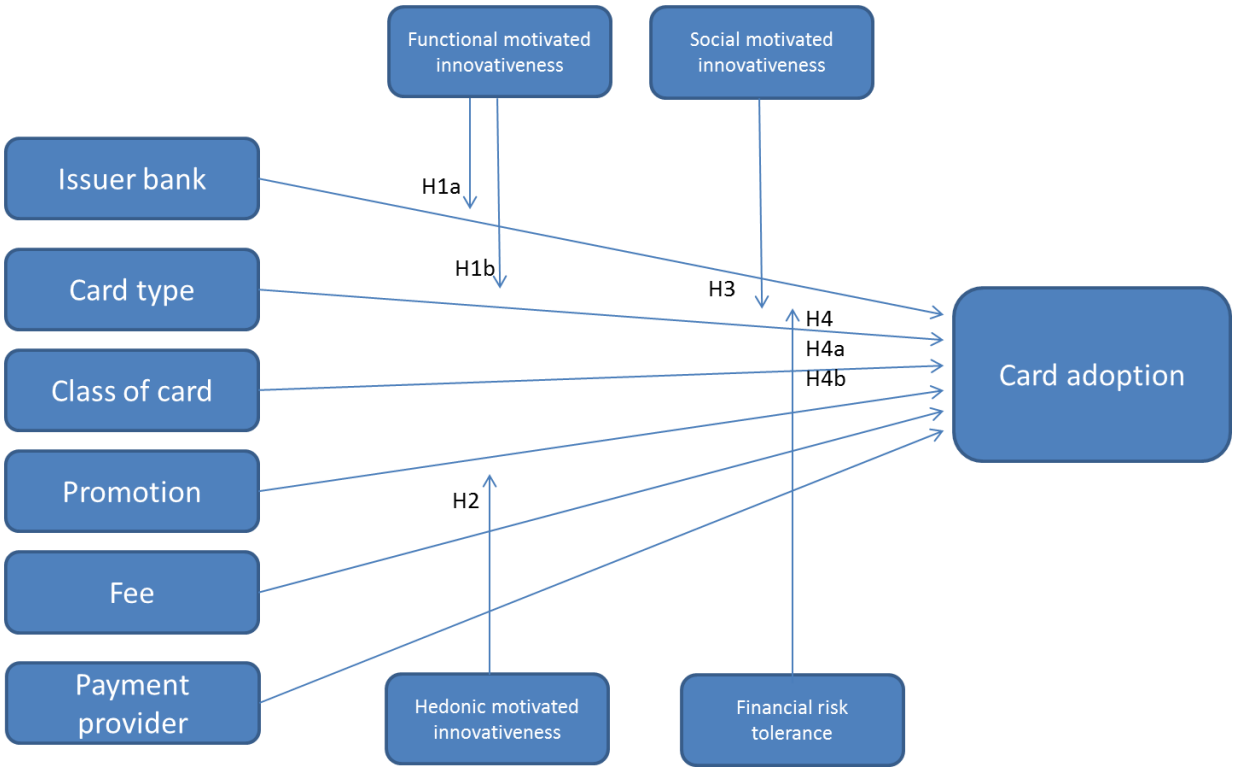

Figure 1 : Theoretical Framework

Chapter 3: Methods and research design

3.1 Construct measurement

This research will adopt existing psychometrics tools to measure consumer innovativeness motivation and financial risk tolerance that can be found in Table 4. Previous researches in the domain of consumer innovativeness have used different approaches to measure consumer innovativeness, and two main approaches can be distinguished. The first approach is general innovativeness and the second approach is domain specific innovativeness. General innovativeness refers to individual openness to new experiences while domain specific innovativeness refers to individual openness to try a new product in according to individual's interest.

General innovativeness is found to be a significant predictor of consumer adoption intention and have a higher degree of abstraction compared to domain-specific innovativeness (Aldas-Manzano et al. 2009). Therefore, this research will use this approach to measure consumer innovativeness. Consumer innovativeness will be measured using scale adapted from Vandecasteele & Geuens (2010). All items in the scale will be Likert-type items starting from 1=" totally disagree" to 5=" totally agree". Consumers financial risk tolerance will be measured using scales developed by Weber et al. (2002). The scales have been tested for its construct, convergent, discriminant validity. Looking at reliability, the scales have a reported Cronbach $\alpha$of 0.86. All items will have 5-point rating scale starting from "totally unlikely" to "totally likely". All scales have been tested for several types of validity including construct validity, convergent validity, discriminant validity and predictive validity with good result. Looking at the scales reliability, the consumer financial risk tolerance and consumer innovativeness scales reported Cronbach Alphas from previous research was 0.8 and 0.9.

Scale's construct validity will be check using exploratory factor analysis. The scale is construct valid if all items in the scale represent one underlying construct. To measure scale's reliability, the scale Cronbach Alpha will be calculated using SPSS statistical software.

Table 4: Motivated consumer innovativeness scale

Construct	Scale
Social motivated innovativeness	I love to use innovations that impress others
	I like to own a new product that distinguishes me from others who do not own this new product
	I prefer to try new products with which I can present myself to my friends and neighbours
	I like to outdo others, and I prefer to do this by buying new products which my friends do not have
	I like to outdo others, and I prefer to do this by buying new products which my friends do not have
Functional motivated innovativeness	If a new time-saving product is launched, I will buy it right away
	If a new product gives me more comfort than my current product, I will not hesitate to buy it

	If an innovation is more functional, I usually buy it
	If I discover a new product in a more convenient size, I am very inclined to buy this
	If a new product makes my work easier, then this new product is a "must" for me
Hedonic motivated innovativeness	Using novelties gives me a sense of personal enjoyment
	It gives me a good feeling to acquire new products
	Innovation makes my life exciting and stimulating
	Acquiring an innovation makes me happier
	The discovery of novelties makes me playful and cheerful
Financial risk tolerance	Investing in a business that has a 50: 50 of success and failing
	Taking a day's income to play the slot-machines at a casino
	Investing 10% of your annual income in a very speculative stock
	Spending money impulsively without thinking about the consequences
	Taking a job where you get paid exclusively on a commission basis.

3.2 Choice experiment and conjoint analysis

To answer the research question on what factors, determine consumers' preference for a credit card product, this study uses conjoint analysis in investigating the relative importance of each card attribute on consumer's card choice. Conjoint analysis defined as "a decompositional method that estimates the structure of a consumer's preferences given her or his overall evaluations of a set of alternatives that are pre-specified in term of levels of the different attribute" (Green & Srinivasan, 1990).

The conjoint analysis offers a method to understand consumer preference by measuring consumer evaluations of a hypothetical attributes combinations that build up a product or services. Conjoint analysis is widely accepted and used in many industries such as industrial goods, consumer goods, and financial services. The conjoint analysis serves multiple purposes such as new product identification, pricing, market segmentation, advertising and repositioning (Wittink & Cattin, 1989).

Selection of conjoint methodologies can be made by considering the characteristic of the research which include the number of attributes, choice task, and level of analysis. Looking at the purpose of this study and number of attributes measured, choice-based conjoint approach with the full profile is selected because it simulates real life condition by presenting profiles in sets where the consumer can choose one profile from sets of profile shown. One of the advantages of choice choice-based conjoint is the ability to include a no-choice option in the choice set. Including a no choice option in choice-based conjoint have several benefits and disadvantages. The benefit of including no choice option is that it will make the choice to be more realistic and will lead to better prediction. The disadvantages of including no choice option in the design is that it respondents may choose no choice option to avoid making difficult choices which at the end will lead to a lower predictive power. This research will include a no choice option because one of the primary purposes of this research is to find payment card that would be successful in the market.

Issuer bank,payment provider, card type, card class, promotion type and fee payment are selected because it is actionable, easily translated into an evaluation, accurately represent a standard terminology

in the industry and a product aspect that commonly specified in consumer buying decision (Hair et al. 2010; Churchill & Iacobucci, 2010). Fee is commonly not an important factor for the banks as it is not their main profit contributor. Consumers in Indonesia also very price sensitive to fee in payment card, in order to maintain consumers' objectivity and reduce distraction, fee is not specified in term of money but only in the method of fee payment (AC Nielsen Plascash, 2011). Based on feedback gathered from pre-test sessions, different type of issuer bank will be represented by the most popular bank in the category to avoid consumer's misinterpretation. Bank Mandiri will represent state-owned bank, BCA will represent national private owned bank and Citibank will represent international private owned bank.

Table 6: Card attributes and level.

Attribute	Level
Issuer bank	State-owned, local private owned, International private owned
Payment providers	MasterCard, Visa, JCB, American Express
Card type	Credit, debit
Promotion type	Direct discount, point reward
Class of card	Silver, gold, platinum
Fee payment	Monthly, annually

A list of a choice set is generated using SAS with optimized D-efficiency, and an example is presented in Table 4 which include a no choice option to make the choice more realistic (Haaijer et al. 2001; Hair et al. 2010). This research uses fixed designs where respondent gets the same questions. To reach an optimum balance between statistical accuracy and questionnaire simplicity, a total of 18 choice sets is generated. Johnson & Orme (1996) advise that choice sets should not exceed 20 to avoid an increase in random error and decrease in data quality. The goodness of the design is measured using the relative D-efficiency which is should be more than 90. The relative D-efficiency score of the design is 97. The generated design n-way frequencies show that there is no duplication in choice and the design is acceptable (Kuhfeld, 2010).

Choice sets will be presented in a table and text from which can be found at Table 5. The questionnaire will have a brief introduction about the research to make sure each respondent able to finish the questionnaire without any problems. A total of 18 choice sets will be presented with five profile per choice sets including a no choice option and profiles within each choice sets will be randomized to avoid order effects. The design will be block into three block to maximize time efficiency for respondents where each block is distributed to 50 respondents.

Table 7: Choice sets

Card 1	Card 2	Card 3	Card 5	
Credit card	Debit card	Debit card	Credit card	
Gold	Silver	Platinum	Platinum	
National private-owned bank	International private-owned bank	State-owned Bank	International private-owned bank	No choice
American Express	JCB	MasterCard	Visa	
Point rewards	Direct discount	Point rewards	Direct Discount	
Annually	Monthly	Monthly	Annually	

A minimum number of respondent in this research will be determined using the following formula from Johnson & Orme (1996).

$$\frac{nta}{c} \geq 500$$

n is the number of respondents, *t* is the number of tasks, *a* is a number of alternatives per task and *c* is the largest number of levels in any attribute. Looking at the recommendations, the number of respondent in this research will be 150. According to the formula, 150 respondents will be enough because it will equal to 2700 which is more than 500.

3.3 Statistical analysis

Respondents attitudinal data will be analysed to measured scale reliability and unidimensionality. Next, Haussmann-McFadden test will be conducted to test the independence of irrelevant alternatives assumption. The outcome of the test will determine the type of analysis that will be carried out to analyse consumers' choice data. If the Haussmann-McFadden test suggests that there is no independence of irrelevant alternatives violations, this research will use a conditional logit model to elicit consumer preference of a payment card where the utility of a choice is determined by the characteristic of the alternatives and characteristics of individual making the choice (McFadden,1973). In the conditional logit model, consumers' choice data are grouped and the probability is estimated relative to each group using the following equation:

$$P_{nj} = P(y_n = j|x_n) = \frac{e^{x'_{nj}\beta}}{\sum_{i=1}^{J} e^{x'_{ni}\beta}}.$$

Alternatively, nested multinomial logit model will be used to analyse the choice data if the violation of the independence of irrelevant alternatives is found. Nested multinomial logit model calculates the choice probability by including structural relationship between the alternatives within the choice set that share the same features (Kannan & Wright, 1991).

Choice probabilities for each profile will be presented which include main effect and interaction with continuous variable collected from attitudinal data. This will give an understanding of what influence consumer preference of a payment card and an answer to the research hypothesis and research question. The goodness of the model will be measured by the model Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC) and McFadden adjusted ρ^2 that provide relative quality of a statistical model.

Akaike's Information Criterion (AIC) was first proposed by Akaike (1973). According to Akaike's Information Criterion, a model with smaller AIC is considered as having the relatively better goodness of fit.Bayesian information criterion (BIC) was first proposed by Raftery (1965) as a measure of model goodness of fit for nested and non-nested model. BIC has the same interpretation as AIC where the smaller the number, the better the model.

The use of AIC and BIC is not without potential problem since the AIC and BIC score often give conflicting result. Both AIC and BIC criterion use the form of likelihoods with a deterministic penalty. Research in this topic suggests that BIC has the optimal measure of a model goodness of fit compared to AIC (Yang, 2005). Therefore, if a conflicting result between AIC and BIC is found the BIC score will be selected to determine the model goodness of fit

McFadden adjusted ρ^2 or also commonly known as likelihood ratio index measured a model goodness of fit by comparing the model with the intercept only and model with all parameters. McFadden adjusted ρ^2 is better in measuring the model goodness of fit that McFadden ρ^2 because McFadden ρ^2 will always increase every time a new variable is added to the model and the and the adjusted version addressed this issue.

3.4 Questionnaire presentation and data collection

To test the hypnotized model, this research will use web-based questionnaire to captured the influence of consumer innovativeness and risk tolerance on consumer's adoption intention. The scales will be pre-tested prior the data collection to detect ambiguous questions and unfamiliar terminology present in the questionnaires.

The first part of the questionnaire will contain question about type of payment card that they owned and mostly used together with payment card choice sets. The second part will contain consumer innovativeness and financial risk tolerance. The population sample size will be limited to Indonesian nationality. To ensure that respondents have the sufficient knowledge to understand the question and

provide valid information, the respondents should meet the following characteristic: age 25 - 45 years old, university degree, have professional job, minimum spending per month 5 million IDR. The target group also chosen because I represent the consuming class in Indonesia and potential market for the bank. To make sure the accuracy of respondent characteristic, questionnaire will be distributed collected through third party service called JakPat which will provide the targeted respondents along with their demographic data.

4. Result

A total of 153 respondents took part in the in the study and the respondents profile can be found in Table 8. 57 % respondents are male, and 43 % are female. Respondents age range between 25 -45 years old and mostly age between 30-35 years old. Looking at the social, economic status, 28 % respondents come from upper one social economic status, 43 % from upper two social economic statuses and 29 % come from middle one social economic status. 92 % respondents have a bachelor degree, and 7.6 % have master degree. The respondents only represent a part of Indonesian consumer's class and selected to ensure financial literacy that is required to fill the questionnaires.

Table 8: Respondents demographic

Demographic	Respondent demographic (%)	Indonesia demographic (%)
Gender		
Male	57	51
Female	43	49
Age		
< 25	n/a	31
25-29	16	9
30-35	40	10
36-39	37	8
40-45	7	7
> 45	n/a	35
Social economic status		
A1	28	5
A2	43	11
B1	29	38
< B1	n/a	54
Education		
Below bachelor	n/a	93
Bachelor	92	6
Master	8	0.23

4.1. Scale unidimensionality and reliability

Respondents motivated innovativeness and financial risk tolerance data gathered from the questionnaire were analysed to check the scales' unidimensionality using factor analysis and the result reported in Table 9. Looking at the result for innovativeness scale, the eigen value for the first component is much larger than the Eigen value for the second component which indicates that the scale items are unidimensional. The Eigen value of the financial risk tolerance scale shows that the scale could represent two underlying constructs. Further analysis using orthogonal rotation indicates that according to the factor loadings, the scale has two dimensions of financial risk tolerance, and the factor loading can be found in Table 10. The first dimension is financial risk tolerance in the domain of investment and work related while the second dimension is financial risk tolerance in the area of recreational activities. As a result of these findings, two type of financial risk tolerance will be used as a moderator in consumer's choice of a payment card.

Table 9 : Scale's Eigen value's, KMO & Bartlett's Sphericity test

Scale	KMO	Eigen Value 1st component	Eigen Value 2nd component	Bartlett's test P value
Social motivated innovativeness	0.81	3.37	0.62	< 0.00
Functional motivated innovativeness	0.85	3.16	0.66	< 0.00
Hedonic motivated innovativeness	0.87	3.83	0.42	< 0.00
Financial risk tolerance	0.73	2.58	0.93	< 0.00

Table 10: Different dimension in financial risk tolerance scale

NO	Scale	Component 1	Component 1
1	Investing in a business that has a 50: 50 of success and failing	0.822	-
2	Investing 10% of your annual income in a very speculative stock	0.755	-
3	Taking a job where you get paid exclusively on a commission basis.	0.753	-
4	Taking a day's income to play the slot machines at a casino	-	0.877
5	Spending money impulsively without thinking about the consequences	-	0.843

Rotation: Varimax

To measure scale reliability, scale Cronbach Alpha was calculated using SPSS and the result reported in Table 11. Each scale in the study is reported to have good reliability with reported Cronbach's Alpha more than 0.7, and the are no items that would increase the scale's Cronbach alpha if that item is deleted. Financial tolerance scale is categorised into investment financial risk tolerance and recreational financial risk tolerance according to the finding in factor analysis.

Table 11: Scale reliability

Scale	Cronbach's Alpha
Social motivated innovativeness	0.879
Functional motivated innovativeness	0.852
Hedonic motivated innovativeness	0.923
Investment financial risk tolerance	0.723
Recreational financial risk tolerance	0.727

4.2. Analysis of choice data

A total of 153 respondent participated in the study. The choice data contains 918 choice decision that can be found in Table 12. Overall, 71 % of the data contains choice decision and 29 % of no choice decision. Most of the respondents choose national private owned bank, MasterCard, debit, platinum, direct discount and monthly fee. Most of the attributes are closely positioned with one another, and there is no attribute that is chosen in over 60 % of the cases.

Table 12: Choice decision distribution

Attribute	Level	%
Issuer	National private owned bank	44
	State-owned bank	42
	International private owned bank	14
Payment provider	MasterCard	28
	Visa	27
	American Express	23
	JCB	22
Card type	Debit	55
	Credit	45
Card segment	Platinum	38
	Gold	33
	Silver	29
Card promo	Direct discount	54
	Point reward	46
Card fee	Monthly	53
	Annual	47
Choice decision	Choice	71
	No choice	29

Respondents choice data were analysed to test the independence of irrelevant alternative violation and reported in Table 13. Hausman-Mcfadden test in Stata statistical software was used to test the independence of irrelevant alternative violation. The test result shows that the outcome are independent, and there is no evidence of the independence of irrelevant alternative violation. Therefore, conditional logit model will be used to analyse the data.

Table 13: Test of IIA violation result

Attribute	Level	P value
Issuer	State-owned bank	0.982
	National private owned bank	0.174
	International private owned bank	0.397
Payment Provider	Visa	1.0
	MasterCard	0.691
	JCB	0.981
	American Express	1.0
Card Type	Debit	0.877
	Credit	0.926
Card Segment	Silver	0.991
	Gold	0.496
	Platinum	0.910
Card promo	Direct discount	0.886
	Point reward	0.844
Card fee	Annual	0.995
	Monthly	0.591

A conditional logit model was used to analyse the choice data. The dependent variable of this model is a choice decision, and the independent variable is the payment card attributes for the main effect model

while in the model with interaction, motivated consumer innovativeness and financial risk tolerance were used as the moderator. One of the features of conditional logit model is that the model will grouped the data and the likelihood of each group are calculated relative to one another and for attributes that have no natural base level, the base group will be varied. The result from conditional logit model is reported in log odds unit coefficient. The general interpretation of log odds unit coefficient is that for a unit increase in the dependent variable, the probability for outcome relative to the base group is predicted to change according to the estimate, given all the variables in the model all held constant. In general, if the estimate is negative, the outcome probability is more likely to be in the base group.

To estimate consumer's choice probability, three type of model is estimated, the first model is main effect model which estimate the main effect. The second model is interaction effect model which capture the influence of motivated consumer innovativeness and financial risk tolerance on consumer's choice of a payment card. The third model is the full model which capture both main effect and interaction effect. The model goodness of fit is measured using Akaike Information Criterion, Bayesian Information Criterion and McFadden adjusted ρ^2 that provide relative quality of a statistical model. The smaller Akaike Information Criterion and Bayesian Information Criterion suggest that the model has better quality compared to other. The higher McFadden adjusted ρ^2 score indicated that the model has better quality compared to other.

The result of the conditional logit model with the main effect and interaction effect is reported in Table 14 as a univariate model where the moderating variable is included one at a time or. According to the main effect model, the most preferred payment card is a gold or platinum credit card from a state-owned bank or national private owned bank with MasterCard or Visa as the payment provider and offers direct discount promotion. The result from the main effect suggests that issuer bank is an important factor that could determine consumer preference of a payment card. This finding is not surprising because consumer stores their money in issuer bank which causes them to pay more attention to the issuer bank in a payment card. Issuer bank also acts as the brand of the card. A brand has been argued to have a major role in consumer decision making and by providing certain cue such as quality and reliability (Macdonald & Sharp, 2000).

The result from the main effect model perfectly illustrates the condition in the Indonesian market. State-owned bank and national private owned bank are more preferred than international private owned bank. International private owned bank offers limited service compared to state owned and national private owned bank in Indonesia. Most of the international private bank in Indonesia focus their service to corporate and provide less service on the consumer level. MasterCard and Visa are the most preferred payment provider because they have the widest acceptance in Indonesian market compared to JCB and American Express. A debit card is more preferred than a credit card, debit card is more common in the Indonesian market and has higher market share than credit card in Indonesia. Direct discount is more preferred than point reward because issuer bank offers direct discount program as payment card main selling point than point reward. The result from main effect model also shows that the no choice option

has the highest coefficient which indicates that the probability to not adopt a payment card is high. This results corresponds to the data presented previously about the low penetration of payment card in Indonesia where only 36 % of Indonesian adult population have a bank account (Institute of International Finance, 2015).

To find the influence of motivated consumer innovativeness and financial risk tolerance on consumer payment card adoption, the choice data were analysed using the conditional logit model with main effect and interaction which reported in Table 15 as a multivariate model where the moderating variables is included at all the same time. The three different model have a similar result but have different goodness of fit score. The full model has the lowest AIC score and the highest McFadden adjusted R^2 but it also has the highest BIC score. The main effect model generates from interaction from investment financial risk tolerance has the second lowest AIC score and McFadden adjusted ρ^2 with the lowest BIC score.

Table 14: Conditional logit model with main effect and interaction

Main effect model							
Attribute	**level**	**Main effect**	**social**	**Functional**	**Hedonic**	**investment FRT**	**Recreational FRT**
Issuer	NPO vs IPO	1.37**	1.37**	1.43**	1.40**	1.39**	1.44*
	SO vs IPO	1.37**	1.40**	1.43**	1.40**	1.41**	1.48*
	NPO vs SO	-0.000	-0.03	-0.000	-0.000	-0.02	-0.03
Payment provider	American Express vs Visa	0.28*	-0.29*	0.29*	-0.28*	-0.30*	-0.26*
	JCB vs Visa	-0.34*	-0.37*	0.35*	-0.34*	-0.36*	-0.40*
	MasterCard vs Visa	-0.017	-0.03	-0.04	-0.02	-0.01	-0.002
	MasterCard vs American Express	0.26*	0.25*	0.29*	0.26*	0.29*	0.26*
	JCB vs American Express	-0.05	-0.07	-0.05	-0.05	-0.06	-0.13
	MasterCard vs JCB	0.32*	0.33*	0.30*	0.32*	0.35*	0.40*
Card type	Credit vs Debit	-0.19	-0.22*	-0.19*	-0.20*	-0.21*	-0.19*
Card segment	Gold vs Silver	0.16	016	0.17	0.18	0.17	-0.09
	Platinum vs Silver	0.16	0.15	0.15	0.16	0.16	-0.08
	Gold vs Platinum	0.000	0.01	0.02	0.01	0.00	0.03
Card promotion	Direct discount vs Point reward	0.24*	0.27*	0.24*	0.25	0.24*	0.26*
Card fee	Annual vs Monthly	-0.06	-0.08	-0.07	-0.06	-0.04	-0.04
No choice	No choice	1.48**	1.43**	1.43**	1.46**	1.33**	1.58**

Interaction effect model							
Attribute	**level**		**social**	**Functional**	**Hedonic**	**investment FRT**	**Recreational FRT**
Issuer	NPO vs IPO		0.01*	-0.18*	-0.1	-0.06	-0.16
	SO vs IPO		-0.19	-0.18*	-0.1	-0.18	-0.19*
	NPO vs SO		0.20*	0.002	-0.003	0.11	0.02
Payment provider	American Express vs Visa		-0.04	0.02	-0.007	0.15*	-0.13*
	JCB vs Visa		0.08	0.03	0.004	0.12	0.07
	MasterCard vs Visa		0.03	0.10	0.01	0.005	-0.06
	MasterCard vs American Express		0.07	0.08	0.02	-0.15	0.06
	JCB vs American Express		0.13	0.008	0.01	-0.03	0.20*
	MasterCard vs JCB		-0.05	0.07	0.01	-0.11	-0.14
Card type	Credit vs Debit		0.13*	0.03	0.03	0.12	0.07
Card segment	Gold vs Silver		0.06*	-0.02	-0.05	-0.04	0.15
	Platinum vs Silver		0.09	0.06	0.01	0.09	0.11
	Gold vs Platinum		-0.03	-0.008	-0.07	-0.13	-0.05
Card promotion	Direct discount vs Point reward		-0.13*	-0.01	0.25	0.05	-0.03
Card fee	Annual vs Monthly		-0.13	0.07	-0.06	-0.13	0.03
No choice	No choice		-0.32*	-0.37*	-0.43**	-0.56**	-0.55**
Model goodness of fit							
AIC		2723	2665	2694	2693	2652	2684
BIC		2794	2803	2835	2834	2793	2826
McFadden's Adj. R2		0.078	0.098	0.088	0.089	0.102	0.092

FRT: Financial risk tolerance; SO: state-owned bank; NPO: National private owned bank; IPO: International private owned bank
MCI: Motivated consumer innovativeness *) significant at the 5 % level; **) significant at the 1 % level; N= 153

Table 15: Conditional logit full model

Attribute	level	Main effect	Social	Functional	Hedonic	Investment FRT	Recreational FRT
Issuer	NPO vs IPO	1.43**	0.45*	-0.42*	-0.07	0.10	-0.22*
	SO vs IPO	1.51**	-0.16	-0.25*	0.24	0.016	-0.14
	NPO vs SO	-0.07	0.61**	-0.17	0.31	0.08	-0.07
Payment provider	American Express vs Visa	-0.28*	-0.09	0.02	-0.001	0.34*	-0.24*
	JCB vs Visa	-0.41*	-0.008	-0.008	-0.18	0.08	0.02
	MasterCard vs Visa	-0.004	0.23	-0.23	-0.13	0.01	-0.11
	MasterCard vs American Express	0.27*	0.32	0.21	-0.13	-0.32	-0.12
	JCB vs American Express	-0.13	0.10	-0.03	-0.18	-0.25	0.26*
	MasterCard vs JCB	0.40*	-0.22	0.24	0.04	-0.06	-0.13
Card type	Credit vs Debit	-0.11*	0.27*	-0.07	-0.15	0.10	0.001
Card segment	Gold vs Silver	0.17	0.34*	-0.07	-0.21	-0.01	-0.09
	Platinum vs Silver	0.17	0.21	0.04	-0.17	0.09	-0.09
	Gold vs Platinum	-0.006	0.13	-0.12	-0.03	-0.10	0.003
Card promotion	Direct discount vs Point reward	0.35**	-0.31*	0.14	-0.000	0.17	-0.03
Card fee	Annual vs Monthly	-0.12	-0.28	0.10	-0.15	-0.33	0.11
No choice	No choice	1.58**	-0.34	-0.37*	0.42*	-0.21	-0.42
Model goodness of fit							
AIC					2616		
BIC					3040		
McFadden's Adj. R2					0.115		

Financial risk tolerance; SO: state-owned bank; NPO: National private owned bank; IPO: International private owned bank
MCI: Motivated consumer innovativeness *) significant at the 5 % level; **) significant at the 1 % level; N= 153

4.3. Hypothesis testing

The results from Table 14 and 15 were used to analyse the hypothesis. The result is presented in relative log odds unit, and the common way to interpret is that if the coefficient is negative, it means that the outcome is more likely to fall into the base category which can be found in the second level in each line.

Hypothesis 1

Hypothesis 1: Consumers with higher functional motivated innovativeness will have higher likelihood to adopt payment card that offers more functionality than consumers with higher social and hedonic motivated innovativeness

1a: Consumers with higher functional motivated innovativeness will have higher likelihood to adopt payment card with state-owned bank than consumers with higher social and hedonic motivated innovativeness

1b: Consumers with higher functional motivated innovativeness will have higher likelihood to adopt credit card than consumers with higher social and hedonic motivated innovativeness

This research hypothesizes that consumers with functional motivated innovativeness will put functional motive as more important than others. Functionality, compatibility, and reliability are critical factors that determine their adoption intention (Vandecasteele & Geuens, 2010). Payment card functional attributes such as issuer bank and card type deliver a different level of functionality, compatibility, and reliability

than other functional attributes. State-owned banks dominate Indonesian banking industry and offer a more complete financial services and extensive networks compared to private owned banks which make payment card from state-owned banks to have more functionality and compatibility and reliability (Ernst & Young 2015). Both debit and credit card offers the convenience of not having to carry much cash. Credit card offers additional purpose which is the ability to borrow money and provide grace period between the time of transaction and billing period. Credit card offers more functionality regarding spending power than debit card

According to the result from the univariate model presented in Table 14, for consumers with higher functional motivated innovativeness, the multinomial log odds of choosing a payment card from a national private bank and state-owned bank than payment card form international private owned bank is expected to decrease by 0.18 unit. The result from the multivariate model presented in Table 15 shows similar result, for consumers with higher functional motivated innovativeness, the multinomial log odds of choosing a payment card from national private bank and state-owned bank to international private owned bank is expected to decrease by 0.42 unit and 0.25 unit. The result from both model suggests that consumer with higher functional motived innovativeness is more likely to choose a payment card from international bank than local bank. Both models show that functional motivated innovativeness has no significant effect on consumers choose of payment card type. Looking at the result, it is concluded that hypothesis 1a and 1 b are not supported.

Hypothesis 2

Hypothesis 2: Consumers with higher hedonic motivated innovativeness will have higher likelihood to adopt payment card that offers more variety and stimulation than consumers with functional and social motivated innovativeness

2a: Consumers with higher hedonic motivated innovativeness will have higher likelihood to adopt payment card with point rewards than consumers with functional and social motivated innovativeness

This research hypothesizes that consumers with higher hedonic motivated innovativeness will look for a product that can give them variety and sensory stimulation (Vandecasteele & Geuens, 2010). Payment card experiential attributes such as promotion provide a reward that acts as stimuly and provides variety to consumers. Point rewards in payment card promotion program offer more reward variety than direct discount. Direct discount promotion program offers discounts in selected retailers. Point rewards program doesn't limit the retailers where consumers could get a benefit and allow consumers to redeemed their reward point with various items. This shows that point rewards offers more variety and provide more sensory stimulation than direct discount. Unfortunately, the result provides no significant evidence on the influence of hedonic motivated innovativeness on consumer's choice of a payment card, and the hypothesis can't be supported.

Hypothesis 3

Hypothesis 3: Consumers with higher social motivated innovativeness are more likely to adopt payment card that offers recognition and admiration than consumers with functional and hedonic motivated innovativeness

3a: Consumers with higher social motivated innovativeness are more likely to adopt gold and platinum payment card than consumers with functional and hedonic motivated innovativeness.

This research hypothesizes that consumers with higher social motivated innovativeness are motivated by social goals such as recognition, and they will look for a product that could help the to achieve their goals (Vandecasteele & Geuens, 2010). Payment card social attributes such as card segment reflects how much money that an individual can spend through the card act as a cue to consumer's social status. Social status refers to consumer's position in a social system and influence consumer's feels of distinctiveness. Social status is gained through possession of certain characteristic such as wealth that is considered to be worthy by certain society (Grier & Deshpande, 2001). This will lead to the third hypothesis

Both univariate model in Table 14 and multivariate model in Table 15 show that for consumers with higher social motivated innovativeness, the multinomial log odds unit of choosing a gold payment card than silver is expected to increase by 0.06 unit according to the univariate model and 0.34 unit according to the multivariate model. Both models also show that platinum payment card have a higher coefficient to consumers with higher social motivated innovativeness but unfortunately the result is not significant. Looking at the result it is conclude that hypothesis 3 is supported.

Hypothesis 4

Hypothesis 4: Consumers with higher risk tolerance are more will have higher likelihood to adopt a payment card from less known brand than consumers with lower financial risk tolerance

4a. Consumers with higher financial risk tolerance are more likely to adopt a payment card from national and international private owned bank than than consumers with lower financial risk tolerance

4b. Consumers with lower financial risk tolerance are more likely to adopt a payment card from state owned bank than consumers with lower financial risk tolerance

Financial risk tolerance decreases individual sensitivity to the adverse outcome of a product and drives consumers to choose a product that comes less popular brand. This research hypothesizes that consumers with higher risk tolerance to be more likely to choose a payment card from national and international private owned bank than state-owned bank with American Express and JCB as the payment provider.

According to the univariate model, for consumers with higher financial risk tolerance in the domain of investment, the multinomial log odds of choosing American Express than Visa is predicted to increase by 0.15 unit. However, the result also shows that, for consumers with higher financial risk tolerance in the

domain of recreation, the multinomial log odds of choosing American Express than Visa is predicted to decrease by 0.13 unit. Furthermore, consumers with higher financial risk tolerance in recreation is predicted to prefer international private owned bank than national private owned bank with Visa and JCB as the payment provider. Looking at the result, it is concluded that the hypothesis is partially supported.

One of the main characteristics of innovators is that they are risk tolerant, therefore, they are more sensitive to incentives offered by a new product. Innovators are less influenced by the uncertainty coming from adopting a new product. Consumers with low-risk tolerance are less likely to respond to changes and lower their intention to adopt new product (Kelly et al. 2008; Pennings & Smidts, 2000).

Looking at the log odds coefficient both from the univariate and multivariate model, consumer innovativeness and financial risk tolerance are proven to have positive correlation with consumer's intention to adopt a payment card. Hedonic motivated innovativeness and financial risk tolerance in the domain of recreation have significant influence in increasing consumer's intention to adopt a payment card.

5. Discussion and conclusion

The purpose of this research is to examine the influence of consumer innovativeness and financial risk tolerance on consumer's payment card adoption which lead to the following research questions:

1. What is the influence of consumer innovativeness and financial risk tolerance on consumers payment card adoption?
2. What is the influence of consumer innovativeness and financial risk tolerance on the relative importance of payment card attributes?

This research theorize that consumer's choice of a payment card will determined by their value and financial risk tolerance. Three different value is chosen as primary driver in adoption intention. First value is functional value which drive individual to focus more on product capability to increase productivity and task management. The second value is hedonic value which drive individual to focus on product capability to provide sensory stimulation and affective gratification. The third value is social value which drive individual to focus on product capability to give social power. This values are independent and Individual can have more than one value. Individual will evaluate attributes to be more important according to their value. Individual with higher social value will evaluate social attributes of a product to be more important than other attributes.

The result shows that individual with social value will evaluate social attributes of a payment card to be more important and individual with functional value will choose a payment card from an issuer bank that offers more service on the consumer level. The research didn't find a significant result on the influence of hedonic value on payment card hedonic attributes. Overall, the research conclude that social value has the higher influence on consumer's choice of a payment card. This could be because of the fact that

from a cultural point of view, Indonesia is considered as a collective society where the opinion of others has a significant influence on the purchase decision.

This research theorizes that financial risk tolerance will drive individual to choose a product from a less known brand. The research shows that individual with higher financial risk tolerance will have higher likelihood to adopt payment card from less brand but only to certain extent. According to the result, an individual with higher financial risk tolerance will choose a payment card with less known payment provider but still choose a payment card from a well-known issuer bank.

The study shows that consumer innovativeness and financial tolerance have significant influence in the relative important of payment card attributes. After testing the conceptual framework and hypothesis. This research found that social motivated innovativeness, functional motivated innovativeness and financial risk tolerance in the domain of investment and recreational have a significant influence on the relative importance of payment card. This finding corresponds with previous research in consumer innovativeness that shows consumer innovativeness have a positive correlation with consumer's adoption intention and buying intention (Hirunyawipada & Paswan, 2006; Lassar et al. 2005). Literature in consumer's innovativeness theorized risk tolerance as one of the main traits of innovative consumers. This research found that financial risk tolerance influence consumer's likelihood to adopt payment card and probability to choose a payment card from a less popular brand such as JCB and American Express. Furthermore, this research also found evidence that consumers will be more likely to adopt a product that is congruent with their motivation.

This research adds to the several of research that have identified the importance of personal values in driving consumer decision making (Shaw et al. 2005; Solomon, 2014). In the field of decision making and product evaluation, certain consumers values might drive consumers to be more aware to an attribute which usually may not considered important. Effective product design must be able to identify consumer's values and how it could be used to design a more attractive product for consumers.

This research has several limitations. First, all of the respondents are from Indonesian nationality. Previous research from Steenkamp et al. (1999) suggests that consumer culture could influence and their level of innovativeness. Indonesia is a collectivist and hierarchical society which may explain why social motivated innovativeness has higher influence than another type of motivated consumer innovativeness. Second, this study only addresses consumers' payment card adoption and not consumer's usage of a payment card. Payment card adoption is only the first step on the payment card product life cycle. Further investigation on what factors influence consumer's usage of a payment card would be beneficial to reduce the card usage in Indonesia. Third, the interaction between consumer innovativeness and financial risk tolerance is not explored in this study. The interaction between motivated consumer innovativeness and financial risk tolerance may provide a better predictive model in payment card adoption.

The outcome of this research can be useful for banks in designing their payment card product. Bank could use this research to combine different card attribute according to its target market. The managerial implication of this study can be implemented outside the domain of payment card or product adoption such as marketing communicationn. This study shows that consumers will evaluate a product according to their motivation. These findings can be useful to develop product design and marketing communication strategy of a product. A product that is designed and targeted to consumers with high social motivation should have a communication strategy that highlights product attribute that could act as a social cue.

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Appendix 1 : Consumer innovativeness and financial risk tolerance scale

Construct	Scale
Social motivated innovativeness	I love to use innovations that impress others
	I like to own a new product that distinguishes me from others who do not own this new product
	I prefer to try new products with which I can present myself to my friends and neighbours
	I like to outdo others and I prefer to do this by buying new products which my friends do not have
	I like to outdo others and I prefer to do this by buying new products which my friends do not have
Functional motivated innovativeness	If a new time-saving product is launched, I will buy it right away
	If a new product gives me more comfort than my current product, I will not hesitate to buy it
	If an innovation is more functional, I usually buy it
	If I discover a new product in a more convenient size, I am very inclined to buy this
	If a new product makes my work easier, then this new product is a "must" for me
Hedonic motivated innovativeness	Using novelties gives me a sense of personal enjoyment
	It gives me a good feeling to acquire new products
	Innovation make my life exciting and stimulating
	Acquiring an innovation makes me happier
	The discovery of novelties makes me playful and cheerful
Financial risk tolerance	Investing in a business that has a 50 : 50 of success and failing
	Taking a day's income to play the slot-machines at a casino
	Investing 10% of your annual income in a very speculative stock
	Spending money impulsively without thinking about the consequences
	Taking a job where you get paid exclusively on a commission basis.

Appendix 2: Choice sets

Block	Set	Issuer bank	Payment provider	Card type	Segment	Promotion	Fee payment
1	1	BCA	Visa	Credit	Platinum	Point reward	Monthly
		Bank Mandiri	MasterCard	Debit	Silver	Direct discount	Monthly
		Bank Mandiri	JCB	Credit	Silver	Point reward	Annual
		Citibank	American Express	Debit	Gold	Direct discount	Annual
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	2	BCA	MasterCard	Debit	Platinum	Direct discount	Annual
		Citibank	Visa	Debit	Gold	Direct discount	Monthly
		Citibank	American Express	Credit	Silver	Point reward	Monthly
		Bank Mandiri	JCB	Credit	Platinum	Point reward	Annual
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	3	BCA	American Express	Credit	Gold	Direct discount	Monthly
		Bank Mandiri	MasterCard	Credit	Platinum	Point reward	Monthly
		Bank Mandiri	JCB	Debit	Silver	Direct discount	Annual
		Citibank	Visa	Debit	Gold	Point reward	Annual
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	4	Bank Mandiri	Visa	Credit	Silver	Point reward	Monthly
		Citibank	MasterCard	Credit	Platinum	Direct discount	Monthly
		Bank Mandiri	American Express	Debit	Platinum	Direct discount	Annual
		BCA	JCB	Debit	Gold	Point reward	Annual
		No choice					

	Set	Bank	Prinsipal	Card type	Segment	Promotion	Fee payment
	5	Bank Mandiri	Visa	Credit	Gold	Direct discount	Monthly
		Citibank	American Express	Debit	Platinum	Point reward	Annual
		BCA	MasterCard	Credit	Silver	Point reward	Annual
		BCA	JCB	Debit	Silver	Direct discount	Monthly
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	6	BCA	JCB	Debit	Platinum	Direct discount	Annual
		BCA	Visa	Credit	Silver	Point reward	Annual
		Citibank	MasterCard	Credit	Gold	Point reward	Monthly
		Bank Mandiri	American Express	Debit	Platinum	Direct discount	Monthly
		No choice					

Block	Set	Issuer bank	Payment provider	Card type	Segment	Promotion	Fee payment
2	**1**	Bank Mandiri	JCB	Debit	Gold	Point reward	Annual
		BCA	American Express	Credit	Platinum	Point reward	Monthly
		Citibank	MasterCard	Debit	Silver	Direct discount	Annual
		Citibank	Visa	Credit	Platinum	Direct discount	Monthly
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	2	Citibank	Visa	Debit	Gold	Point reward	Annual
		Citibank	American Express	Credit	Silver	Direct discount	Annual
		BCA	JCB	Credit	Platinum	Direct discount	Monthly
		Bank Mandiri	MasterCard	Debit	Gold	Point reward	Monthly
		No choice					

	Set	Bank	Prinsipal	Card type	Segment	Promotion	Fee payment
	3	BCA	MasterCard	Credit	Gold	Direct discount	Annual
		Bank Mandiri	Visa	Debit	Platinum	Direct discount	Monthly
		Citibank	American Express	Credit	Silver	Point reward	Monthly
		Citibank	JCB	Debit	Platinum	Point reward	Annual
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	4	Bank Mandiri	MasterCard	Credit	Platinum	Point reward	Annual
		BCA	Visa	Debit	Silver	Point reward	Annual
		BCA	American Express	Debit	Silver	Direct discount	Monthly
		Citibank	JCB	Credit	Gold	Direct discount	Monthly
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	5	BCA	Visa	Debit	Platinum	Point reward	Annual
		Citibank	MasterCard	Credit	Gold	Point reward	Monthly
		Bank Mandiri	American Express	Credit	Gold	Direct discount	Annual
		BCA	JCB	Debit	Silver	Direct discount	Monthly
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	6	Citibank	Visa	Credit	Platinum	Direct discount	Monthly
		BCA	MasterCard	Credit	Gold	Direct discount	Annual
		Bank Mandiri	JCB	Debit	Silver	Point reward	Monthly
		Citibank	American Express	Debit	Platinum	Point reward	Annual
		No choice					

Block	Set	Issuer bank	Payment provider	Card type	Segment	Promotion	Fee payment
3	**1**	Bank Mandiri	Visa	Credit	Platinum	Direct discount	Annual
		Citibank	MasterCard	Debit	Silver	Point reward	Monthly
		BCA	JCB	Credit	Gold	Direct discount	Annual
		BCA	American Express	Debit	Gold	Point reward	Monthly
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	2	Bank Mandiri	American Express	Debit	Gold	Point reward	Monthly
		Citibank	Visa	Debit	Platinum	Direct discount	Annual
		Citibank	JCB	Credit	Gold	Direct discount	Monthly
		BCA	MasterCard	Credit	Silver	Point reward	Annual
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	3	Citibank	JCB	Debit	Silver	Direct discount	Monthly
		BCA	American Express	Credit	Platinum	Point reward	Annual
		Bank Mandiri	MasterCard	Debit	Gold	Point reward	Monthly
		Bank Mandiri	Visa	Credit	Silver	Direct discount	Annual
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	4	Citibank	JCB	Credit	Gold	Point reward	Annual
		Bank Mandiri	Visa	Credit	Silver	Point reward	Monthly
		BCA	American Express	Debit	Silver	Direct discount	Monthly
		Citibank	MasterCard	Debit	Platinum	Direct discount	Annual
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	5	BCA	MasterCard	Debit	Platinum	Direct discount	Monthly

		Citibank	American Express	Credit	Silver	Direct discount	Annual
		Bank Mandiri	JCB	Debit	Platinum	Point reward	Monthly
		Citibank	Visa	Debit	Gold	Point reward	Annual
		No choice					
	Set	**Bank**	**Prinsipal**	**Card type**	**Segment**	**Promotion**	**Fee payment**
	6	BCA	Visa	Debit	Gold	Point reward	Monthly
		Bank Mandiri	American Express	Credit	Gold	Direct discount	Annual
		Citibank	MasterCard	Debit	Silver	Direct discount	Annual
		Citibank	JCB	Credit	Platinum	Point reward	Monthly
		No choice					