The Perceived Risk and
The Consumer Decision-Making Process
- A Study on Credit Card Holders

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Tutors: Christer Ekelund Annika Fjelkner Lisa Källström
Authors: Hong Liang Duoc Lu Li Tu
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Hong Liang Duoc Lu Li Tu
Abstract

The market changing of the credit card segment has driven many credit card providers reconstructing their business models and set up strategies in order to attract and retain customers. This leads to an idea of studying the underlying factors behind the consumers’ decision-making of using credit cards. After examining different Consumer Decision-Making theories and their influential factors, we find that the perceived risk is not included as an influential factor in the Consumer Decision Process (CDP). The perceived risks such as financial, psychological, social and performance are not regarded in the existing CDP theories, which we believe is important in the case of credit card usage. Therefore, the aim of this study is to investigate if the perceived risk occurs in the CDP. Our study is focusing on the existing credit card holders in Sweden.

Eight hypotheses are designed to test in which stage of the CDP, the perceived risk occurs and whether it affects the consumers’ decision-making concerning with credit cards usage. Although our result cannot be generalized, because of the size of the chosen population is too small, we do find some indication of the perceived risk actually affects the CDP, especially in the first stage of the Decision-Making Process.

Keywords: Consumer Decision Process, Perceived Risk, Credit Cards
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1 Introduction

In the first chapter, we will present the background of our dissertation. We will also discuss the research problem, purpose and limitation. Finally, based on the previous discussion, we will present our research questions and the outline of this dissertation.

1.1 Background

According to Chakravorti S. (2003), “Credit cards provide consumers a secure, reliable and convenient means of payment.” But in recent years in UK, customers’ attitudes toward credit card(s) has changed radically and the average number of customers who borrowed money from credit card(s) is decreasing with 20% every year, according to Steve Ewart, Acting Head of Marketing at IKANO FS in UK. As a consequence, IKANO FS has to reconstruct their business model because the current model cannot extract enough profit in order to keep sustainable in business. This phenomenon does not only affect IKANO FS but also the whole European market.

One possible explanation to the decreasing number of credit card(s) holders is that the UK government helps consumers to increase the knowledge about credit card(s), especially the costs and the consequences of not being able to pay back the loan. We find it interesting to study the consumer behaviour and the factors, which affect their decision-making. In the case of retailer banking such as IKANO FS, it is valuable to understand the consumers’ attitudes towards credit cards in order to adapt marketing strategies to attract and retain customers.

Although many researchers found both internal and external factors that significantly influence the consumers’ decision-making process, which will be explained in detail in the theoretical framework. However, we find that few of the existing theories explain the relationship between the perceived risk and the decision-making process. In our research, we believe that consumers are conscious about the risks they are taking when using credit on the card(s), besides of considering the costs. In the situation as in UK, we believe that the perceived risks affect consumers negatively on the use of credit card(s). Therefore, the aim of this research is to find empirical evidence to prove that consumers’ perceived risk actually affects their decision-making to use credit card(s).
1.2 Problem
In the case of credit card(s), it is different from other products and services in the sense that risk is usually associated with the credit card usage, not only the financial risk but also the consequences that it causes. For instance, for a credit card holder, there is risk of over consuming. As a consequence, the consumer may be in financial trouble, which may cause psychological effects such as anxiety, sleeplessness and so on. In the literature, this is considered as one factor of the perceived risk. However, the perceived risk, which we believe is an important factor in this case, has not been discussed in the Conceptual Model for Credit Card Choice and Usage Behaviour (Kara A., Kavnk E. & Kucukemiroglu O., 1996). Therefore, the problem we are going to study in this research is the perceived risk in credit card usage.

1.3 Purpose
The purpose of our dissertation is to investigate and understand the existing theories on consumer behaviour when applied them to the credit card usage. We would like to understand the different factors that influence the consumers’ decision-making process. Furthermore, our purpose is also to investigate whether there is a perceived risk occurring when consumers use credit card(s). If yes, we would like to build a new model to explain what kind of factors of the perceived risk affects the decision-making process of using credit card(s).

1.4 Research Questions
This dissertation is based on the following research questions:
1. What is the perceived risk associated with purchasing product(s) with a credit card?
2. Does the perceived risk, such as financial, psychological, performance, or social risk occur in the decision-making process of credit card usage?
3. If yes, does the perceived risk affect consumers’ decision of buying product(s) negatively by using credit card(s)?

1.5 Limitation
There are three limitations in our research. First, we are studying the perceived risk as a factor affecting the consumers’ decision-making process on whether to use credit cards or not. In this case, we do not discuss credit card choice. Second, our research does not focus on studying the different levels of the perceived risks among different categories of consumers, and we do not discuss how strong the perceived risk affects the consumers’ decision-making either. Third, due to the limitation of the time, resources and scope of our research, we do not carry out research to prove the relationship between the influential factors and the perceived risk.


1.6 Outline

This dissertation has the following chapters:

Chapter 2: The method, the research approach and philosophy are presented.

Chapter 3: The definition of a credit card and its attributes are presented.

Chapter 4: The theoretical framework is presented. First, we define that a credit card is a service and not a product. Second, we review the existing theories of consumers’ decision-making process, the influential factors and the perceived risk. Third, in the discussion part, we give some explanation to the internal relationship among the influential factors, the perceived risks and the decision making process. Then we criticize the existing model of credit card usage. At the end of this chapter, we set up our new model and build hypotheses.

Chapter 5: The empirical method is presented. We discuss the research strategy, sample and limitations. The response rate, the validity and the reliability are also discussed.

Chapter 6: The survey is analyzed. We analyze the results of the data and test our hypotheses by using SPSS. Then, the conclusion will be presented.

Chapter 7: The conclusions are presented. We give the summary of our research, the evaluation of our model and the criticism of our research method. Finally, we give suggestions for the future research.
2 Method

In this chapter, we present our choice of methodology. We will discuss the research approach, research philosophy, and the data collection.

2.1 Research Approach

The choice of methodology greatly depends on the research purpose and research questions (Saunders, Lewis & Thornhill, 2003). It means that the research method has to be chosen carefully based on our research purpose and research questions because there are different views of how we conduct knowledge of a phenomena we want to study. There are two distinct research methods when approaching a research; induction and deduction. Induction means starting the research from reality, and then building up a theory based on the data collected from reality. Deduction means starting with the existing theories and formulating hypotheses, and then test these hypotheses in reality (Saunders et al, 2003).

Our approach is deductive since we begin to study the existing theories within the appropriate area. From the theories we build a model and after that we test the model and our assumptions in reality.

2.2 Research Philosophy

Positivism, interpretivism and realism are three different research philosophies that are mentioned in the literature we have studied.

According to Saunders et al. (2003), the characteristic of positivism is that the researchers adopt the philosophical stance of the natural scientist. The researchers work with an observable social reality and the end product of such a research can be law-like generalization. The researchers assume the role of an objective analyst. There will be an emphasis on a highly structured methodology to facilitate replication and on quantifiable observations that lend themselves to statistical analysis. “The researcher is independent of and neither affects nor is affected by the subject of the research” (Saunders et al., 2003, 84)

The interpretivistic philosophy is the one that focuses on analyzing the details of events in order to understand the reality or perhaps a reality working behind them. Researchers advocate that this philosophy is opposite to positivism and maintain that the social world cannot be generalized because of its uniqueness and complication (Saunders et al., 2003, 84)
Realism is based on the belief that a reality exists that is independent of human thoughts and beliefs (Saunders et al., 2003, 84). Under this philosophy, the researchers believe that large-scale forces can affect people’s perception (Saunders et al., 2003).

In one way, we try to adopt positivism philosophy in our research, because we want to study our subject(s) objectively without interfering or affecting their responses. But in another way, our objective is not supposed to draw law-like generalization of consumer behaviour but rather to try to understand how the perceived risk affects their decision of using credit cards. This way, interpretivism is appropriate. But we cannot ignore the fact that consumers live in a complex society and depend on interaction with other people in the society. Their personality and their lifestyles may affect the way they interpret the world, especially in our case, the interpretation of the perceived risk. Therefore, in our research, we conduct the research following the philosophy of interpretivism and realism because we try to understand consumer behaviour as it is in a complex society.

**2.3 Data Collection**

**2.3.1 Secondary Data**

The use of credit cards has become popular recently because of the integrity of the economic system. There are many existing theories related to consumer behaviour we can use to explain the phenomena of credit card usage, but only a few of them discuss the perceived risk which also affects consumer behaviour. There is a book written by Donald F. Cox, *Risk taking and information handling in consumer behaviour* (1967) that mostly discuss the risk taking and consumer behaviour. It was published long time ago and is far behind the time. So we have to begin our research by studying all the theories both of consumer behaviour and risk.

The theories we studied on the consumer behaviour mainly focus on the decision-making theories and the influential factors that can affect consumer behaviour. Totally, there are altogether seven theories or models we can use. And the theories on the risk mainly discuss the perceived risk and its classification. We get access to those theories in our library as well as via the Internet.

**2.3.2 Primary Data**

We collected our primary data by doing a survey. Our respondents are consumers that hold credit card(s) and the questionnaire are designed. This way, we got the data we needed and the data is up to date for our purpose in this research.
One problem with collecting primary data is that it is time consuming. In order to get data that are representative, the response rate has to be calculated carefully because not everyone we choose in our survey is willing or qualified to help us fill in the questionnaire. The participants in each category must not overlap and must be distributed equally, otherwise, it will affect the reliability of our survey.

From the beginning, we planned to do this survey on IKANO Financial Services in England but, due to the time limitation, it was not possible for us to retrieve data from these customers. Otherwise, the data collected is representative because we were able to reach proper size of each category for our research. Instead, we collected our data by asking customers entering Elgiganten, an electronic store in Kristianstad.

### 2.4 Summary

Our research is based on the deductive approach because we design and test hypotheses on existing theories. We choose interpretivism and realism research philosophy because we are trying to understand the consumer behaviour in the complex society. Our data is based on both primary data by doing survey, and secondary data by exploring the existing theories.
3 Credit Cards

In this chapter, we will introduce the definition of credit cards, and also explain the attributes of credit cards, such as the benefits and the costs of using credit cards.

3.1 Introduction

"The credit card was the successor of a variety of merchant credit schemes". It was first used in the 1920s in the United States. In 1999, there were 14.2 billion credit card transactions accounting for $1.096 trillion (Credit Card News, 2000). The popularity of credit cards continues to grow because of the increasing number of the merchants that accept them and consumers that carry them (Sujit Chakravorti, 2003,3).

Before discussing different theories about consumer’s behaviour concerning credit card usage, we should know some basic concepts of credit cards, such as the definition and the attributes of credit cards including the benefits and the costs of using a credit card.

3.2 The Definition of Credit Cards

Credit cards serve as a payment instrument with authorized credit (Sujit Chakravorti, 2003, 3). A credit card is a device, which may be issued by a bank or a business, and used to obtain consumer credit at the time of purchasing an article or service. Stated in another way, the credit cards allow someone to carry out a purchase on borrowed money. There are two types of cards, credit cards and charge cards. Credit cards such as Visa and MasterCard allow consumers to pay a monthly minimum on their purchases with an interest charged on the unpaid balance. Charge cards, such as American Express, require consumers to pay for all purchases at the end of the billing period. Credit card issuers receive revenue from fees paid by stores that accept their cards and by consumers that use the cards, and from interest by charging consumers on their unpaid balances.

In our research, we will focus on the consumers’ perspective. They use cards as payment means at the point of purchase, for instance in supermarkets, or making reservation online.

3.3 Credit Card Attributes

An attribute in general and in philosophy is "an abstraction of a characteristic of an entity or substance, i.e. an essential property, as opposed to a non-necessary (contingent) property,
which is called a mode. In our case, a credit card has such attributes as interests, annual fee and transaction fee and so on. When consumers are using credit cards, these factors should be considered and cannot be avoided. However, these attributes lead to some problems of using credit cards and make people hesitated when deciding whether to use it or not. We will talk about these from both the positive and negative angles, including the benefits and the costs of using credit cards.

### 3.3.1 Benefits of Using Credit Cards

As mentioned in the previous part, credit cards provide consumers with a secure, reliable and convenient means of payment. Sujit Chakravorti (2003) said that “Consumers find credit cards convenient for making purchases by accessing lines of credit that they may choose to pay off at the end of the billing cycle or pay over a longer period of time” (Sujit Chakravorti, 2003, 3). This means that consumer are able to buy products or services they need and do the payment at the end of the billing cycle, for instance at the end of the month. The lack of cash does not prevent consumers from completing the purchase. In addition, the transactions made by credit cards are also secure and reliable.

Moreover, Chakravorti (2003) also argued that consumers also find “…that credit cards provide relatively secure transactions for non-face-to-face transactions as evidenced by the overwhelming use of credit cards for online transactions.” (Sujit Chakravorti, 2003, 3). This means that consumers who using credit card(s) to pay feel more secure and free. Nowadays, credit card(s) is welcomed as a kind of life facilitator.

### 3.3.2 Costs of Using Credit Cards

However, credit cards are the most expensive payment instrument to accept (Sujit Chakravorti, 2003, 3). The cost refers to monetary value of good and service that producers and consumers purchase. For consumers, cost describes the price pay for goods and service.

The major fees for consumer using credit cards are (1) late payments; (2) charges that result in exceeding the credit limit on the card (whether done deliberately or by mistake); (3) payment processing fees (per-transaction fees or transaction fee, often three percent of the amount); (4) transactions in a foreign currency (as much as three percent of the amount; a few financial institutions charge no fee for this); and (5) membership fees (annual or monthly), sometimes one percentage of the credit limit.

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The costs of using a credit card that mentioned above can be understood in the following way: first, consumers may be charged an extra fee with interest by issuers if their payments' date exceeds the time limit of the bill; second, if the consumer uses her or his credit that exceeds the credit limit on the card, he or she can be charged by the issuer. For example, if the limit on the card is 5 000 SEK and the consumer’s consumption exceeds that amount, he or she can be charged; third, at the time of the purchase, some merchants may charge a fixed amount (for example 5 SEK per transaction) when a consumer uses the credit card as a payment tool instead of cash. This is referred as the per-transaction fee. However, merchants may also charge so called transaction fee depending on the amount of the transaction, for example three percent; fourth, the transaction in a foreign currency refers to the transaction made by the holder outside the home country, where he or she can be charged by the issuer for example three percent of the amount; last, the membership fee refers to an annual or monthly fee. Normally, most issuers only charge an annual fee or no fee at all.

3.4 Summary

We know that using credit cards can help people to arrange a better life through using tomorrow’s money to enjoy the life today. However when consumers make decisions, they will not ignore the negative aspects of using credit cards. In spite of those costs we have mentioned above, customers still bear many risks when using credit cards. It will cost customers a lot if they cannot use credit cards reasonably. For example, consumers may lose their credit standing if they cannot pay the money back to banks, and this will influence their whole lives. Thus, it is very hard for consumers to make a decision whether to use the credit on the card or not, if they want to keep balance among the benefits, costs and risks.
4 Theoretical Framework

In this chapter, we will present the most important theories that contribute and support our research. First, we will distinguish the differences between products and services and put credit cards in the context. Then, we explore different theories about consumer behaviour, such as consumer decision-making theories and influential factors that affect their behaviours and decisions. And third, in order to get deeper understanding of the risk, we explore the theories of the perceived risk. Then, we present our general conclusion and build a new model, which argues whether the perceived risk affects the consumers’ decision making of using credit cards.

4.1 Introduction

Our research objective is to find the empirical evidence to prove whether the perceived risk affects the consumer’s decision-making process. Therefore it is essential to understand their decision-making process and the factors that influence this process. It is why we present decision-making theories and influential factors in this part.

Credit card is a kind of financial service, as we argued in the next part, which differs from other products and services in terms of the attitude towards using it. For consumers, using credit cards to purchase products or services on its credit is considered as a short-term loan because consumers can pay the bill at the end of the month or a short period of time in the future. In this kind of situation, there exist risks that consumers are over consuming and not be able to pay back. Therefore we explore the risk theories, besides of consumer behaviour theories, in order to understand this phenomena concerning with using credit cards to purchase on its credit.

4.2 Credit Card is a Financial Service

Our research focuses on studying whether the perceived risk affects the credit card holders’ decision-making process. Therefore, it is necessary for us to clarify the differences among products, services and credit cards.

According to the explanation from the website\(^\text{1}\), a product in marketing is “anything that can be offered to a market that might satisfy a want or need”. It has two types, on is tangible (physical), the other is intangible (non-physical). Therefore if consumers purchase the products, they will perceive the complete package of benefits or satisfactions, which include

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\(^1\) Retrieved from http://www.answers.com/topic/product
the sum of all physical, psychological, symbolic, and service attributes, not just the physical merchandise. In terms of a credit card itself, it is a kind of tangible financial product; however, consumer will receive financial service (intangible) once they hold it till they stop using it.

Then, what is service? In the same way, we check the explanation from the same website and get to know that the term of service has various meanings, depending upon the context of the word.

"In economics and marketing, a service is the non-material equivalent of a good. Service has been defined as an economic activity that does not result in ownership, and this is what differentiates it from providing physical goods. It is claimed to be a process, in which it creates benefits by facilitating a change on customers; or a change in their physical possessions; or a change in their intangible assets."

Following the above definition, financial service refers to the services provided by the finance industry that deals with the management of money. Banks, investment banks, insurance companies, credit card companies and stock brokerages are examples of the type of firms comprising the industry, which provides a variety of money and investment related to services.

Therefore, it is clear that once customers decide to use credit cards, they will be involved in receiving financial services. Due to the attributes of financial services, they are completely different from buying other physical merchandises. Consumers will be influenced by different perceived risks in their minds when they are using credit cards to purchase products. Meanwhile, the process of making the decision to buy a kind of physical merchandise or a certain financial service, to some extent, is influenced by other different factors such as the attributes of the product(s). In the following theoretical framework, before we study further with the perceived risk of using credit card, our research focuses on exam the general consumer behaviour theories, including the theories of decision-making process and influential factors.

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1 Retrieved from http://www.answers.com/topic/service
**4.3 Consumer Behaviour Theories**

**4.3.1 Introduction**

As Roger.D Blackwell, Paul W.Minjar and James F.Engel (2001) put forward in their book:

"Consumer behaviour is defined as activities people undertake when obtaining, consuming, and disposing of products and services. Simply stated, consumer behaviour has traditionally been thought of as the study of 'why people buy'-with the premise that it becomes easier to develop strategies to influence consumers once a marketer knows why people buy certain products or brands."

However, it is very important to study the decision-making process because it will explain why and when consumers buy a product(s). From consumers’ general view, there are five reasons. First, there are variety of commodities and customers have to make choice from different products which processes same function; second, customers need this product because it will bring some benefits to them; third, the consumers are interested in it, even though it may not be useful; fourth, the product has a very famous brand which embodies the consumers’ life style and social status; fifth, the external influential factors lead to the customers’ choices, and so on. According to Assael (1985), these ideas will definitely lead to complex decision-making process. Marketers must understand every aspect of the consumer buying decision process, from learning about a product to making a choice, using the products, and even disposing of it. By understanding these aspects, we can discover how consumers make the decision to buy the products or services.

Meanwhile, when consumers want to buy a certain product, there are also a lot of influential factors in the decision-making process, both from external and internal aspect. These factors are playing important roles to help consumers evaluate the alternatives and make the final decision.

In this part, we first explore the consumer decision-making process models from different angles, and then explain the influential factors using some existing theories.

**4.3.2 Consumer Decision-Making Theories**

The purpose of this part is going to explore the consumer’s behaviour, especially focus on the decision-making process. We will introduce three theories of decision-making from consumer’s perspective: complex decision-making theory (Henry Assael, 1985), Consumer Decision Process (CDP) model (Blackwell et al., 2001) and the Means- end approach (Tomas J. Reynolds & Jerry C. Olson, 2001).
4.3.2.1 Complex Decision Model

According to Henry Assael (1985), there are five phases in the decision-making process: (1) problem recognition, (2) search for information, (3) evaluation of alternatives, (4) choice, (5) outcome of choice. These steps can be translated into those steps involved in consumers’ complex decision-making: (1) need arousal, (2) consumer information processing, (3) brand evaluation, (4) purchase, and (5) post purchase evaluation. A model of complex decision-making is presenting the five processes in the following figure:

![Complex Decision-Making Model (Assael, 1995)](image)

We can understand the above figure in this way. The first step of need arousal means consumers begin with a particular state of mind that represent their perceptions and attitudes towards the known-brands. The second step of consumer information processing means gathering information about the products, which is the immediate result of need arousal. The third step of brand evaluation, which is a result of information processing (Assel, 1995, 82). The fourth step is purchase and the fifth step is the post purchase evaluation.

4.3.2.2 Consumer Decision Process Model

According to Blackwell, et al. (2001), as the CDP model (Figure 4.2) shows, consumers will be involved in seven stages when making decisions: need recognition, search for information, pre-purchase evaluation of alternatives, purchase, consumption, post-consumption evaluation, and divestment.

As the authors point out, ”the model captures the activities that occur when decisions are made in a schematic format and shows how different internal and external forces interact and affect how consumers think, evaluate, and act” (Blackwell, et al., 2001). Need recognition occurs ”when an individual senses a difference between what he or she perceives to be the ideal versus the actual state of affairs” (Blackwell, et al., 2001, 72). Once need recognition occurs, consumers begin searching for information and solutions to satisfy their unmet needs. In the stage of pre-purchase evaluation, consumers are evaluating the alternative options according to their ”perceived evaluative criteria” (Blackwell, et al., 2001, 74). The fourth
stage is purchase, which is based on the decision of buying a product. During this stage, it involves two phases, one is to choose retailer and the other is the in-store purchasing process. Consumption is the fifth stage, which will occur once consumers use the product. Post-consumption evaluation is the sixth stage during the whole consumer decision process, in which consumers "experience a sense of either satisfaction or dissatisfaction" (Blackwell, et al., 2001, 80). Finally comes with divestment, which is the last stage involving consumers' decision. Consumers have several options including "outright disposal, recycling, or remarketing" (Blackwell, et al., 2001, 84). Every stage of the CDP model is involved in decision making because there are always internal and external factors influencing consumers' buying behaviour. The model includes seven stages described by Blackwell, et al. (2001) in the Figure 4.2 below:

**Figure 4.2** The Consumer Decision Process (CDP) model. (Blackwell, et al., 2001)

![Diagram of the Consumer Decision Process (CDP) model](image)

Comparing with the Complex Decision model (Assael, 1985), we can identify that CDP model (Blackwell, et al., 2001) mainly adds another two stages, which are consumption and divestment. The stage of post-purchase evaluation cannot be conducted unless consumption happens. And it is also important to make proper decision in terms of divestment methods, which is closely related to environment protection. It is evident that the CDP model presents a piece of more detailed picture of decision-making process.

### 4.3.2.3 The Means-End Approach

The Means-End Approach observes the theory of consumer decision-making from a completely different angel with the models we have talked above. The above two decision-making models we are presenting are focused on the decision-making process, while as
Reynolds et al. (2001) pointed out "the means-end approach assumes that consumers decide which product(s) and service(s) to buy based on the anticipated consequences (experienced outcomes, need satisfaction, goal or value achievement) associated with each considered alternative (Reynolds & Olson, 2001, 11). The Means-End Approach claims that the most important choice criteria in a decision are the anticipated experience or consequences associated with the various alternatives”. Stated differently, the consequences of using credit cards, not the attributes of the products, are the consumers’ focal concern (Reynolds et al., 2001, 11).

The Means-End Approach recognizes that consumers are concerned with both positive and negative experience (benefits to be sought or risks to be avoided). Thus consumers evaluate alternatives in terms of both the positive and negative consequences that are most personally relevant to them. As a general principle, therefore, consumers are likely to select the alternative that maximizes the positive outcomes and minimizes the negative ones (Reynolds et al, 2001, 11).

Peter & Olson (1999) said "In most general means-end formulation, consumers have three levels of product-related knowledge – product, the consequences or outcomes of using a product, and the broad goals or values that may be satisfied by use of that product”. These three levels of consumer knowledge are combined to form a simple, hierarchical chain of associations:

\[
\text{Attributes} \rightarrow \text{Consequences} \rightarrow \text{Values}
\]

This set of associations is called a means-end chain because consumers see the product and its attributes as a means to an end. The desired end involves satisfaction of self-relevant consequences and values. The chain is the set of connections or linkages between attributes, consequence and values. These linkages or associations have a hierarchical quality in that they connect concepts at a more concrete level of meaning (product attributes) to concepts at a more abstract level (values) (Reynolds et al, 2001,13).

This simplest means-end chain model links attributes to consequences to values. Some researchers have proposed more complex means-end chain that distinguishes finer graduations of attributes and consequences. And finally, a four-level model has eventually become the “standard” (most common) means-end chain (Reynolds et al, 2001,14).

\[
\text{Attributes} \rightarrow \text{Functional Consequences} \rightarrow \text{Psychosocial Consequences} \rightarrow \text{Values or Goals}
\]
Gutman (1982) and Olson & Reynolds (1983) said that understanding consequence is the most important point to understand the means-end approach (Reynolds, et al. 2001, 14). Although consequences can be modelled at varying levels of abstraction, two levels of consequences are sufficient for most marketing analyses. During consumption, product features or attributes produce immediate and tangible consequences that are experienced directly by consumers. These outcomes are called “functional consequences”. And these outcomes can be of two types – psychological consequences (for example, I feel like a good homemaker) and social consequences (for example, others will notice my clean clothes). We combine both types of outcomes into psychological consequences (Reynolds et al., 2001, 14).

The essence of the means-end view of consumer decision making is that consumers make decisions to solve problems in order to obtain desired consequences. Thus, in making decisions about which product or brand to buy, consumers necessarily focus on consequences (outcome or experiences), rather than attributes. Stated differently, products or products’ attributes are not inherently important to consumers. Rather, consumers think about likely solutions to their problems when making purchase decisions (Reynolds et al., 2001, 15).

4.3.3 Influential Factors

In this section, we will present four different theories about the factors that can influence the consumers’ behaviour: Environmental Influences (Assael, 1995), Three Key Variables (Hunter & Goldsmith, 2004), Conceptual Model for Credit Card Choice and Usage Behaviour (Ali Kara et al., 1996) and Influences on Consumer Behaviour Model (Fahy & Jobber, 2002).

4.3.3.1 Environmental Influences

Assael (1995) discussed the influential factors that affect the customer behaviour from the environmental view. Assael considers these factors as external factors: Culture, Face-to-Face Groups, and Situational Determinants. They are presented at the Figure 4.3 below.

**Figure 4.3** Environmental influences (Assael, 1995)
As the first factor, Assael (1995) explained that “culture is a set of socially acquired value that society accepts as a whole and transmits to its members through language and symbols. These social values are likely to influence its member’s purchases and consumption patterns”. In this part, we will exam the aspects Assael presented that affect the culture influences, which are culture values, subculture influences and cross-culture influences.

Rokeach (1968) defined “cultural values as beliefs that a general state of existence is personally and socially worth striving for” (cited in Assael, 1995, 454). Cultural values guide and direct an individual’s behaviour through the establishment of cultural norms. Such norms establish standards of behaviour regarding proper social relations, means of ensuring safety, eating habits, and so forth (Assael, 1995, 456).

There are two variations to the theme of cultural influences in a particular country. One is difference in values across countries, referred to as across-cultural influences. Such cross-culture influences form the basis for marketing strategies abroad (Assael, 1995, 453). The consumer’s customs and values can be verified according to different product preference, product usage, language, symbols and economic environment (Assael, 1995, 487-490). The other is the difference in values among groups within a country, referred to as sub cultural influences (Assael, 1995, 483). In one society, individuals do not necessarily share the same cultural values. Certain segments may be identified as subcultures because they have homogeneous values and customers that distinguish them from society as a whole (Assael, 1995, 500). The subculture can be categorized by age, religion, geography, ethnic subcultures, social class, etc.

The second important factor of the environmental influences on consumer behaviour is the face-to-face group. Two considerations of the influential groups are reference group and family.

Reference group is a group that serves as a reference point for the individual in the information of his or her beliefs, attitudes, and behaviour (Assael, 1995, 525). It includes family, friends, colleagues, business partners, etc. In one certain group, the members share the same norm, value, power, role, belief and interest. The customer can be one member of the reference group or not. The reference group can directly influence the consumer’s needs and behaviour. Reingen and his colleagues (1984) found that the members of groups with the greatest contact in various situations (such as family, close friends and colleagues) were more likely to buy the same brands (cited in Assael, 1995, 528).

For the other aspect, the family influences, we can consider it from two aspects: (1) husband-wife influences, (2) parents-child influences (Assael, 1995, 567). Sheth (1974) found
that when the level of perceived risk in buying is high, the joint decision-making is needed in the family (cited in Assael, 1995, 561). On the one hand, the decision-making is dependent on the couple’s education background, lifestyle and the family’s financial situation. Davi and Rigaux found that in the process of problem recognition to information search, the husband became a more dominant influence for most products (cited in Assael, 1995, 569). On the other hand, when moving from information searching to the final decision, the pattern of influence became more equal. Information searching was likely to be an individual process, whereas the final decision was more likely to be made jointly (Assael, 1995, 569). On the other hand, children are playing more important roles in the family decision (Assael, 1995, 572). On the other hand, the parents can give their child some opinions of the benefits and also the risks of using credit cards depending on the past experience, they can help young man to make right decision according to their own needs and financial situation.

The last factor of this model is situational influences. Assael (1995) defined it as "temporary conditions or settings that occur in the environment as a specific time and place. They occur independently of the products or the consumers". For example, we buy a present just for a friend’s birthday. The present itself might not attractive. The model of situational influences is presented as the following:

**Figure 4.4**: Situational influences model

From this model, we can see that the two external forces acting on consumers are the product and the situation. Consumers react to the product and the situation, then make the decision of which brand to be purchased. The interaction among the consumers, the situation, and the product results in a process of choice leading to the purchasing behaviour (Assael, 1995, 609-610).

**4.3.3.2 Three Key Variables**

When Hunter and Goldsmith (2004) are talking about Consumers’ understanding of the financial risk, they point out that there is big difference among consumers’ attitude to finance risk which is mainly the result of three key variables: personality, circumstances and level of
financial knowledge/experience (Hunter & Goldsmith, 2004). The variables are presented in the Table 4.1 below.

**Table 4.1 Three-Key Variables (Hunter & Goldsmith, 2004)**

<table>
<thead>
<tr>
<th>1) Personality</th>
<th>2) Circumstances</th>
<th>3) Level of financial knowledge or experience</th>
</tr>
</thead>
</table>
| • Upbringing, education and socio-economic class  
• Ambitions and life goals  
• Security vs. greed  
• Past, present and future orientation | • Level of disposable capital  
• Life stage, commitments and dependants  
• Security of income and job  
• Intended role of investment | • Interest and confidence in finance  
• Age of consumer  
• Past experiences  
• Beliefs concerning the economy and recovery |

From the three key variables, we can consider them as the internal view of the influences. It is the complementary of Assael’s external point of view.

First, the personality will have some effects on personal perceive towards risk taking. The different education level, ambition and life goals of different customers can lead to different attitude toward risk taking. Customers with most ambition to lead a rich and comfortable life will have the biggest possibility to take risks in their lives. Customers with high education level may have more knowledge about the credit card if compared to the people who have lower education level. So they can identify clearly the benefits and the risks or costs for them to use credit card and have the ability to use credit card more reasonably than others even if they have the equal financial situation. Hence, even if the interest rate is very high and they are not in most satisfied financial situation, they will still feel comfortable and confident to use tomorrow’s money to enjoy today’s life, and have the faith to figure out paying back to the bank finally.

Second, it almost concerns with the consumers’ social class and financial situation. The consumers with high life stage and stable income and job belong to the middle or upper social class; they have higher level of disposable capital and arrangement of investment than the customers in lower social class. Thus the risk of using credit cards is different from people with different social class and income level.

Third, based on the personal past experience, consumers can have different attitudes towards credit card usage. Good and successful experiences lead to strong confidence not only to finance and economy, but also to personal future. Bad and frustrated experiences lead to cautious decision to everything, including self-orientation.
4.3.3.3 Conceptual Model for Credit Card Choice and Usage Behaviour

Conceptual Model for Credit Card Choice and Usage Behaviour (Ali Kara et al., 1996) is a comprehensive model including the influential factors as a small part. They explained that the external factors like economic, demographic and socio-economic factors are assumed to have some impacts on the credit card usage while the attitudes toward credit card usage are assumed to be input variables (Ali Kara et al, 1996). However, this seems very similar with the ideas with–environmental influences (Assael, 1995). The figure 4.5 below illustrates the attributes of credit card choice and use, according to Kara et al. (1996).

Figure 4.5 A Conceptual Model for Credit Card Choice and Usage Behaviour. (Kara A., Kaynak E. & Kucukemiroglu O., 1996)

In their analysis, from the economic theory perspective, Murphy and Ott (1977) predicted that "bankcards will most profitably be accepted by firms that sell goods have high-income elasticities" (cited in Ali Kara et al., 1996, 5-7). That means the banks are more willing to offer the credit cards to the customers with high incomes, because they probably get most profits from this type of customers.

Ali Kara et al. (1996) also pointed out that the determinants of credit card choice and usage include other factors such as social, psychological, legal and economic factors as well as product/service attributes.
4.3.3.4 Influences on Consumer Behaviour Model

We have talked about three models, which are Environmental Influences, Three Key Variables, and the Conceptual Model for Credit Card Choice and Usage Behaviour. Actually, they are studying the same problem from different aspects. The Environmental Influences and the Conceptual Model for Credit Card Choice and Usage Behaviour study the influences from the external view, the model of Three Key Variables is from the internal view of the consumers themselves. Fahy & Jobber (2002) summarized these important factors into one comprehensive model as followed:

Figure 4.6: Influences on consumer behaviour model (Fahy & Jobber, 2002)

In this model, Fahy & Jobber (2002) combined both the internal and external factors together. The personal influences concern with the consumers themselves, their knowledge, self-actualisation, inner psychological characteristics, personal interest, income stage and potential target for financial service as well. The external factors are buying situation and the social influences, which have been examined in detail before. Only when these three aspects get harmonized, the consumer can make the final decision to buy the product.

4.3.4 Summary

We have studied the decision-making theories in order to understand how and why consumers choose a product or service. According to Henry Assael (1985), there are five phases in the decision-making process: problem recognition, search for information, evaluation of alternatives, choice, outcome of choice. CDP model (Blackwell, et al., 2001) developed further with the decision-making theories and added two more phases, consumption and divestment, which is called Consumer Decision Process model.
The Means-End Approach (Reynolds & Olson, 2001) studied the consumer decision-making from a very different angel and claimed that the most important choice criteria in a decision are the anticipated experiences or consequences associated with the various choice alternatives. It recognizes that consumers are concerned with both positive and negative experience and they are likely to select the alternative that maximizes the positive outcomes and minimizes the negative ones. The Means-End Approach also stated that consumer focus on the consequences rather than the product/service attributes, which means that they are likely to think about the solutions to their problems when making purchase decisions.

Meanwhile, there exist influential factors that affect the customer behaviour both from internal and external. Environmental Influences (Assael, 1995) and Conceptual Model for Credit Card Choice and Usage Behaviour (Ali Kara et al., 1996) discussed about external influences. On the contrary, Hunter and Goldsmith (2004) discussed the internal influences, which are presented in Three Key Variables model.


The Three Key Variables model discussed mainly from the aspects of social class, financial situation and knowledge and experience. According to Mathews and Slocum (1969, 1970), when they analyzed the relationship between social- economic factors and credit card usage behaviour, that cardholders with low income and low socio- economic status use credit cards to generate revolving credit more often than high income and high socio- economic cardholders do.

Ali Kara et al. (1996) also studied the influences factors from the external view as Asseal’s model. Both of them agreed that the customer’s income is very important when they are considering using credit card or not. Ali Kara et al. in addition talked something about the convenience and time saving from the demographic and socio- economic perspectives.

4.3.5 Conclusion

In this part, we introduce the consumer behaviour theories from two main aspects, one is the decision-making process, and the other is the influential factors. There are three decision-making models focusing both on the processes and consequences of decision-making. In addition, we use four models about the influential factors and try to understand what will affect consumer’s decision-making when they are wondering whether to use credit cards or not.
We found that there are two good models, one is Conceptual Model for Credit Card Choice and Usage Behaviour (Ali Kara et al., 1996), and the other is Influences on Consumer Behaviour Model (Fahy & Jobber, 2002). They covered the most important factors that will be considered by consumers. But as we mentioned before, credit card is a special financial service, even consumers can purchase on its credit. It will raise a problem of not paying back due to the consequences of using. This might lead the consumers into financial problems, and it can be considered as a kind of risk. However, not all people like to take risks in their lives. In order to understand how the perceived risk affects credit card holder, it is essential to understand and explore the risk theories, which we will present in the next part.

4.4 Risk Theories

4.4.1 Definition of Risk

Bauer (1960) states “Consumer behaviour involves risk in that sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty, and some of which are likely to be unpleasant” (cited in Giesler, 2004). This means that the decision of a consumer made, that involve risk, the outcome cannot exactly be calculated and may result in disadvantages for her. Vaughan E. J. (1997) has a similar definition of risk, which is connected to the possibility of loss. When risk is said to exist, the possibility of an outcome is uncertain. Vaughan E. J. (1997) explained “uncertainty is simply a psychological reaction to the absence of knowledge about the future.” What he meant was that the outcome of an undesired event is unpredictable or the knowledge to predict the outcome of that event is not certain. So, if the undesired event can be calculated, then risk is not a right term to apply.

According to Heuth and Schmitz (1982, 1986), risk is regarded as the “transformation of physical harm or other undesired effects into subjective utilities” (cited in Giesler, 2004). In some situation of choice, the outcome of knowable probabilities is random. In most marketing literature, the definition of perceived risk is associated with product choice that has, according to Cunningham (1967), “non-predictable physical or social consequences resulting from poor performance, danger, health hazards, and costs” (cited in Giesler, 2004). Therefore, we think that, risk is an important factor to take into consideration, because when a consumer is facing a consumption which risk is involved, she will “attempt to reduce her perceived risk through one of several strategies” (cited in Gielser, 2004). These strategies of reducing it will eventually affect consumer decision-making.

4.4.2 Perceived Risk

Perceived risk, according to Arrow (1951), Taylor (1975), Humphreys and Kenderdine (1979),
“represents an uncertain, probabilistic potential future financial outlay” (cited in Giesler, 2004). It is existed in consumers’ minds, which will conduct the consumers’ behaviors, not only influencing the customers’ choices of product(s), but also influencing other decisions, such as new financial product adoption etc.

Foxall, Goldsmirth and Brown (1998) defined that “the perceived risk a consumer feels in a choice situation is generally described as being dependent on the uncertainty present in the information he or she has and the likely consequences of the purchase” (cited in Szmigin, 2003). This means that perceived risk is associated with a consumer’s limited cognitive capacity of information handling. It is probably an under-rated phenomenon in relation to what we buy, how we buy and particularly in relation to the adoption of new ideas and things. In some areas, some of us can tolerate high levels of risk, others cannot. For most of us, the actual calculation of risk is really very difficult, just as imagining the odds on winning the lottery are. The more important thing is how close the relationship we have with the product, service, idea and the role it has in our lives.

4.4.3 Classification of the Perceived Risk

Blummer (1931) states that “there can be no theory of scientific investigation without classification” (cited in Giesler, 2004). Therefore, classification is a necessary tool to divide and order the phenomena the researchers try to study.

According to Roselius (1971) and Jacoby & Kaplan (1972), perceived risk is usually measured as a multidimensional construct: financial risk, physical risk, psychological risk, performance risk, time risk, and social risk (Cunningham, Gerlach, Harper & Young, 2005).

In the table below, we put credit card into the context and give the implication of these risks when people are using credit card(s).
### Table 4.2 Classification of the perceived risk

<table>
<thead>
<tr>
<th>Perceived risk components</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial risk</td>
<td>The uncertainty of the cost to use credit card, which cannot be calculated if unpredicted financial problems occurs.</td>
</tr>
<tr>
<td>Physical risk</td>
<td>Commonly associated with the credit cards that might have harmful side effect on the consumer’s health.</td>
</tr>
<tr>
<td>Psychological risk</td>
<td>Regretting, bad feeling and bad experience of using credit cards.</td>
</tr>
<tr>
<td>Performance risk</td>
<td>Consumers worry that the credit card usage system may not have been fully tested and may not work effectively.</td>
</tr>
<tr>
<td>Time risk</td>
<td>Time, convenience, effort in using credit card and time lost.</td>
</tr>
<tr>
<td>Social risk</td>
<td>The influences from the consumer’s reference groups, family and the culture, related to the risk that self-image could be affected.</td>
</tr>
</tbody>
</table>

### 4.4.4 Risks of Using Credit Cards

Chakravorti S., (2003) argues “some consumers are reluctant to make most of their purchases with credit cards because they fear that they may not be able to make full payment when their credit card bills are due.” It is also a risk that consumers are over consuming without having control on their balances. As consequences, interest and extra administration fee added on the bill and in worse case, consumers can run into financial debt.

Therefore the risk a consumer has to take into consideration when using credit card is the bad credit and the risk of being on the black list. The consequence is high because this will cause customers hard to get any loan in the future. Also, according to an article *Bad credit puts reputation at risk* (Rowland M., 1994), “A bad credit report can cost you a job, a promotion, an apartment, a mortgage, an award, or a political appointment.”

### 4.4.5 Customers’ Attitude Toward Using Credit Cards

Four major dimensions of credit card attitudes are identified according to the research result from Kara A., Kaynak E. & Kucukemiroglu O. (1996), which are Credit Card Prone Attitudes, Credit Card Aversive Attitudes, Outer-directed Credit Card Attitudes, and Felt-involved Credit Card Attitude. Customers with Credit Card Aversive Attitudes believe that shopping with credit cards is an incorrect approach and a bad habit. On the contrary, customers with Credit Card Prone Attitudes are positive towards the use of credit cards and they think that credit card is an effective tool, which need to be utilizing in a modern society. These two groups of customers are representing more than 80% of the researching population. The third group of customers that have Outer-directed Credit Card Attitudes, are ready to buy almost everything with credit cards, and they do not worry about the possible debt burden that credit cards could create for them. The fourth group of customers are very careful in their
spending, use a limited number of cards and have control on their credit charges. The authors called this attitude as Felt-involved Credit Card Attitudes.

The dimensions of credit card attitudes conclude that consumers with Aversive and Felt-involved Attitudes toward the credit card usage may have a tendency to avoid charging on their credit cards, whereas consumers with Prone and Outer-directed attitudes may have a tendency to put charges on their credit cards as much as possible.

4.4.6 Summary
Risk of an action is connected to the uncertain negative outcome of the future. It is existed in consumers’ minds, affecting the consumers’ behaviors, and influencing their choices of products.

The perceived risk is a set of belief that a product choice has potentially negative non-predictable physical or social consequences resulting from poor performance (Cunningham 1967). The risk is an important factor because consumers’ rational choices will attempt to reduce their perceived risk. The perceived risk a consumer feels in a choice situation is dependent on the uncertainty present in the information he or she has and the consequences of the purchase (Foxall, Goldsmith and Brown, 1998). According to Roselius (1973), Jacoby and Kaplan (1972), the perceived risk can be divided into six factors: financial risk, physical risk, psychological risk, performance risk, time risk, and social risk.

Four major dimensions of credit card attitudes toward risk are identified by Kara A., Kaynak E. & Kucukemiroglu O. (1996); Credit Card Aversive Attitudes, Credit Card Prone Attitudes, Outer-directed Credit Card Attitudes, and Felt-involved Attitude. Kara et al. (1996) concluded that consumers with Aversive and Felt-involved Attitudes toward the credit card usage may have a tendency to avoid charging on their credit cards, whereas consumers with Prone and Outer-directed Attitudes may have a tendency to put charges on their credit cards as much as possible.

4.5 Discussion of the Theoretical Framework
In this part, we will present our interpretation of the existing theories of consumer behaviour. Based on our interpretation, we will criticize the existing theories and argue what is the internal relationship between the background variables and the perceived risk; why we think the perceived risk affects the credit card holder’s decision-making process. Based on that, we will set up a new model and hypotheses in order to prove that the perceived risk can affect the decision-making process when credit card holder use cards to buy products on its credit.
4.5.1 Interpretation of the Existing Theories

Based on our understanding of the existing theories, we find that most of these theories on consumer behaviour analyze the consumer’s decision-making process in order to explain how and why consumers choose a product or service. What’s more, the theories emphasize that each stage of decision-making process is influenced by a lot of factors. Assael (1995) presented three categories of environmental influences: culture influences, face-to-face group influences, and situational influences. Hunter and Goldsmith’s (2004) pointed out the Three Key Variables model, which mainly discussed influential factors from the aspects of personality, financial situation and knowledge and experience. Ali Kara et al. (1996) put forward that economic, demographic and socio-economic factors were the influential factors. And Fahy and Jobber (2002) confirmed that the influences on consumer’s behaviour should be combined with personal influences, the buying situation and social influences. If we combine all these influential factors together, we can make a conclusion that the decision-making process of consumer behaviour is decided by factors not only from internal, but also from external.

In order to find out what are the general influential factors on credit card holders’ behaviour from the first stage of need recognition to the last stage of divestment, we select the most important influential factors from the existing theories. All the important factors can be regarded as the background variables. It can be categorized into two aspects, one is the external factors, and the other is the internal factors. The important external factors are culture value, social class, reference group and family, and buying situation. Among these factors, social class refers to credit card users’ profession and income; buying situation is mainly related to the attributes of products or service, values and its goals to buy it. On the aspect of internal factors, most important influential factors are demographic profile, personality, lifestyle, knowledge and past experience. Demographic profile refers to sex, marital status, income, education, profession and age; personality refers to upbringing, education, socioeconomic class, ambitions, life goals, security, greed, present and future orientation; and lifestyle refers to the choice of payment instruments.

It is evident that it is not easy to decide whether to go ahead with the next step of buying process or stop making the buying decision because every stage of CDP model is influenced by abundant factors, not only from internal but also from external aspects. Consumer behaviour is surely conducted accordingly with the change of those influential factors. In order to help understanding of the relationship between the influential factors and credit card holders’ decision-making process, we build a model, which is followed.
If we go deeper to understand the existing theories, we can find that paying with credit card on its credit is not same as those consumptions of general physical products. It is a kind of financial service with special financial risk, which we have discussed in the previous part. Therefore, we think that credit card holders might also be influenced by the perceived risk when they use credit card to buy products on its credit. However, it is necessary for us to give a simple explanation of the internal relationship between all these background variables and the perceived risk, which will be discussed in the next part.

### 4.5.2 Critical Review of the Existing Model

In all the models that are related to the credit card usage we have studied, we find that Conceptual Model for Credit Card Choice and Usage Behaviour (Ali Kara et al., 1996) seems to be a comprehensive one. In our case, because we are not focusing on the Credit Card Choice, only the part of Credit Card Usage in this model can be useful for us.
There are three aspects that the model is talking about, the first is the influential factors from economic, demographic and socio-economic views, the second is the experience that also can influence the use of credit card, the third is the attitudes the consumers hold towards the credit card usage. All of these influential factors have been mentioned and proved by other researchers in their models.

Based on our interpretation of the consumer behaviour theory, we find that this model is not so perfect in two aspects:

The first aspect is that it doesn’t cover all the factors that can influence the consumer’s behaviour. In this model, the author listed out the influential factors such as economic, demographic and socio-economic factors and the experience both positive and negative. According to what we have found in other researcher’s models such as Assael’s Environmental Influences, Paul Hunter and Anna Goldsmith’s Three Key Variables, there are also some other factors, for example, culture influence, the buying situation, the reference group and etc. These factors are not covered in any of Ali Kara et al.’s categories of influential factors. So these are the factors what Ali Kara et al. ignored when they built their model.

The second aspect is the structure of the model. The author put the economic, demographic, socio-economic factors, the experience and the attitudes in the parallel position. But from the explanations of the relationship between the decision-making and influential factors in last part, we think the attitudes toward credit card usage is not parallel to the other two, but the result of them. Because different consumers have different backgrounds and past experience,
these lead to their different attitudes towards credit card usage. The structure of this model cannot give the exact explanation of the relationships among these three aspects.

Based on the previous theories and our thoughts, the economic, demographic and socio-economic factors and the experience both belong to the influential factors and they can be put together. The attitudes towards the credit card are the results of these influential factors. And we can find in a logical way that different consumers who hold different attitudes must have different perceived risks towards credit card usage. If they have high-perceived risks, their attitudes must not be so positive as the consumers who have low perceived risks. So we can say that the perceived risks can be resulted from the influential factors. This is the idea of the internal relationship between the background variables and the perceived risk, which we want to use in our new model instead of proving it.

4.5.3 The New Model of Credit Card Usage

We interpret the theories on the background variables and consumer decision-making process in the previous part, in which, we discuss what the decision-making process are and what the influential factors of background variables are. Meanwhile, the existing theories give the strong support that the consumers’ decision-making is surely conducted accordingly with the change of those influential factors, we argue that the perceived risk somehow comes into being because of these influential factors. There is definitely the internal relationship between the background variables and the perceived risk.

Cunningham, Gerlach, Harper, and Young (2005) studied the relationship between the perceived risk and the consumer buying process on Internet airline reservation. His conclusion is that the perceived risk does affect the consumer decision-making process significantly all through these seven steps. We realized, to some extent, our research idea is similar with theirs. And it made us more confident to go further with the research.

Based on the relationships among these three aspects: influential factor, the perceived risk and the decision-making process. we come up with the new model especially for the credit card holder. The new model is followed:
In the whole frame of this model, because of the time and the resource limitations, we will only focus on understanding how the perceived risk affects the credit card holders’ decision-making process and not how strong the perceived risk is in these stages. We are satisfying to explore in which stage of the decision-making process the perceived risk occurs and whether it affects consumers negatively or not. Moreover, we do not put effort to investigate or prove the other part of this new model, such as the internal relationship between the influential factors and the perceived risk, or between the influential factors and the decision-making process.

In order to understand the relationship between the perceived risk and the decision-making process, we will explain different components of our model.

Because our model is especially studying the credit card usage, therefore, the seven steps of Blackwell’s CDP model feel overflow. According to our understanding of his explanation, the last step of divestment is concerning on the disposal of the package or the residual of the products, so in terms of credit cards, it is not necessary to study this stage. In our model, we combine Blackwell’s and Asseal’s decision-making model. Therefore, one of the steps is containing both purchase and consumption. Purchase is referring to the purchase of product(s) or service(s) and consumption is considering using of credit cards to buy it. As result, in our model, decision-making process is consisted of five steps: need recognition, information searching, pre-purchase evaluation of alternatives, purchase and consumption, and the post-consumption evaluation. Each step of this process will be explained in detail in the following paragraph.
First in need recognition, the consumer begins to realize he needs a product or a kind of service. We are interested in finding out if they are thinking of paying by credit cards, if yes, if any risk occurs in their minds. In the second stage, consumer is searching for the information about the product they want. And meanwhile they are also searching for the information and costs of using credit cards. In the third stage, the consumer evaluates the different brands of the products and which payment instrument to use. In the fourth step, people use credit cards to buy product(s) or service(s), and think of the risk of using credit cards. And in the last step, according to consumers’ satisfaction, they will judge if the product deserves to be bought by credit cards, and in this stage, consumers are facing for the consequences and generate the experience of using credit cards. Reynolds et al. explained this in detail in the Means-End Approach. In our case, positive and negative experiences can affect consumers’ attitudes toward using credit card(s).

We categorize the perceived risk according to Roselius (1971) and Jacoby and Kaplan (1972): physical risk, financial risk, psychological risk, time risk, performance risk, and social risk. These attributes are the probabilities of losses and are considered as consequences of the uncertainty. Physical risk is associated with products that might have harmful side effect on the consumer’s health, which we consider is not needed in our model because the physical harm of using credit card is minimal. Financial risk refers to the risk that using credit cards will increase the cost that consumers cannot predict when using it. It can also occur when unpredicted financial problems occur. Psychological risk is considering the risk of being in bad feeling, bad experience and regretting after using credit cards. Time risk refers to, in our case, the risk that a specific payment method will take up more time than other payment means, which we consider is not significant in our research because it does little or none influence on the consumer behaviour whether to use credit cards or not. Performance risk refers to the system that the transaction may not be completed when credit cards are used to pay for the product(s). It can also refer to problems that occur for instance, the bill is not correct and not consistent with the contract. Finally, social risk is the risk of not being accepted by family or friends. Therefore, in our dissertation, our model only includes four factors of the perceived risk; financial risk, psychological risk, social risk and performance risk.
4.5.4 Hypotheses

Based on the new model we have built, we try to set up hypotheses, which will be tested, in the empirical study. The previous researchers never regard the perceived risk as another significant factor that can influence the credit card usage. Therefore we set up our main hypothesis.

H1 If consumers pay with credit cards on its credit, there is a perceived risk affecting the consumer decision-making process.

H1 describes our main aim of this research, but it is too general. In order to test it, more specific hypotheses are designed, which are H2 and H3. These hypotheses are divided further into sub-hypotheses. In this way, it is easier to design questionnaire correspondent to the sub-hypotheses.

H2 There is at least one factor of the perceived risk occurring in each stage of the consumer decision-making process.

H2^1 The financial risk, psychological risk, social risk or performance risk occurs in the first stage of need recognition.

H2^2 The financial risk, psychological risk, social risk or performance risk occurs in the second stage of information searching.

H2^3 The financial risk, psychological risk, social risk or performance risk occurs in the third stage of pre-purchase evaluation of alternatives.

H2^4 The financial risk, psychological risk, social risk or performance risk occurs in the fourth stage of purchase and consumption.

H2^5 Consumer are being in financial problems, worrying about their financial problems caused by using credit card(s), unfriendly with family or friends or getting in troubles caused by errors from the bank’s system.
H3 If the perceived risk occurs in one stage of the decision-making process, consumers will be affected negatively when they consider using credit card(s) to buy the product(s) in this stage.

H3\(^1\) If the perceived risk affects the first stage of need recognition, consumers will be affected negatively when they consider using credit card(s) to buy the product(s).

H3\(^2\) If the perceived risk affects the second stage of information searching, consumers will be affected negatively when they consider using credit card(s) to buy the product(s).

H3\(^3\) If the perceived risk affects the third stage of pre-purchase evaluation of alternatives, consumers will be affected negatively when they consider using credit card(s) to buy the product(s).
5 Empirical Method

In this chapter, we will present our research strategy. We will discuss the method of choosing the sample and how to design a questionnaire. We will also discuss the validity and reliability of the data as well as the response rate. Finally, we will discuss the generalisability of the result.

5.1 Research Strategy

We adopted deduction as our research approaches. Based on the existing theories of consumer behaviour and risk, we built up our new model to illustrate the relationships between the perceived risk and the decision making process. Three hypotheses were designed and tested by using the empirical data. The most appropriate way for us to do the research was survey. Saunders points out in his book "the survey strategy is usually associated with the deductive approach" (Saunders, 2007, 138). In his opinion, the survey strategy can help to collect the data to explain the reason of the relationships between the variables, and help to build up a model to explain these relationships (Saunders, 2007). In our case, the variables were the different factors of the perceived risk and five stages of the decision making process. We did our survey by using questionnaire, which helped us collect standardized data and make easy comparison (Saunders, 2007). There are many kinds of questionnaires. We chose the self-administered one, which could be completed by the respondents themselves. We wanted to hand out the questionnaires to the existing credit card holders. It was not difficult for us to find this group of people as they were around us. We chose to deliver and collect the questionnaires ourselves in Kristianstad, Sweden due to the limited time and resources.

In order to ensure the validity and reliability of the questionnaire, before we hand it out to the respondents, it was necessary for us to do the pilot test. We did the pilot test on seven Chinese students, one German student and six Swedish students. Some of them had credit card(s), some of them did not. But they all had ideas of the risk of using credit card. By doing the pilot test, we wanted to make sure that the respondents would not have any problems and difficulties to understand or answer our questions. Although the students who helped us to do the pilot test were coming from different countries with different culture and different language foundation, the problems they found in our questionnaire were almost the same. That means our pilot test was successful. And some corrections were made after the pilot test.
5.2 Sample

There are a large amount of consumers having credit card(s) nowadays all over the world. Therefore, it is necessary for us to select a specific group as our sample. As we mentioned in the introduction part, our research was limited in studying the phenomenon which is occurring especially in the European markets, and due to the financial resource and time limitation, we decided to choose Swedish population out of all the European population. Furthermore, we are students in Kristianstad, Sweden, which is the decisive reason for us to choose Kristianstad credit card holders as a population.

If we adopt the probability sample, it requires a sample frame and a complete list of all the cases in the population from which the sample would be drawn (Saunders, et al., 2003, 153). If the survey could be carried out under the help of IKANO, Finance service, we could follow the probability sample. However, the time was limited and we had to give up this idea. Therefore, in our research, our survey was conducted by adopting the non-probability sampling. By using the purposive sampling, we select the cases, which were suitable for answering the research questions and achieve our objectives (Saunders, et al., 2003, 175).

Our research aim was to find how the perceived risk affects the consumers’ decision to use credit card(s) to buy product(s) or service(s). Thus, in order to cover the suitable cases as more as possible, we chose to do the survey on the credit card holders who were the spot consumers in the electronic stores in Kristianstad. We believe that there are more chances to find credit card holders in the electronic stores such as Elgiganten, because the prices of many product(s) are very high and it is reasonable for many consumers to use credit card to carry out the purchase. This might lead to high response rate of survey.

5.3 Limitations

There were some limitations in the research. First, our survey sample was limited to Swedish credit card holders in Kristianstad due to the time and financial resource; second, we limited our survey spot in front of the electronic store because we believed it would lead to high response rate and they could be regarded as a specific group of consumers; third limitation is that we chose to do the survey during 10am to 13pm, and 15pm to 18pm (16 pm on 12th Nov.), from 10th Nov. to 12th Nov. According to the staff of Elgiganten, there are more customers during these periods. But we missed the consumers in other periods of time.

5.4 Questionnaire

As mentioned above, we used questionnaire to do our survey. In order to increase the response rate, we tried to limit our questionnaire in 20 questions, and finally we got 17 questions altogether.
There were two parts in the questionnaire, one was concerning with personal information, from Question 1 to Question 6, we wanted to get some personal background of the respondents; the other was concerning with the perceived risk and decision making process, Question 7 to Question 17, and this part was our keystone.

In the beginning of the questionnaire, in order to help the respondents understand the questions better; we gave very easy explanation of the difference between credit cards and charge cards. In the personal information part, we had the different questions on the gender, age, income, education of the respondents, and frequency of using credit cards. It could help us to categorize the respondents into different groups when we do the analysis. In the second part, it was very important for us to explain the five stages of decision-making process clearly to the respondents. Since we could not give the definitions of each process directly, we divided all the questions in this part into five situations, which were corresponding to each decision-making process.

In the first three situations, need recognition (Question 7 – 9), information searching (Question 10 – 12), and pre-purchase evaluation of alternatives (Question 13 – 15), we had almost the same questions in each situation. The first question asked if the respondent was thinking of the risk of using credit card(s) to buy product(s); the second was which factors of the perceived risk they were thinking about, financial, psychological, social or performance. Of course we used simple examples to illustrate these risks instead of using their definitions; the third question asked if the perceived risk occurs, would it influence consumers decision-making negatively. Through these questions, we could see which kind of the perceived risk the respondents was thinking about in a certain decision making stage, or we could see that the respondents did not think about the risk at all in certain stages.

In the fourth situation, purchase and consumption (Question 16), and the fifth situation of the post-purchase evaluation (Question 17), the questions were different with the former situations because in these two stages, the consumers have already made the decision, and the consequences of using credit card(s) could be seen. We only asked which kind of risk they were thinking about or facing for.

We also gave the respondents choices to jump from one situation to the next situation in case they did not consider using credit card(s) in that stage. The whole questionnaire was in a very clear structure. The answers were easy to identify, which included two choices: YES or NO. Most of the questions and sentences were presented repeatedly; it was easy for the respondents to follow our idea.
Considering that we would do the survey on consumers who were living in Sweden, we translated the English version into Swedish version. Due to the culture differences, there were a few differences on the expression in some sentences. We did the pilot test on both English and Swedish versions.

### 5.5 Response Rate

From 10th Nov to 12th Nov. 2006, we asked 451 customers when they entering Elgiganten, the electronic store in Kristianstad. 300 of them didn’t have time or refused to participate in our survey for different reasons. There were 151 customers willing to help us fill out the questionnaires, but only 73 customers out of 151 had some kind of credit card(s), which account for 48 % in the total number of the consumers who were willing to answer the questionnaires.

<table>
<thead>
<tr>
<th>Table 5.1 Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>N consumers</td>
</tr>
<tr>
<td>The consumers who did not want to participate</td>
</tr>
<tr>
<td>The consumers who wanted to participate and had credit card(s)</td>
</tr>
<tr>
<td>The consumers who wanted to participate but did not have credit card(s)</td>
</tr>
<tr>
<td>The consumers that were unreachable</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Based on these numbers, we can count our total response rate. The total response rate is the total number of response (73) divided by the total number of participants (151) minus the ineligible (78) (Saunders, 2003, 157). In our research, the total response rate is 17.6%. And the active response rate is the total number of response (73) divided by the total number of participants (451) minus the ineligible (78) and unreachable (0) (Saunders, 2003, 284). So in our case, the active response rate is the same as the total response rate, which is 17.6%.

### 5.6 Validity

According to Saunders et al. (2003, 101), validity examines whether there is a causal relationship between two variables and means that the final findings of the research are really consistent with the reality. In our research, it was very important for us to get high validity; otherwise, the result would be characterized with systematic errors. We carefully designed the right questions to measure the perceived risk of using credit card(s) in different stages through decision-making process. Most of the questions were concerning about the attitudes or feelings of consumers, which made it difficult to transfer it into quantifiable variables. In order to minimize the threat of validity and clarify the objective of the survey,
we tried to give the explanations of credit card(s) and charge card(s) at the beginning of the questionnaire. Meanwhile, we used understandable words and sentences to raise the questions. In this way, we tried to make something abstract into more concrete and also embodied the meaning of terms used in literatures as well. However, even the questionnaire has been modified by pilot test, we could not guarantee that there was no misleading or wrongly formulated in our questions.

5.7 Reliability

According to Saunders et al. (2003,101), the reliability of collected data means whether the survey method will yield consistent findings if similar observations would be made or conclusions reached by other researchers. One threat to reliability is participant error. We should choose an appropriate time to deliver the questionnaire because people might have different answers to the questions at the different occasions (Saunders et al. 2003, 101). As we mentioned in the limitation part of this chapter, during the specific time we chose to carry out the survey, most consumers were not so stressful and could give the clear response to each questions. The second threat to reliability is participant bias (Saunders et al. 2003, 101). Fortunately, in our research, this was not the big problem because the survey was not conducted in an organisation. The consumers could feel free to choose the answers, which ensure their true feelings of using the credit card(s). The other threats to reliability are observer error and observer bias (Saunders et al. 2003, 101). Observers might have different approaches to conduct the survey and hold different approaches to interpret the replies. These kinds of threats were not likely to happen because we designed the questionnaire in structured and standardized way. Most important of all, all the survey was conducted by only one research member and he could give the same explanation to all the respondents.

5.8 Generalisability

Generalisability means the research findings can be equally applicable to other research settings (Saunders et al. 2003, 102). In other words it means that the result can be generalized to a large population. Our research aim was to conduct a survey that could be generalized to European population. We believed that the Swedish consumers did not differ much from the population of other nationals in Europe. However, “to be able to generalize about regularities in human social behaviour it is necessary to select samples of sufficient numerical size” (Saunders et al., 2003, 87). In our research, we only did the survey in Kristianstad by purposive sampling. Due to the non-sufficient selected samples, we were not sure whether the collected data were large enough to represent the European population. Our task was simply to try to explain this particular phenomenon in the research setting.
5.9 Summary

In this chapter, we discussed our empirical method of doing the research. The research strategy was to build a model based on the existing theories and develop hypotheses. In order to test these hypotheses, we designed the questionnaire to collect the data. We chose to do survey on credit card holders who visited the electronic store in Kristianstad, Sweden. And there were altogether 73 eligible participants we reached during the periods of survey. The validity, reliability and generalisibility of the research were also discussed in this chapter.
6 Analysis

In this chapter, we will present our collected data and use it to test our hypotheses. Based on that, we will draw conclusions and discuss different kind of factors that influence the result.

6.1 Introduction

In this part, we will prove our hypotheses by using binomial test. We use 95% interval, which means that the hypothesis is accepted if the asymmetry significant value (based on Z approximation) is under 0.05. This test is used to see whether the answer can be generalized using test proportion 0.5, and this refers to the majority of the participants in our test. Because the nature of our questionnaire, the answer of the respondent can be either YES or NO, the population of different categories is under 30 and the distribution of those categories is unknown, we think binomial test is most appropriate in this case. We use SPSS to conduct our test.

Before we test and present the results of the hypotheses, we will present and discuss the data we have collected.

6.1.1 Data Description of the Personal Information

The aim of Question 1 to 6 is to describe the respondents’ background information such as gender, age, income per year (before tax), education and how often they use credit card(s).

In terms of gender (Table 1, Appendix III), among 73 respondents who have credit card(s), the majority of them is male and accounts for 74%, which correspond to 54 of the respondents. The result is not surprising because it is a well-known phenomenon that electronic stores attract more males than females. For this reason, our data collection cannot be used to make comparison between the genders.

When we observe the distribution among categories of age, the result is especially good, which is shown in (Table 2, Appendix III). However, the number of participants in the category of 61 or older is much less than other age categories. They account for 8.2% of the respondents, comparing to other three categories, which accounted for 20 – 26% each.

In the categories of income, the distribution of the respondents is not equal because most participants who answered this survey belong to two subcategories: middle income and higher, which is 78.1% comparing to 21.9% respondents with low income, which is shown in (Table 3, Appendix III). But this kind of result is not surprising for the following reasons. First, we believe that the willingness of answering this kind of survey is low, especially for the
people with low income or people who are in some kind of financial problems caused by using credit card(s). Of course, they are not willing to review it and they may feel ashamed of other people knowing their problems. Second, people want to show that they earn more money than they actually do. This kind of problem is related to “status disease” in our society. The third reason is concerning with our method of doing the survey. The environment is not private enough at the time when the respondents are filling in the questionnaire, which may lead to unwillingness to tell the truth.

One interesting observation is that, in the education part, 43% of our respondents only have Nine-year compulsory school and/or high school education, but in average, most of them have high income. This is a strange correlation because it is logical that people with higher education earn more money. Is it normal that Swedish people have a high probability of earning more money even though they have low education level?

The fact that 20.5% of the respondents with credit card(s) never used it last month (Table 5, Appendix III), proves that credit card provider(s) should pay attention to the reason why they didn’t use their credit card(s). Maybe it was not a good consumption month or people were not willing to use credit card(s) even though it was needed. Maybe the risk for them is too high. Moreover, the sample size of each category is too small and not equal, therefore, it is not possible to analyze it. This means that credit card provider lost 20.5% of the opportunity to make profit and it is necessary for them to consider if the service they provided is matching with this group of customers or not.

6.1.2 Data Description of the Five Stages in CDP

All detailed data description of the five stages in CDP can be found in Table 6.1. There are five stages in this table, which represent Need Recognition, Information Search, Pre-purchase Evaluation of Alternatives, Purchasing and consumption, Post-consumption Evaluation.
Table 6.1 Description of the five stages in CDP

<table>
<thead>
<tr>
<th>Risks</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
<th>STAGE 4</th>
<th>STAGE 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The cost of using credit card will be more than you expected such as</td>
<td>YES</td>
<td>16</td>
<td>53 %</td>
<td>17</td>
<td>57 %</td>
</tr>
<tr>
<td>interest and/or fee</td>
<td>NO</td>
<td>14</td>
<td>47 %</td>
<td>12</td>
<td>43 %</td>
</tr>
<tr>
<td>You are worrying about your finance in the future causes by using</td>
<td>YES</td>
<td>9</td>
<td>30 %</td>
<td>7</td>
<td>24 %</td>
</tr>
<tr>
<td>credit card</td>
<td>NO</td>
<td>21</td>
<td>70 %</td>
<td>22</td>
<td>76 %</td>
</tr>
<tr>
<td>Using credit card is not accepted by family and/or friends</td>
<td>YES</td>
<td>5</td>
<td>16 %</td>
<td>1</td>
<td>3 %</td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>25</td>
<td>84 %</td>
<td>28</td>
<td>97 %</td>
</tr>
<tr>
<td>Bank system errors will bring you some troubles in the future, such</td>
<td>YES</td>
<td>12</td>
<td>40 %</td>
<td>8</td>
<td>28 %</td>
</tr>
<tr>
<td>as being double charged or the transaction can not be completed.</td>
<td>NO</td>
<td>18</td>
<td>60 %</td>
<td>21</td>
<td>72 %</td>
</tr>
</tbody>
</table>

Total in each risk

|                      | 30 | 100 % | 29 | 100 % | 28 | 100 % | 73 | 100 % | 73 | 100 % |

In this part, we will present some interesting phenomena.

First, in terms of the financial risk in stage 1, 2 and 4, the majority of the respondents answered that they worry that the cost of using credit card will be more than they expected such as interest and fee. In overall, the differences between the answers are small. This indicates that most consumers are thinking of financial risk in these stages. But it does not mean that the financial risk is significant in these stages. This will be tested later in this chapter.

Second, from Table 6.1, in terms of performance risk, 40 % of the respondents in stage 1 worry that bank system errors may bring them troubles in the future, such as being double charged or that the transaction can not be completed. This means that customers do not think that bank system is secure enough once they consider using credit card(s). Why performance risk is considered by fewer consumers in the later four stages cannot be explained from our research. Further study of this phenomenon could be interesting.

Third, some respondents that answered YES on one or more of the perceived risk (Q9, Q13 & Q15) in each stage also think that it affects them negatively on whether to carry out the purchase or not. In stage 1, the percentage is 40 %, which is much higher than the other two stages, 21 % and 25 % respectively (see Table 6.2). This indicates that the perceived
risk does affect more customers negatively in stage 1. But, in order to generalize it, test must be conducted later in this chapter.

Table 6.2 The effect of the perceived risk on consumers’ decisions in the first three stages

<table>
<thead>
<tr>
<th></th>
<th>STAGE 1</th>
<th></th>
<th>STAGE 2</th>
<th></th>
<th>STAGE 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq.</td>
<td>Percent</td>
<td>Freq.</td>
<td>Percent</td>
<td>Freq.</td>
<td>Percent</td>
</tr>
<tr>
<td>If the answer is YES in one of the cases above (A-D), does it affect your consideration of buying the product(s) or service(s) negatively?</td>
<td>YES 12 40</td>
<td>6 21 7 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO 18 60</td>
<td>23 79 21 75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30 100</td>
<td>29 100</td>
<td>28 100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.1.3 Relationship Between the Hypotheses and the Stages in CDP

We have designed three hypotheses in total. H1 states that if consumers pay with credit cards on its credit, there is a perceived risk affecting the consumer decision-making process. But this hypothesis is too general because the perceived risk is consisted of four different factors. Thus, in order to conduct an appropriate test to prove if H1 is true or not, we designed two additional hypotheses, H2 and H3.

Hypothesis two (H2) consists of five sub-hypotheses, which correspond to five stages in the CDP. Hypothesis three (H3) consists of three sub-hypotheses, aimed to test whether the perceived risk in stage 1-3 actually affects the consumers negatively in their decision-making process. All these hypotheses will be tested in the following parts in this chapter.

6.2 Test of H2

In this part, we are going to test our second hypothesis that there is at least one factor of the perceived risk occurring in each stage of the CDP. We will divide this hypothesis into five small hypotheses to test whether it is valid in each stage of the decision-making process based on our collected data from the survey. One thing should be pointed out that in the questionnaire, the Question 7, Question 10 and Question 13 are necessary because they are the pre-conditions for the respondents to continue answering if any of the perceived risk occurs in their mind. These questions are not necessary to be tested. Our analysis will emphasize the tests of other questions in the questionnaire.
6.2.1 The Test of the First Sub-Hypothesis of H2

The questions 7 to question 9 belong to the first stage of need recognition. Our sub-hypothesis (H2) in this stage is that the financial risk, psychological risk, social risk or performance risk occurs in the first stage of need recognition. In order to test our hypothesis through our empirical research, we designed four questions, which indicate the four factors of the perceived risk, and the participants were required to answer these questions by YES or NO.

The first question we asked is whether the participants have the financial risk occurring in their mind, that is to say, the cost would be more than they expected, such as interest and/or fee (Q8A). Because when the consumers are using credit card(s), they may need to pay an annual fee, transaction fee or interest to the bank, besides the price of the products. These fees are not expected sometimes. The second question is whether they have a psychological risk in their mind, that is to say, do they worry about their finances in the future (Q8B). It indicates the consumer’s psychological feeling and worry about using credit card. The third question is whether they worry about a social risk occurring, that is to say, if using a credit card is not accepted by families or friends (Q8C). If the consumers feel rejected by their family and friends, it will affect their social lives negatively. The last one is whether they worry about a performance risk occurring, that is to say, the bank system errors would bring them some troubles in the future, such as being double charged or the transaction could not be completed (Q8D). This question refers to the performance of credit card(s) as a kind of financial service. If there are errors all the time, it means that credit card(s) do not work effectively as a service, and it will bring many troubles to the consumers.

Figure 6.1 The questions connected with the factors of the perceived risk in the first stage

If the respondent answers YES on any of the above factors of the perceived risk, it indicates that risk actually occur in their mind. It means that this risk does affect his decision making in the first stage. If the significant value we get is below 0.05 and the group who answered YES is the majority, then we can be sure that risk actually occur in their minds. On the contrary, if the significant value is more than 0.05, the result cannot be generalized.
Through the test, we can see that there are some consumers who have the perceived risk in this stage.

### Table 6.3 Binomial Test of the first stage: Need Recognition

<table>
<thead>
<tr>
<th>Category</th>
<th>Observed Prop.</th>
<th>Test Prop.</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td>14</td>
<td>.47</td>
<td>0.50</td>
</tr>
<tr>
<td>Answers YES</td>
<td>16</td>
<td>.53</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Psychological risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td>21</td>
<td>.70</td>
<td>0.50</td>
</tr>
<tr>
<td>Answers YES</td>
<td>9</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Social risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td>25</td>
<td>.83</td>
<td>0.50</td>
</tr>
<tr>
<td>Answers YES</td>
<td>5</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Performance risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td>18</td>
<td>.60</td>
<td>0.50</td>
</tr>
<tr>
<td>Answers YES</td>
<td>12</td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

a Based on Z Approximation.

Since the result of the binomial test always refers to the majority of each factor, we can see from the test that in the psychological risk and social risk, the significant value are 0.043 and 0.000, which are below 0.05. This means that Psychological and Social risk can be generalized, and that they do not occur in this stage. And for financial risk and the performance risk, the significant value are 0.856 and 0.362 respectively, which are much higher than 0.05. This means that we cannot generalize whether these two risks occur in this stage or not. Even though we cannot generalize it, we cannot avoid the fact that financial and performance risk do occur in the stage of Need Recognition.

Based on our research, this sub-hypothesis that that the financial risk, psychological risk, social risk or performance risk occurs in the first stage of need recognition is not accepted.

### 6.2.2 The Test of the Second Sub-Hypothesis of H2

Question 10 to question 12 belong to the second stage of the decision making process. Our sub-hypothesis (H2²) in this stage is that the financial risk, psychological risk, social risk or performance risk occurs in the second stage of information searching. We also have four sub-questions to indicate different factors of the perceived risk, and these questions are exactly the same as the sub-questions in the first stage. The respondents are also required to answer YES or NO to these questions.
Figure 6.2 The questions connected with the factors of the perceived risk in the second stage

And from the outcome of the test, we can identify some differences with the first stage.

Table 6.4 Binomial Test of the second stage: Information Searching

<table>
<thead>
<tr>
<th>Category</th>
<th>Observed</th>
<th>Test</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category</td>
<td>N</td>
<td>Prop.</td>
</tr>
<tr>
<td>Financial risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td></td>
<td>12</td>
<td>.41</td>
</tr>
<tr>
<td>Answers YES</td>
<td></td>
<td>17</td>
<td>.59</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>29</td>
<td>1.00</td>
</tr>
<tr>
<td>Psychological risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td></td>
<td>22</td>
<td>.76</td>
</tr>
<tr>
<td>Answers YES</td>
<td></td>
<td>7</td>
<td>.24</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>29</td>
<td>1.00</td>
</tr>
<tr>
<td>Social risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td></td>
<td>28</td>
<td>.97</td>
</tr>
<tr>
<td>Answers YES</td>
<td></td>
<td>1</td>
<td>.03</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>29</td>
<td>1.00</td>
</tr>
<tr>
<td>Performance risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td></td>
<td>21</td>
<td>.72</td>
</tr>
<tr>
<td>Answers YES</td>
<td></td>
<td>8</td>
<td>.28</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>29</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Based on Z Approximation.*

From the table, we can see that in this stage, most of the respondents answered NO to the last three factors. For the financial risk, since the majority is the respondents who chose YES, the significant value is 0.458, which is much higher than 0.05. According to the result, we cannot generalize that whether the financial risk occurs in this stage or not. For the rest three factors, psychological risk, social risk and performance risk, the majorities are the respondents who answered NO. The significant values are 0.008, 0.000 and 0.024 respectively, and they are all much lower than 0.05. So the result is that the consumers do not consider these three risks in the second stage of information searching and that means these three risks do not occur in this stage.
So in the second stage, the second sub-hypothesis that the *financial risk, psychological risk, social risk or performance risk occurs in the second stage of information searching* is rejected.

**6.2.3 The Test of the Third Sub-Hypothesis of H2**

The third sub-hypothesis of the hypothesis two (H2³) states that the *financial risk, psychological risk, social risk or performance risk occurs in the third stage of pre-purchase evaluation of alternatives negatively*.

As we have explained before, we have four sub-questions that whether the perceived risk occurs in this stage or not. The participants were required to answer these questions by choosing YES or NO. The Figure 6.3 shows the questions that investigate the perceived risk in the third stage of pre-purchase evaluation of alternatives.

*Figure 6.3* The questions connected with the factors of the perceived risk in the third stage

By testing these questions, we expect to find out that some factors of the perceived risk in the third stage of pre-purchase evaluation of alternatives, and test whether the four factors occur in this stage or not. The result of the binomial test is followed with Table 6.5.
We can see from the Table 6.5, that there are some participants choosing to answer YES for each factor of the perceived risk during this stage. It means that some of the participants have the perceived risk; however, in order to judge whether each factor of the perceived risk is significant or not, we should refer to the test results. The significant values of the four factors of the perceived risk in the third stage are 0.851, 0.000, 0.000 and 0.013 respectively. The financial risk is over 0.05, which means we cannot generalize if it occurs in this stage, while the other three are below 0.05, which means that these risks do not occur in this stage.

So in the third stage, the third sub-hypothesis that the financial risk, psychological risk, social risk or performance risk occurs in the third stage of Pre-purchase Evaluation of Alternatives is rejected.

### 6.2.4 The Test of the Fourth Sub-Hypothesis of H2

The fourth sub-hypothesis of hypothesis two (H2') states that the financial risk, psychological risk, social risk or performance risk of using credit card(s) occurs in the fourth stage of purchase and consumption negatively.

The Figure 6.4 shows the questions that investigate the perceived risk in the fourth stage of purchasing and consumption.
The fourth stage is the key stage for the credit card holders to use the credit card(s). Actually, it is a very important stage for them to finish the decision-making of purchasing. The result of the binomial test is followed with Table 6.6.

**Table 6.6** Binomial Test of the fourth stage: Purchasing and Consumption

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Observed Prop.</th>
<th>Test Prop.</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td>32</td>
<td>.44</td>
<td>.50</td>
<td>.349(a)</td>
</tr>
<tr>
<td>Answers YES</td>
<td>41</td>
<td>.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>73</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Psychological risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td>56</td>
<td>.77</td>
<td>.50</td>
<td>.000(a)</td>
</tr>
<tr>
<td>Answers YES</td>
<td>17</td>
<td>.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>73</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Social risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td>68</td>
<td>.93</td>
<td>.50</td>
<td>.000(a)</td>
</tr>
<tr>
<td>Answers YES</td>
<td>5</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>73</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Performance risk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers NO</td>
<td>54</td>
<td>.74</td>
<td>.50</td>
<td>.000(a)</td>
</tr>
<tr>
<td>Answers YES</td>
<td>19</td>
<td>.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>73</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

*a Based on Z Approximation.*

This stage differs from other previous stages that all the participants have the experience of using credit card(s) to buy product(s), this enable them to answer the four questions in this stage, while in the pervious stages, the participants can skip these questions according to their different experiences.

From the test, we can see that for the financial risk, although there are more participants answering YES compared with the participants answer NO, the significant value is 0.349, which means the result cannot be generalized. As for psychological risk, social risk, and...
performance risk, all the significant values are 0.000. This means that these risks do not occur in this stage.

The result cannot support our assumption of the fourth stage. However, there are some interesting indications in this Table. Why there were much more participants chose to answer YES to each question in this stage compared with first three stages? We are sure that if the size of sample is big enough, the result will surely support our hypothesis. It is worthy of further study.

Anyway, in the fourth stage, the fourth sub-hypothesis that the financial risk, psychological risk, social risk or performance risk occurs in the fourth stage of Purchasing and Consumption is rejected.

6.2.5 The Test of the Fifth Sub-Hypothesis of H2

The fifth sub-hypothesis of the hypothesis two (H25) states that consumer are being in financial problems, worrying about their financial problems caused by using credit card(s), unfriendly with family or friends or getting in troubles caused by errors from the bank’s system.

**Figure 6.5** The questions connected with the factors of the perceived risk in the fifth stage

By testing these questions, our hope is to find out whether the consumers find themselves in any of the four situations after purchasing and consumption with the credit card(s). Consequently, the credit card holders will low down their willingness to use credit card(s) and finally change their mind to use another kind of payment instrument instead. The result of the binomial test is followed with Table 6.7.
Table 6.7 Binomial Test of the fifth stage: Post-consumption Evaluation

<table>
<thead>
<tr>
<th>Category</th>
<th>Observed</th>
<th>Test</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category</td>
<td>N</td>
<td>Prop.</td>
</tr>
<tr>
<td>Financial risk</td>
<td>Answers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>71</td>
<td>.97</td>
</tr>
<tr>
<td></td>
<td>YES</td>
<td>2</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>73</td>
<td>1.00</td>
</tr>
<tr>
<td>Psychological risk</td>
<td>Answers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>67</td>
<td>.92</td>
</tr>
<tr>
<td></td>
<td>YES</td>
<td>6</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>73</td>
<td>1.00</td>
</tr>
<tr>
<td>Social risk</td>
<td>Answers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>68</td>
<td>.93</td>
</tr>
<tr>
<td></td>
<td>YES</td>
<td>5</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>73</td>
<td>1.00</td>
</tr>
<tr>
<td>Performance risk</td>
<td>Answers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>60</td>
<td>.82</td>
</tr>
<tr>
<td></td>
<td>YES</td>
<td>13</td>
<td>.18</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>73</td>
<td>1.00</td>
</tr>
</tbody>
</table>

a Based on Z Approximation.

To our surprise, the test results show the unified answers for each test of these four factors. The significant values in the entire tests for these four factors are 0.000 and the majority group of people is the group of participants who answer NO. It means that it is statistically significant that consumers do not usually find themselves in this kind of situations caused by using credit card(s).

Based of the test result, this hypothesis is rejected.

6.3 Test of H3

The third hypothesis is that if the perceived risk occurs in these stages, consumers will be affected negatively when they consider using credit card(s) to buy the product(s). In our questionnaire, we have three questions to test this hypothesis; they are question 9 in the first stage, question 12 in the second stage and question 15 in the third stage. So we also divide this hypothesis into three sub-hypothesis according to three different stages. Our idea in the fourth stage is that the consumer already decided to carry out the purchase and therefore, it can not occur any negative effects on stage five. Therefore we do not have this question in these two stages.

Considering that most of the sub-hypotheses in the last part are not accepted through our test, the respondents we selected did not consider those perceived risks when they were making decisions. We can predict logically that the perceived risk will not affect these
respondents in the decision-making process. The tests are still needed to prove our prediction.

6.3.1 The Test of the First Sub-Hypothesis of H3

The first sub-hypothesis in this stage is *if the perceived risk affects the first stage of need recognition, consumers will be affected negatively when they consider using credit card(s) to buy the product(s)*. We test the result by asking question 9 "if the answer is YES in one of the cases above (8A–D), does it affect your consideration of buying the product(s) or service(s) negatively". The respondents are required to answer YES or NO to this question. If the answer is YES, then the perceived risk will affect the consumers in decision making process; if the answer is NO, then the perceived risk does not affect the consumers.

We can see the outcome as the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Observed Prop.</th>
<th>Test Prop.</th>
<th>Exact Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>11</td>
<td>.48</td>
<td>.50</td>
<td>1.000</td>
</tr>
<tr>
<td>NO</td>
<td>12</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
<td><strong>1.00</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a If the answer is YES in one of the cases above (A-D), does it affect your consideration of buying the product(s) or service(s) negatively?

In the first stage, since the differences between YES and NO in the question 9 is not big, the significant value is 1.000, which is higher than 0.05. The result cannot be generalized. And therefore, this sub-hypothesis is rejected.

6.3.2 The Test of Second Sub-Hypothesis of H3

The second sub-hypothesis of H3 states that *if the perceived risk affects the second stage of information searching, consumers will be affected negatively when they consider using credit card(s) to buy the product(s)*.

In order to know whether the participants will be influenced by the perceived risk or not, we design the question 12 to test it, and the question states that "If the answer is YES in one of the cases (11A-11D), does it affect your consideration of buying that product negatively?" We, therefore, get the test result according to their answer of YES or NO. The participants who answer YES show their positive attitude towards the influences of the perceived risk, while the participants who answer NO show their negative attitude towards the influences of the perceived risk. The test result is followed with Table 6.9.
According to Table 6.9, the significant value is 0.078, which is higher than 0.05, and the majority group is answering NO. It means that it cannot be generalized. But our sub-hypothesis is still rejected. It is very logical because the second sub-hypothesis in the hypothesis two is rejected. Therefore it is impossible for this sub-hypothesis to be accepted.

### 6.3.3 The Test of the Third Sub-Hypothesis of H3

The third sub-hypothesis is if the perceived risk affects the third stage of pre-purchase evaluation of alternatives, consumers will be affected negatively when they consider using credit card(s) to buy the product(s). We test the result by asking question 15 that "if the answer is YES in one of the cases above (14A–D), does it affect your consideration of buying that product negatively". As the same with the previous two stages, the respondents are required to choose YES or NO. The outcome is shown in the Table 6.10:

**Table 6.10 Binomial Test of stage 3**

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Observed Prop.</th>
<th>Test Prop.</th>
<th>Exact Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision affected by the perceived risk (a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>7</td>
<td>.37</td>
<td>.50</td>
<td>.359</td>
</tr>
<tr>
<td>NO</td>
<td>12</td>
<td>.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a If the answer is YES in one of the cases above (A–D), does it affect your consideration of buying the product(s) or service(s) negatively?

In this stage, most of the respondents chose NO, which means that the perceived risk does not affect them. And the significant value is 0.359 and it is higher than 0.05. Therefore, as in the previous case, this result cannot be generalized.
6.4 Conclusion of Analysis

According to the binominal test with the proportion of 0.5, our eight sub-hypothesis are rejected. As a result, hypothesis 2 (H2) and 3 (H3) are rejected. Considering the relationship we have explained before, our general hypothesis 1 (H1) should also be rejected.

We will present our findings in each stage of the decision-making process as well as the reasons why all hypotheses are rejected.

6.4.1 Finding of the First Stage: Need Recognition

The sub-hypothesis of H2 is rejected in this stage. The psychological risk and the social risk do not occur in the consumers’ minds according to the significant values, while the financial risk and the performance risk cannot be generalized that they do not occur in the consumers’ mind because their significant values are much higher than 0.05. Even though 53 % and 40 % of the respondents answer that they do think about financial risk and performance risk respectively, this empirical evidence is not enough to support our assumption. Therefore, our conclusion in this stage is that we find some indication that financial risk and performance risk do occur although the hypothesis is rejected.

In addition, the first hypothesis of H3 (H31) in this stage is rejected, but we cannot generalize that whether the perceived risk affects consumers’ decision negatively when they are considering using credit card(s) to buy product(s). Even though the respondents who answer YES and NO are almost equal, 48 % and 52 % respectively, this empirical evidence is not enough to support this hypothesis. Furthermore, we think that the result is affected by the uncertainty of generalization of the two risks we mentioned above. We still believe that there are some consumers who are affected negatively by the perceived risk in this stage.

6.4.2 Finding of the Second Stage: Information Searching

In this stage, the sub-hypothesis of H2 is rejected. The psychological risk, the social risk and the performance risk can be generalized that they do not occur. But the result of financial risk still cannot be generalized because the significant value is 0.458, which is much higher than 0.05. Interestingly, we find 59 % respondents agree that the financial risk occurs in their minds. This support is stronger than the situation in stage one, it gives us more confidence that our assumption is right in some degree, but it is still not enough to prove it statistically.

The second sub-hypothesis (H32) in this stage is also rejected. The significant value is 0.078, which is higher than 0.05, therefore we cannot generalize this result. The evidence is weak to support that the respondents are affected by the perceived risk, because only 29 % of them answered YES in this question.
6.4.3 Finding of the Third Stage: Pre-purchase Evaluation of Alternatives

The result we find in this stage is similar to the stage two because the psychological risk, the social risk and the performance risk do not occur. In terms of the financial risk, according to the statistical evidence, it is not enough to generalize whether it occurs in this stage or not. Here, the difference between the respondents answering YES and NO is not big, 46 % and 54 % respectively. Still, our assumption cannot be accepted, but we cannot reject the fact that the financial risk does exist in this stage too.

The significant value of sub-hypothesis (H3\textsuperscript{3}) is 0.359 and is higher than 0.05. Again, we cannot generalize this result although the evidence that the perceived risk does not affect the respondents is much stronger. In this stage 37 % of the respondents think that the perceived risk affect their decisions negatively. Like the situation in the stage two, we do think that there is an indication of the perceived risk actually affecting the consumer decision-making negatively.

6.4.4 Finding of the Fourth Stage: Purchase and Consumption

The same evidence can be found in this stage, which is similar to stage 2 and stage 3 that the psychological risk, the social risk and the performance risk do not occur. In terms of financial risk, the significant value is 0.349, which is much higher than 0.05. This means that the result we get cannot be generalized, even though 56 % of respondents do feel that the financial risk occurs in their mind. The conclusion is the same as all the previous stages that, according to the empirical evidence, financial risk does occur but we cannot prove it statically.

6.4.5 Finding of the Fifth Stage: Post-Consumption Evaluation

In this stage, our aim is to find whether the respondents are in some kinds of troubles caused by credit cards usage. Here, there is no evidence to show that the respondents have financial problems, psychological problems, social problems or practical problems caused by credit cards usage.

6.4.6 Reasons of These Findings

In sum, all of our hypotheses of H2 are rejected. But we do find indications of the financial risk occur in the first four stages of the CDP. We also find that the performance risk occurs in the first stage. The hypotheses of H3 are also rejected. We find that more respondents are affected negatively in stage one and stage three than in stage two.

In addition, according to the results of the survey, most of the respondents do not consider a lot about the psychological risk, social risk and performance risk. There are several reasons.
First, the Swedish people are independent with each other due to the culture and social environment. They are not easily influenced by others when they are making decisions. And the family members or friends do not make many comments on one’s behaviour. So they have very little social risk. Second, it seems that the transaction system of credit card(s) works effectively and not many errors occur. Consumers trust the system instead of worrying about it. That is why few of them consider the performance risk when they use credit card(s). Third, the psychological risk is mainly caused by the financial risk, social risk and performance risk, since consumers have low social risk and performance risk, even though some consumers still consider the financial risk, the psychological risk of regretting or bad feeling is low correspondently.

On the other hand, although the collected data cannot support our hypotheses, we think our survey can be, to some extent, misleading. The reasons can be discussed from external and internal view. The external reasons refer to our research methodology. The internal reasons refer to the respondents’ willingness of telling the truth. And the internal factors can be affected by the external factors, for example, the respondents may be influenced by the environment when they are doing the questionnaire.

There are three external reasons. First, the sample size of our survey is too small due to the limited time and the financial sources. There should be at least 30 respondents in each category (Saunders, 2007, 211). Second, we are doing this survey only on credit card holders. The consumers maybe have already considered these risks before applying for credit card(s). We do think that if this survey is carried out on both groups of consumers who already have credit card(s) and those who are considering applying for credit card(s), the survey results can be different. Third, most of the participants belong to the categories of middle or higher income (Table 3, Appendix III). It shows that most people in Sweden do not have financial problems. We believe that the perceived risk of using credit card(s) is different from country to country. The living standard in Sweden is high and the social welfare is good. These in some degree can affect our results. We do believe that if we do this survey in the developing countries, for example China, the results may be different.

Meanwhile, there are also internal reasons. First, our data is collected from consumers who have time and are willing to help us filling in the questionnaire. Will the answers we get from the respondents be the same, between who have time and who do not have time? Second, there are some respondents who have bad experience or negative attitudes toward credit cards usage and because of that, they refuse to help us fill in the questionnaire.
7 Conclusion

In this chapter, we will present the summary of the whole dissertation. Evaluation of the model will be discussed and the choice of methodology will be criticized. Suggestion for further study will also be presented.

7.1 Summary of the Dissertation

With the development of the social economy and the security of the bank transferring system, more merchants and shops accept credit cards as a kind of payment instrument. But according to the information we get from Steve Edward, Acting Head of Marketing of IKANO FS in the UK, customers’ attitudes to credit card changing radically in the recent years, and the number of the customers who use credit cards has decreased 20% each year. Thus, the banks make fewer profits these years. There are many reasons for this phenomenon, both internal and external. Since credit card is a kind of financial service, there must be risks existing when using it. So we are interested in doing the research to find out whether the risks of using credit cards will affect the consumers’ decision-making of using it or not.

Since we adopt the deductive research method in our study, we explore different theories first and try to build up our own model.

We make effort to study the theories mainly in two areas, one is consumer behaviour theory, and the other is risk theory. In the consumer behaviour theories, we focus on two aspects. The first aspect is decision-making theories, which conclude three different theories: the Complex Decision Model (Assael, 1995), the Consumer Decision-making Process Model (Blackwell, 2001), and the Means-End Approach. The first two theories are talking about the different stages of decision-making process, while the third theory is talking about the consequence of the decision-making. All the three theories help us to understand the consumers’ attitudes and psychological process when they are making decision whether to buy the product(s) or service(s) or not. The second aspect in the consumer behaviour theories is discussing the factors that can influence the consumers’ decision-making. We have four theories in this aspect. They are Environmental Influences (Assael, 1995), Three Key Variables (Hunter & Goldsmith, 2004), the Conceptual Model for Credit Card Choice and Usage Behaviour (Ali Kara et al., 1996), and the Influences on Consumer Behaviour Model (Fahy & Jobber, 2002). These theories are discussing the influences factors both from internal view and external view.

And on the theories of risk, we are studying the perceived risk and its classification. We also continue to make deeper study on the risks of using credit cards and the consumer’s attitudes.
to the credit card usage. Based on this knowledge, we discuss the research question that what the perceived risk is associated with purchasing product(s) with a credit card. We find that there are four factors of the perceived risk which are most related to the credit card usage. They are financial risk, psychological risk, social risk and performance risk.

Based on these theories, we create our new model of Credit Card Usage, which puts emphasis on the perceived risk and we want to prove that the perceived risk occurs and affects the decision-making process of using credit cards. In order to test it, we set up three hypotheses, which include eight sub-hypotheses.

We choose credit card holders to be the target group of our survey. We send out 451 questionnaires to the consumers of Elgiganten, the electronic store in Kristianstad. 300 of them refused to participate, 78 of them do not have credit card(s), and only 73 of them are qualified to answer the questionnaire. Based on the answers of these 73 participants, we do binomial test based on testing proportion 0.5 with a 95 % (5 % marginal error) on our data. The result is that all our hypotheses are rejected, although some of them cannot be generalized. Due to the reasons we have explained in the last chapter, we still believe that the perceived risk, especially the financial risk, do occur when people are using credit cards. And the perceived risk do affect their decision-making process in some degree.

7.2 Evaluation of the Model

As argued in the discussion of the existing models, we think that those models are not enough to explain the credit card users' behaviour. Existing models of consumer decision-process are based on both external and internal variable. In the case of credit card(s) user, according to Ali Kara et al. (1996), credit card usage behaviour determines by (1) attitudes towards using credit card usage, (2) economic, demographic and socio-economic factors and, (3) negative and positive experiences. We have found that this model is too comprehensive for two reasons: all factors of the CDP are not included and the structure of the model does not explain internal relationship between the dependent variables. Moreover, we think that the perceived risk plays important role in the CDP. Therefore, our idea of the model is including the perceived risk as a new factor resulted in all those influential factors.

Based on these reasons, we designed the questionnaire in order to test our hypotheses that the perceived risk actually occurred in the CDP. As a result, we didn't find enough evidence to support our theory and all of our hypotheses were rejected. Even thought that they were rejected, financial risk cannot be generalized in the first four stages in the CDP and neither performance risk in the first stage. For these reasons, we cannot decide entirely to reject the perceived risk in the model. Furthermore, as we concluded in Chapter 6.4, there are many
reasons influencing our result such as small sample size, the data is based only on existing credit card(s) holders, income distribution are not equal among participants, and we are dependent on the willingness of consumer answering our questionnaire.

**Figure 7.1** The modified model: Credit Cards Usage

As a result, we keep the perceived risk in the model but we cannot highlight it (Figure 7.1). In order to generalize whether the perceived risk is rejected or accepted in the model, further study has to be conducted.

Based on this study, it is not appropriate for credit card providers such as banks to implement this model.

**7.3 Methodological Criticism**

We conduct our research with deductive approach, which means we build a model by studying the existing theories and set up the hypotheses based on it. In order to test these hypotheses in reality, we chose to design the questionnaire and collect the data by doing survey.

By reviewing the method, which was adopted in this research, we found that there were some aspects worthy of discussing and should be criticized, such as the way to formulate the hypotheses, the design of the questionnaire and the problem of choosing the sample.

First, the hypotheses were formulated based on the new model, which was created by us. As a matter of fact, we created this new model just based on reviewing some books and articles.
We were lacking of specific knowledge related to the sector of bank, especially the service of credit card(s). It would be much better and reasonable for us to make assumption and build hypotheses if we have more knowledge of this sector.

Second, the questionnaire was not enough to test these hypotheses. More specific questions should be added besides of questions related to the five stages of CDP. For instance, we can ask *if you are affected by the perceived risk this time, will you still consider using credit card(s) thereafter*. By asking this kind of specific question, it would be helpful for us to analyze the consumers’ willingness of using credit card(s). The other problem with the questionnaire was the designing of the question 9, 12 and 15. These questions could not embody the actual meaning of what we want to ask. As we have stated, the five stages of CDP should be followed and connected with each other, these three questions could have been much better if it was stated as following: *if the answer is YES in one of the cases above, does it affect you move forward to the next stage negatively?* In this way, the questions will be acted as intermediates and stimulate for participants to continue answering the questions of the following stages.

Third, there is a big problem concerning on the choosing of the sample. Due to the limited time and financial resource, there were only 73 eligible participants in our survey. Furthermore, most of these participants were belonging to the categories of middle or high-income consumers. Because we chose to do the survey in front of an electronic store, the category of low-income consumers might have been excluded from this specific group. This was the reason that we could not categorize the participants and analyze their perceived risk according to income. And it could also be the reason that we found that no perceived risk occurs in the CDP.

Therefore, all these method problems might lead to a misleading result.

### 7.4 Further Study

Since our survey result was achieved based on the limited sample size, covering a very small area as well as some problems with the method, we believe that it is worthy of further study in order to achieve high generalisability and validity.

First, in order to increase validity and reliability, further study has to put effort on a bigger sample size. Distribution of each category must meet the standard for example, the number of each category must be at least 30 and the size of each category must be equal. This will increase the reliability of the result. In this way, it is more meaningful to exam the
relationships between the personal background variables and the perceived risk such as the relation between the income and the perceived risk.

Second, it is also interesting to find out the different perceived risk between consumers who are in different countries with different economic levels. We did our survey in Sweden, which is the most developed country. Swedish people rarely meet financial problems thanks to the good social welfare. Also, in Sweden, the differences between the people with high social class and low social class is not big, therefore it is hard to find, for example, the relationship between the economic level and the perceived risk. On the contrary, in most developing countries, the average living standard is lower than Sweden. People living in those countries have higher-level risk. Therefore, the research on the perceived risk of using credit card(s) in developing countries will be interesting and the result might be different.

Third, we do think that the further study on the perceived risk can also be conducted on the group of consumers who do not have credit card(s). There are many reasons why this group of people do not use credit card(s). For example, they have high-perceived risk, or they do not think it is not necessary to use credit card(s) and they think using charge card(s) is a better choice. It might be worthy of doing survey on university students who are the potential credit card users in the future. They have more reasonable views of using credit card(s) with their education background. In addition, from banks’ point of view, they should conduct such kind of survey on potential consumers, which will help them offer better service and extract more profits.
References

Books:


Donald F. Cox (1967), Risk taking and information handling in consumer behaviour, Harvard University, USA.


Articles:


**Internet:**


The definition of service(s). Retrieved October 26, 2006, from http://www.answers.com/topic/service
Appendix I: Questionnaire in English

The Perceived Risk and the Decision-Making Process of Using Credit Cards

The survey is being carried out to find out how the perceived risk affects the credit card holders’ decision making to use credit card. Please answer the questions freely.

We will appreciate if you could please fill in this questionnaire. It will only take you five minutes. The more answers we receive, the better results we will get.

Try to remember filling in your first thought when you do this questionnaire.

We hope you find completing the questionnaire enjoyable, and thank you for taking the time to help us. If you have any questions, please do not hesitate to contact us.

All the information you provide will be treated in the strictest confidence.

Thank you for your help.

Duoc Lu (duoocl@gmail.com)
Tu Li (tt0572@gmail.com)
Liang Hong (lianghong714@gmail.com)
Personal information

8. Gender
   □ Male   □ Female

9. Age
   □ 18 – 30   □ 31 – 40   □ 41 – 50   □ 51 – 60   □ 61 or older

10. Income per year
    □ 110 000 SEK or less
    □ 110 001 – 210 000 SEK
    □ 210 001 – 300 000 SEK
    □ 300 001 SEK or higher

11. Education. Please choose one alternative
    □ Nine-year compulsory school and/or High school graduate
    □ Vocational qualification or some college education but no academic degree
    □ Academic degree such as Bachelor’s or Master’s degree
    □ Doctorate or higher

12. Do you have credit card(s)?
    □ YES   □ NO

13. How often did you use the credit card(s) in the last month?
    □ Never   □ Once times   □ A couple of times (2 – 5 times)   □ Often (6 times or more)

Explanations:
A Credit card is a card which enables you buy first and pay later. And the credit is offered by the card issuer or a bank. A charge card enables you to pay 'cash' with a card, as the sum is automatically deducted from your Bank account.

PLEASE ANSWER IF YOU ARE A CREDIT CARD HOLDER.
Situation 1
You get the impulse that you need to buy a certain product.

14. When you have this kind of need, do you sometimes consider using credit card to buy it?
   1 □ YES  2 □ NO (please, go to Situation 2)

15. If your answer is YES, do you have the following feelings? Please check Yes or No in each case.

   Yes  No

   A. The cost will be more than you expected, such as interest and/or fee.
      1 □  2 □

   B. You are worrying about your financing in the future.
      1 □  2 □

   C. Using credit card is not accepted by families or friends.
      1 □  2 □

   D. Bank system errors will bring you some troubles in the future, such as being double charged or the transaction can not be completed.
      1 □  2 □

16. If the answer is YES in one of the cases above (A–D), does it affect your consideration of buying the product(s) or service(s) negatively?
   1 □ YES  2 □ NO

Situation 2
You are in the process of searching for information about the product that you are planning to buy.

17. When you are in the process of searching for information, do you consider using a credit card to buy the product(s) or service(s)?
   1 □ YES  2 □ NO (please go to Situation 3)
18. If your answer is YES, do you have the following feelings? Please check Yes or No in each case.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

A. The cost will be more than you expected, such as interest and/or fee.

B. You are worrying about your financing in the future.

C. Using credit card is not accepted by families or friends.

D. Bank system errors will bring you some troubles in the future, such as being double charged or the transaction can not be completed.

19. If the answer is YES in one of the cases above (A–D), does it affect your consideration of buying that product negatively?

☐ YES ☑ NO

**Situation 3**

Now you are comparing the prices, qualities and different brands of the product.

20. When you are at the process of comparing the prices, qualities and different brands, do you consider using credit card to buy the product(s) or service(s)?

☐ YES ☑ NO (please go to Situation 4)

21. If your answer is YES, do you have the following feelings? Please check Yes or No in each case.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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<tbody>
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</tr>
</tbody>
</table>

A. The cost will be more than you expected, such as interest and/or fee.

B. You are worried about your financing in the future.

C. Using credit card is not accepted by families or friends.

D. Bank system errors will bring you some troubles in the future, such as being double charged or the transaction can not be completed.
22. If the answer is YES in one of the cases above (A–D), does it affect your consideration of buying that product negatively?

☐ YES ☐ NO

Situation 4
Now you decide to buy the product with your credit card.

23. Do you think about the following consequences? Please check Yes or No in each case.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

a. The cost will be more than you expected, such as interest and/or fee.
b. You are worrying about your financing in the future.
c. Using credit card is not accepted by families or friends.
d. Bank system errors will bring you some troubles in the future, such as being double charged or the transaction cannot be completed.

Situation 5
You have bought the product with your credit card. You are using it now.

24. Do you sometimes find yourself in the following situations caused by using the credit card? Please check Yes or No in each case.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
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</tbody>
</table>

a. Not be able to or hard to pay back the loan before the due day.
b. You are worrying about your financial situation.
c. Your families or friends are against the decision of buying product using credit card.
d. Sometimes you are in trouble because of error(s) the bank made when handling your account.
Kundens riskuppfattning och beslutsprocess
vid användning av kreditkort

Undersökningssyftet är att ta reda på om det finns något samband mellan kundens riskuppfattning och beslutsprocess vid användning av kreditkort. Svaret kommer att användas som underlag i en kandidat uppsats, inom ekonomi.

Vi uppskattar om Ni svarar på denna enkät som endast tar några minuter. Ju fler svar vi får, desto högre är trovärdigheten av resultaten. Känn Er fria och svarar på det första som Ni kommer på.

Om något är oklart, tveka inte och fråga oss. Tack på förhand!

All information kommer att behandlas konfidentiell.

Duoc Lu (duoclu@gmail.com)
Tu Li (tt0572@gmail.com)
Liang Hong (lianghong714@gmail.com)
**Förklaringar:**
Att använda kreditkort skiljer sig från vanlig kort genom att man använder kredit vid köp istället för att pengarna dras direkt från kontot.
Vår undersökning består av fem situationer och vissa frågor återkommer. Vi uppskattar om du tar dig tid och går igenom alla situationer.

**Personlig information**

1. **Kön**
   - □ Man
   - □ Kvinna

2. **Ålder**
   - □ 18 – 30
   - □ 31 – 40
   - □ 41 – 50
   - □ 51 – 60
   - □ 61 eller äldre

3. **Årsinkomst**
   - □ 110 000 SEK eller lägre
   - □ 110 001 – 210 000 SEK
   - □ 210 001 – 300 000 SEK
   - □ 300 001 SEK eller högre

4. **Utbildningsnivå. Välj ett alternativ som passar dig bäst.**
   - □ Grundskola och/eller Gymnasium
   - □ Kvalificerad yrkesutbildning eller motsvarande, universitet/högskoleutbildning utan examen.
   - □ Universitet/högskoleutbildning med avslutad examen
   - □ Doktor/Professor

5. **Har du kreditkort?**
   - □ JA
   - □ NEJ

6. **Hur ofta använder du ditt kreditkort den senaste månaden? Välj endast ett alternativ**
   - □ Aldrig
   - □ 1 gång
   - □ Några gånger (2 – 5 ggr)
   - □ Ofta (6 ggr eller mer)
**Situation 1**

I det här fallet upptäcker Du **behov** av att köpa en produkt.

7. Tänker Du då på att Du omedelbart kan få tillgång till varan tack vare kreditkortet?
   - [ ] Ja
   - [ ] Nej (om NEJ, hoppa till Situation 2)

8. Om JA, tänker Du då på följande? Välj **Ja** eller **Nej** på följande alternativ

<table>
<thead>
<tr>
<th>Alternativ</th>
<th>Ja</th>
<th>Nej</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Eventuella räntekostnader och fakturaavgift</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Oro om finansiering i framtiden orsakas av användning av kreditkort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Användning av kreditkort är tabubelagt inom familj och bekanta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Eventuella systemfel hos banken kan orsaka problem, som t ex:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. kortet inte accepteras och/eller,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. summan på fakturan inte stämmer med köpets kvitto</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Om svaret är JA i något av ovanstående alternativ (A–D), tvekar du då för eventuellt inköp?
   - [ ] JA
   - [ ] Nej

**Situation 2**

Du **söker efter information** om produkten som Du har planer på att införskaffa.

10. Tänker Du då ibland medvetet på att använda kreditkortet?
    - [ ] Ja
    - [ ] Nej (om NEJ, hoppa till Situation 3)
11. Om JA, tänker Du då på följande? Välj Ja eller Nej på följande alternativ

<table>
<thead>
<tr>
<th>Alternativ</th>
<th>Ja</th>
<th>Nej</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Eventuella räntekostnader och fakturaavgift</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B. Oro om finansiering i framtiden orsakas av användning av kreditkort</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C. Användning av kreditkort är tabubelagt inom familj och bekanta</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D. Eventuella systemfel hos banken kan orsaka problem, som t ex:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. kortet inte accepteras och/eller,</td>
<td></td>
<td></td>
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<tr>
<td>d. summan på fakturan inte stämmer med köpets kvitto</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Om svaret är JA i något av ovanstående alternativ (A–D), tvekar du då för eventuellt inköp?


**Situation 3**

Du jämför mellan priser, kvalité och olika märken av den produkt Du tänker köpa.

13. Tänker Du ibland på att använda kreditkort för att köpa det?


14. Om JA, tänker Du då på följande? Välj Ja eller Nej på följande alternativ

<table>
<thead>
<tr>
<th>Alternativ</th>
<th>Ja</th>
<th>Nej</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Eventuella räntekostnader och fakturaavgift</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B. Oro om finansiering i framtiden orsakas av användning av kreditkort</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C. Användning av kreditkort är tabubelagt inom familj och bekanta</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D. Eventuella systemfel hos banken kan orsaka problem, som t ex:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. kortet inte accepteras och/eller,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. summan på fakturan inte stämmer med köpets kvitto</td>
<td></td>
<td></td>
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</tbody>
</table>

15. Om svaret är JA i något av ovanstående alternativ (A–D), tvekar du då för eventuellt inköp?


**Situation 4**
Du har **bestämt dig** att genomföra köpet med hjälp av kreditkortet.

16. Tänker Du då på följande? Välj **Ja** eller **Nej** på följande alternativ

<table>
<thead>
<tr>
<th>Alternativ</th>
<th>Ja</th>
<th>Nej</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Eventuella räntekostnader och fakturaavgift</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B. Oro om finansiering i framtiden orsakas av användning av kreditkort</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C. Användning av kreditkort är tabubelagt inom familj och bekanta</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D. Eventuella systemfel hos banken kan orsaka problem, som t ex:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. kortet inte accepteras och/eller,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. summan på fakturan inte stämmer med köpens kvitto</td>
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</tbody>
</table>

**Situation 5**

Du **har genomfört köpet** med hjälp av kreditkortet och **använder produkten**.

17. Brukar Du finna dig i följande situationer? Välj **Ja** eller **Nej** på följande alternativ

<table>
<thead>
<tr>
<th>Alternativ</th>
<th>Ja</th>
<th>Nej</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Problem med att betala tillbaka lånet.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B. Oroar dig om den finansiella situationen orsakas av kreditkortet</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C. Din familj/bekanta brukar argumentera emot dig angående om användning av kreditkortet</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D. Fel i bankernas system orsakar problem för dig.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Tack för din medverkan!**
Appendix III: Tables of the survey result

Table 1: Gender

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>54</td>
<td>74.0</td>
<td>74.0</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 2: Age

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-30</td>
<td>19</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>31-40</td>
<td>15</td>
<td>20.5</td>
<td>20.5</td>
<td>46.6</td>
</tr>
<tr>
<td>41-50</td>
<td>18</td>
<td>24.7</td>
<td>24.7</td>
<td>71.2</td>
</tr>
<tr>
<td>51-60</td>
<td>15</td>
<td>20.5</td>
<td>20.5</td>
<td>91.8</td>
</tr>
<tr>
<td>61 or older</td>
<td>6</td>
<td>8.2</td>
<td>8.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Income per year

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110 000 SEK or less</td>
<td>5</td>
<td>6.8</td>
<td>6.8</td>
<td>6.8</td>
</tr>
<tr>
<td>110 001 - 210 000 SEK</td>
<td>11</td>
<td>15.1</td>
<td>15.1</td>
<td>21.9</td>
</tr>
<tr>
<td>210 001 - 310 000 SEK</td>
<td>30</td>
<td>41.1</td>
<td>41.1</td>
<td>63.0</td>
</tr>
<tr>
<td>310 001 SEK or higher</td>
<td>27</td>
<td>37.0</td>
<td>37.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Table 4: Education

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nine-year compulsory school and/or highschool graduate</td>
<td>31</td>
<td>42.5</td>
<td>42.5</td>
<td>42.5</td>
</tr>
<tr>
<td>Vocational qualification or some college education</td>
<td>17</td>
<td>23.3</td>
<td>23.3</td>
<td>65.8</td>
</tr>
<tr>
<td>Academic degree such as Bachelor's or Master's degree</td>
<td>21</td>
<td>28.8</td>
<td>28.8</td>
<td>94.5</td>
</tr>
<tr>
<td>Doctorate or higher</td>
<td>4</td>
<td>5.5</td>
<td>5.5</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: How often did you use the credit card(s) in the last month?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>15</td>
<td>20.5</td>
<td>20.5</td>
</tr>
<tr>
<td>Once</td>
<td>7</td>
<td>9.6</td>
<td>9.6</td>
</tr>
<tr>
<td>A couple of times</td>
<td>26</td>
<td>35.6</td>
<td>35.6</td>
</tr>
<tr>
<td>Often (6 times or more)</td>
<td>25</td>
<td>34.2</td>
<td>34.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>