Master Thesis in Informatics

Analysis on the Usage Intention of Mobile Payment

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Abstract
In 21st century, the constant development in economy promotes the expanding advancement of science and technology. In the global range, mobile payment has witnessed continuous expanding and application in a wider range of situations, which is considered to be one of the most potential industries in the world. However, as has been noticed by researchers, the popularity of mobile payment is limited to people of certain age groups, different areas, countries and other factors. And compared to former research, this thesis is based on the background of that all the technology including mobile technology, intelligent phones, network and many other aspects in our lives have developed much these years, the collected data and results in this thesis can reflect the newest feeling and opinion about mobile payment. Therefore, in order to find out factors which influence the usage intention of using mobile payment in this modern society, qualitative method was used in this research. By observing and interviewing the participants from different age, countries and gender, the research finds out the perceived ease of use, the perceived usefulness, perceived risks, situations, reliance are the main factors which influence the people’s usage intention of mobile payment. Moreover, based on the analysis of factors of usage intention, useful suggestions has been given to help mobile payment providers widespread application of mobile payment and offer more convenient payment environment to users.

Keyword: Mobile Payment; Alipay; Usage Intention; Suggestion
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Chapter 1 Introduction

This chapter provides introductory outline of this research on factors that would pose an influence on the usage intention of mobile payment. It constitutes the presentation of the research background, motivation of the propose study, research purpose and research questions. It also introduces the research scope and limitations of this paper. In the last section, it presents the thesis structure.

1.1 Background and problem area

The constant development in economy promotes the expanding advancement of science and technology. With the increasing improvement and application in the communication technologies, mobile terminal devices such as intelligent mobile phones, pad and intelligent watch have been increasingly popular among more and more people, all of which are characteristic of the intelligent and common tendency. In the global range, mobile payment has witnessed continuous expanding and application in a wider range of situations, which is considered to be one of the most potential industries in the world. The popularity and spread of mobile payment is the inevitable outcome of the thriving growth of mobile communication network and the widespread application of intelligent terminal devices. On the one hand, the development of the mobile communication network lays a solid basis for the development of mobile payment as the technological support. With the growth of the mobile Internet era, users of the Internet tend to change from the PC terminal devices to mobile terminal devices including the intelligent mobile phones and pad. Users can achieve their consumption demands in a variety of consumption situations on the basis of the mobile terminal devices, which contributes to the indispensable role of mobile payment in the mobile Internet era (Badra and Badra, 2016). On the other hand, the popularity and spread of devices and supportive technologies such as the intelligent mobile phones and 3G/4G network provide strong and effective promotion forces for the spread of the mobile payment. Comparing with the network and hardware devices in the past decade, users can gain access to more advanced and intelligent devices to complete the mobile payment process.

As a result, business models in relation to the mobile payment have also emerged, and it can be concluded that the mobile payment has brought consumers with totally different life application situations and account function service experience, which further contributes to the promotion and application of mobile payment among users. Meanwhile, the convenience, integration and effectiveness of the mobile payment also expand the application situations and trade market of the mobile payment. By the end of 2016, the annual repost published by Trend Force indicated that the market scale of the global mobile payment was estimated to be as many as 620 billion dollars, and the year of 2017 would witness an increase of 38% in the mobile payment market (Badra and Badra, 2016).

With the continuously improvement in the convenience, safety, technology and integration degree of the mobile payment, the amount of mobile payment users has dramatically expanded. The diversified, convenient and intelligent development of
mobile payment forms and methods such as the code payment, mobile phone payment and wearable mobile payment have greatly aroused the application and consumption enthusiasm of customers.

Application situations of the mobile payment include the online payment and offline payment, both of which have witnessed great growth and improvement in recent years with the increasingly popularity of mobile payment. In terms of the online payment, it is stimulated by the popularity of electronic commerce business and online platforms. People have been accustomed to the convenience and efficiency brought by the online shopping platforms and websites, which provide them with access to a wide range of products from different countries at lower prices (Dwivedi, 2015). Accompanied with the widespread application of the mobile payment, security issues emerge as well to arouse more questions on the reliability and security of online payment. As for the offline mobile payment, mobile payment providers have established the cooperation relationship with physical stores such as shopping malls, supermarkets and restaurants to promote and cultivate the mobile payment habits of consumers in the offline situations (Kazan and Damsgaard, 2013). Comparing with the online payment, the mobile payment business is considered to explore the larger market potential. In terms of the internal competitiveness of the offline payment market, the survival and development of the online payment relies much on the cooperative electronic business platforms, which would lead to greater entrant barriers to mobile payment providers. As for the offline payment, the payment and usage situations will be greatly expanded, thus resulting in a larger amount of user group. For mobile payment enterprises, they can integrate and cultivate the complete payment ecological cycle system with the development and exploration of the offline mobile payment, thus laying a basis for the connection with more business models and consolidating the competitiveness of enterprises.

This research aims at dealing with the emerging and prevailing consumption habit of people nowadays, namely the widespread application and usage of mobile payment. In the background of the rapid development of Internet and mobile technologies, people have benefited from the intelligent and widespread payment method in an increasing number of occasions (Dwivedi, 2015). The mobile payment has been considered to change the way of living and working for that people can be free from cash to complete the daily consumption activities by relying on their intelligent mobile devices. The mobile payment has made use of the advantages of mobile communication technology to bring convenience to the consumption and payment activities of more and more people (Badra and Badra, 2016). However, as has been noticed by researchers, the popularity of mobile payment is limited to people of certain age groups, and it is easier for the young people to accept the new way of payment compared with the elderly. Other differences have been noticed among people from different areas and countries in the willingness of using the mobile payment (Gannamaneni et al., 2015; Miao and Jayakar, 2016). For instance, researchers also noticed the different application situations and usage intention willingness on the mobile payment in countries like China and other countries, so they conducted an analysis on the Alipay to explore the ecosystem of the successful mobile
payment platform (Guo and Bouwman, 2016). As for the exploration on the attractiveness and application mechanism of the mobile payment, researchers conducted analysis on the trust transfer process of consumers on the Internet and the mobile payment (Lu et al., 2011). However, it fails to examine from the overall business chain perspective to identify factors that will affect the usage intention of the mobile payment. In addition, security problems concerning with the mobile payment include the attack of virus on the Internet, leakage of users’ information as well as the lack of sufficient security awareness among users (Kazan and Damsgaard, 2013). However, it only takes the defect factors into consideration while ignoring the overall operation and management of the mobile payment platform and chain. Meanwhile, in the past, the function of mobile payment was limited by the technology. While the technology has developed a lot these years, the function of mobile payment and the influence it makes on the people is definitely different from the time when those researchers did the research. In this research, it endeavors to find out factors that may pose an influence on the usage intention of consumers in the usage of the mobile payment, including ages, countries, overall business chain and security problems. Moreover, it endeavors to start from the security management and convenience perspectives to analyze the usage intention of the mobile payment.

This research is inspired by the convenience and dramatic changes brought by the mobile payment method, which is popular and common among the younger generation. However, disagreement may appear among different people on the security issue of the mobile payment (Kazan and Damsgaard, 2014). As a result, this research will conduct a systematic analysis on factors that will affect the usage intention of the mobile payment. Moreover, it will also explore the security issues behind the mobile payment to figure out the potential risks and corresponding strategies of dealing with the security risks of the mobile payment.

Based on a better understanding of factors that will affect the usage intention of mobile payment, this research is designed for mobile payment companies and providers to explore the wider market and attract more potential consumers. Especially, in addition to the widespread application of mobile payment in China, people from other developed countries such as the United States, the United Kingdom and Japan may be unable to enjoy the convenience and effectiveness brought by the mobile payment. Therefore, this research is specially designed for mobile payment providers in these countries to work out targeting and effective promotion and implementation plans for the mobile payment.

1.2 Topic justification

Both from the national strategy perspective and the integration of the mobile payment industry perspective, the role of mobile payment should never be ignored by service providers and organizations. Currently, mobile payment is witnessing rapid and dramatic growth and development. In the future, the integration and combination of technology and finance will be inevitable in various walks of life, which would be accompanied by numerous potential risks in a variety of aspects, such as the privacy information protection, financial asset security risk, fraud risk and so on. Therefore,
spite of the convenience and effectiveness brought by the mobile payment, potential risks and threats should also be taken into consideration by the mobile payment providers, which are considered to pose an influence on the usage intention of consumers (Chen, 2008). In this research, it aims at figuring out factors that would affect the usage intention of consumers on the mobile payment to provide suggestions for the implementation and promotion of mobile payment especially in areas and countries that have not be widely occupied by the mobile payment. As for motivations that have contributed to the proposal of this research, they can be analyzed from both the theoretical perspective and the practical perspective. From the theoretical perspective, although a large number of studies and research focus on the emergency, popularity, application as well as implementation of the mobile payment, few of them endeavors to figure out the effectiveness and convenience of the mobile payment from the combining perspective of consumers in the usage intention and the perspective of mobile payment providers insecurity issues. Previous research has conducted analysis on the mobile payment from perspectives of consumers, businessperson and the market. From the perspective of consumers on the mobile payment, the Technology Acceptance Model and Innovation Diffusion Model have been widely applied to analyze the mobile payment. The Technology Acceptance Model was firstly put forward by Davis (1986), which constitutes of five elements including the perceived usefulness, perceived ease of use, usage attitude, usage intention as well as the practical usage. The Technology Acceptance Model has been widely applied in the adoption and usage research of information system or information technology. As for the Innovative Diffusion Model, it was proposed by Rogers (2003), and the model classified consumers into five types according to their acceptance degree towards innovations, including the innovators, early adopters, early majority, late majority as well as laggards. Based on the Technology Acceptance Model and the Innovation Diffusion Model, scholars have discussed factors that would affect the usage intention of consumes, including cost, convenience, ease of use, usefulness, risks, reliance, speed of trade, individual feature, externality of the network, system stability, social impacts and so on. As for the perspective of businessperson, the enthusiasm and initiatives of their participation will directly affect the promotion and application of mobile payment, so the adoption behaviors of businessperson on the mobile payment are also of great significance. It has been found out factors such as the perceive ease of use, positive usage intention of consumers will positively affect the adoption of mobile payment among businessperson. As for factors such as the competitive pressure in the industry, perceived profits, innovation of the organization, information technology resources and so on would negatively affect the usage and promotion intention of businessperson on the mobile payment. In terms of the perspective of the market, the positive and good market environment would provide important guarantee for the rapid development and growth of the mobile payment (Dahlberg et al., 2015). It is necessary to comprehensively take the mutual influences between the market and participants into consideration to properly evaluate the role of market environment in the usage intention of mobile payment.
The sustainable, healthy and stable development of mobile payment is of great significance for the development of electronic business and financial payment. This thesis will conduct an analysis on theories such as the features and characteristics of mobile payment, usage intention theory of consumers and perceived risk theory to explore factors that would affect the usage intention of consumers on the mobile payment (Dwivedi, 2015). Different from the current research that fail to comprehensively analyze the scattered factors in affecting the usage intention of consumers on the mobile payment, this thesis will start from the perspective of the consumer usage intention as well as the security risks of the mobile payment system. In terms of the practical perspective, with the promotion of mobile Internet and mobile terminals, it is foreseeable to predict that the mobile payment would be applied and penetrated into the daily life of people. As for the increasingly fierce competition in the mobile payment industry and rapid development in the mobile payment technology, both the online mobile payment situations and the offline mobile payment situations have emerged and diversified (Gannamaneni et al., 2015). However, the promotion of mobile payment among consumers of certain age groups has witnessed troubles. Moreover, the application of mobile payment in occasions especially the offline payment situations is limited in countries such as the United States and European countries. In this thesis, it focuses on the mobile payment as the research objective. By summarizing and concluding the current theoretical research, it proposes factors that would affect the usage intention of consumers on the mobile payment (Hedman and Hennigsson, 2015). With the help of data and conclusion from practical investigation, observation and interview, it further examines and proves the influences of these factors on the usage intention of mobile payment, thus providing suggestions for mobile payment providers in improving the mobile payment products and platforms (Huang et al., 2017). Therefore, this research is of the following practical significance.

First of all, it clearly presents factors that would affect the usage intention of consumers on the mobile payment from the perspective of consumers’ usage intention and the perspective of mobile payment providers in terms of the security issues. Only by looking into the current situations and problems in the mobile payment process could it possible to make corresponding and targeting improvements in the mobile payment.

Secondly, by analyzing factors that would affect the usage intention of consumers on the mobile payment, mobile payment providers can realize the strengths and weaknesses of the mobile payment platforms and services, thus improving the usage intention of consumers on the mobile payment and exploring the larger market share in the mobile payment.

The last practical significance of the research on the usage intention of consumers on the mobile payment is the improvement in the usage experience of consumers. Benefited from the improvements in the mobile payment platforms and services, consumers would be able to enjoy the more convenient and reliable mobile payment products and services in the future.
1.3 Research purpose and research questions

In this research, it intends to analyze the mechanism, functions and features of mobile payment from the practical perspective based on the interview and observation on users of mobile payment, and it finally aims at figuring out crucial factors that will affect the usage intention of consumers, thus providing suggestions for mobile payment providers on the improvement of the mobile payment products and services in more application occasions.

In the context with the increasingly widespread application of mobile payment, more and more users are getting used to the new form of payment with the help of intelligent mobile payment devices and platforms (Karnouskos, 2004). However, the mobile payment has witnessed barriers in entering the market in countries like the United States and other European countries. Therefore, this research aims at investigating factors that would affect the usage intention of consumers on the mobile payment by interviewing, observing and conducting survey on mobile payment users. As a result, guided by the research purpose, there are mainly three research questions that would be explored in this research.

1. How do users make use of the mobile payment in their daily life and what are the application situations of the mobile payment in the practice?
2. How do users react to the mobile payment and what are the influences of factors on the usage intention of consumers in conducting the mobile payment?
3. What are the suggestions for the mobile payment providers and developers in constructing and improving the mobile payment system and platform?

1.4 Research scope and limitations

This research is conducted with the involvement of participants who are supposed to gain a basic understanding of the mobile payment. It is assumed that all the participants of the research have heard or made use of the mobile payment, which will guarantee the reliability and referring meaning of participants’ response and feedback. In addition, the research is delimited to the perspective of consumers, based on which to draw conclusions and suggestions for the improvement of mobile payment, thus arousing the usage intention of mobile payment and dealing with the security problems associated with the mobile payment.

This research would be conducted in English to establish effective communication between people from different countries. The qualitative research method will be employed to explore and verify factors that will affect the usage intention of mobile payment among consumers. Aiming at exploring and analyzing factors affecting the experience and decision of consumers in using mobile payment, this research will rely more on the interpretivism rather than the positivism to draw out the summary and conclusion that is based on the perceptions and experience of consumers in the usage intention of mobile payment.

However, since that the research results and conclusions are based on the interview, observation and survey on participants, the subjective preference and factors of all the participants, the observers and interviewers may pose an influence on the research
results (Kauffman et al., 2015). In other words, bias in the research may be inevitable. Moreover, owing to the limitation of time and energy, the research samples may be limited to certain groups such as international students, and their sharing opinions and attitudes may prevent the overall and objective research results.

1.5 Thesis organization

In this thesis, it consists of six chapters. In the first introduction chapter, it will outline the thesis structure, research background, motivation of the propose study, research purpose and research questions. In the second chapter, it will conduct literature review on concepts and theoretical models that are in relation to the research topics such as the mobile payment, usage intention, consumer psychology, Technology Acceptance Model and so on. In the third chapter, it will introduce the research methodology and methods that would be applied in the thesis. It will make use of the qualitative research method to explore and verify factors that will affect the usage intention of mobile payment among consumers. Aiming at exploring and analyzing factors affecting the experience and decision of consumers in using mobile payment, this research will rely more on the interpretivism rather than the positivism to draw out the summary and conclusion that is based on the perceptions and experience of consumers in the usage intention of mobile payment. In the next chapter, it will present empirical findings and analysis based on the interview and observation results on consumers of the mobile payment. In the fifth chapter, it will conduct further analysis on the research questions and research results based on the empirical findings and theoretical research. In the last chapter, it will present conclusions of the whole thesis as well as answers to the research questions, which will figure out factors that would affect the usage intention of consumers on the mobile payment.
Chapter 2 Literature review

This chapter will conduct literature review on concepts and theoretical models that are in relation to the research topics such as the mobile payment, usage intention, consumer psychology, Technology Acceptance Model and so on. It aims at laying the theoretical basis for the empirical study of this research.

2.1 Mobile payment

2.1.1 Concept of mobile payment

As an important part of the electronic business, mobile payment has played a significant role in people’s daily life with the development of electronic business. Nambar was considered to conduct the initial analysis on mobile payment (Chen, 2008). He thinks that the mobile payment refers to the electronic trade process during which mobile devices and network will be employed to exchange the information, products or goods. Ghezzi and Renga add more explanations on the definition of mobile payment. In their research, mobile payment refers to the application of mobile devices in various wireless environments such as RFID and NFC to conduct the financial trade, and these mobile devices can vary including intelligent mobile phones, PAD or other devices that can wirelessly connect with other network (Hedman and Henningsson, 2015; Slade et al., 2015; Balocco et al., 2008). In summary, the mobile payment can be depicted as the utilization of intelligent mobile devices to conduct business trade on information, products and services with the help of mobile network. With the improvement in the mobile payment methods and technologies, functions and services of the mobile payment are diversifying and more friendly to users with the convenient operation and widespread recognition. As a prevailing trend, the mobile payment has greatly affected the payment habit and consumption habit of consumers (Kazan and Damsgaard, 2014). The popularity and spread of mobile payment have aroused the research interest of numerous scholars from relevant industries and organizations. Based on the environment and professional industry of scholars, they have defined the concept of mobile payment from a variety of aspects and perspectives (Kazan and Damsgaard, 2013). However, until now, there is no unified and widely accepted definition on mobile payment. In the research conducted by Krueger on the mobile payment, he defines the mobile payment from the perspective of the final purpose of trade, forms and methods of the trade (Ghezzi et al., 2013). According to him, mobile payment is a kind of payment between both sides for the exchange of virtual or physical commodities, and they would make use of the mobile payment devices to complete the trade of commodity. With the help of the promised credibility degree or amount of money, the mobile payment will be utilized to transfer the digital information to the side of paying credibility degree or money to complete the payment. Similar to Krueger, Niina Mallat also thinks that the mobile payment will make use of mobile devices to transfer the currency or capital from the payer to the receiver of money, thus completing the process of payment trade (Mallat, 2007).
According to the research of Heijden, in the process of mobile payment, consumers make use of the mobile devices such as the intelligent mobile phone or portable pad to pay data to businessperson with equal value with personal credibility or currency, so that they can complete the payment trade (Heijden, 2004). The mobile payment is considered to be the new and convenient payment method between businessperson and individuals, individuals and individuals to conduct the trade, and the trade is based on the mobile Internet. It has also been emphasized that the mobile payment is completed in the mobile communication network, during which the capital will transfer from individuals to businessperson.

Broadly speaking, the mobile payment process will make use of and operate the mobile terminal devices to exchange products or services. As for the narrow perspective of defining the mobile payment, consumers will make use of the wireless communication technology and the mobile terminal devices to complete the transferring of capital and payment (Liu et al., 2015). According to the Mobile Payment Forum, mobile payment takes advantage of the mobile terminal devices to transfer the capital value through wireless methods such as short message, http, wap or NFC to pay back the debt of products or services (Chen, 2008).

In summary, with the development of the mobile payment, it can be concluded that the mobile payment in this research refers to the utilization of mobile telephone bank, credit card, the third party payment platform such as Apple Pay, and wearable devices such as the Apple Watch to complete the process of money transfer and payment through mobile phone network or the wireless network (Lu et al., 2011). It also integrates the application situations and data services that are in relation to consumers.

2.1.2 Features of mobile payment

Based on the relevant literature on mobile payment, comparing with traditional ways of payment, the mobile payment integrates the mobile devices and the electronic payment functions. The mobile payment is characteristic of the following feature.

First of all is the convenience of payment. With the constant development of mobile payment technologies and the combination of online mobile payment and the offline mobile payment, consumers are able to go shopping online with the help of mobile payment (Miao and Jayakar, 2016). In daily life, consumers can make use of the two-dimensional code or the payment code to complete the payment instead of the exchange of the change. With the help of the mobile devices and mobile network, they can conduct the trade at anytime and anywhere. Moreover, they can gain a better understanding on their account information to conduct better plan and management (Oliveira et al, 2016; Layeghian Javan and Ghaemi Bafghi, 2014). Therefore, the mobile payment can greatly reduce the time cost and energy cost of consumers in the trade, which indicates the convenience and efficiency of mobile payment in the practice.

Secondly is the security of the payment. As an important part of the electronic business, the mobile payment stays in a direct and close relationship with the capital security of users and operators. Therefore, the security issue has always been the core focus of the mobile payment (Li and Wang, 2010). In reality, consumers who make use of the mobile devices tend to be stricter with the security issues compared with
consumers who make use of personal computer (Zhou, 2013). In fact, as has been emphasized by most consumers, the reliance and security of mobile payment have been attached with the prior attention and significance in comparison with the convenience and effectiveness brought by the mobile payment (Ozcan and Santos, 2015; Kim et al., 2010). Therefore, it is required that the mobile Internet terminal applications and platforms should attach the most importance to the security of consumers’ information and capital in addition to the sharing of data and completion of business trade.

In addition, the mobile payment is also characteristic of its integration of other functions such as the investment and financial management, shopping and payment, financial management, entertainment, convenient services and so on, which can greatly enrich and diversify the daily life application and satisfy the basic demands of consumers (Turk and Cosar, 2016; Mallat, 2007). According to the consumption habits of consumers, mobile payment can create the detailed records of consumers’ consumption, which can provide referring information for the selection of consumers in terms of the commodities or services.

Table 2.1 Summary of existing research on mobile payment

<table>
<thead>
<tr>
<th>Author</th>
<th>Concepts/theories</th>
<th>Key findings</th>
<th>Contributions</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heijden, 2004</td>
<td>Mobile payment</td>
<td>Usage of mobile devices, completion of the trade</td>
<td>Identification of the role of devices in mobile payment</td>
<td>Lack of practical examples</td>
</tr>
<tr>
<td>Kazan and Damsgaard, 2014</td>
<td>Influences of mobile payment</td>
<td>The mobile payment has greatly affected the payment habit and consumption habit of consumers</td>
<td>Analysis on the influences of mobile payment</td>
<td>Lack of comparison study on the influence of mobile payment</td>
</tr>
<tr>
<td>Ozcan and Santos; Li and Wang, 2015</td>
<td>security of the mobile payment</td>
<td>Mobile payment stays in a direct and close relationship with the capital security of users and operators</td>
<td>Emphasis on consumers’ information and capital security</td>
<td>Lack of practical examples</td>
</tr>
<tr>
<td>Kim, Mirusmonov and Lee, 2010</td>
<td>Influencing factors of usage intention of mobile payment</td>
<td>Individual differences, convenience, and reachability are critical determinants of the perceived ease of use of m-payment.</td>
<td>M-payment service providers can enhance the system characteristics without additional costs by taking</td>
<td>Did not incorporate actual usage behavior into the proposed model</td>
</tr>
<tr>
<td>Mallat, 2007</td>
<td>Reasons of consumers ‘adopting mobile payment</td>
<td>Relative advantage of mobile payments was determined by mobile technology, the perceived independence of time and place, ability to avoid queue and the ability to complement traditional services.</td>
<td>Providing important guidelines for guidelines for organizations that adopting mobile payments and for the practitioners that develop mobile payments</td>
<td>Empirical data was collected in one country. The collected data was old.</td>
</tr>
<tr>
<td>Schierz, Schilke, and Wirtz, 2010</td>
<td>Reasons of consumers ‘adopting mobile payment service</td>
<td>Perceived compatibility has the greatest impact on the intention to use mobile payment services</td>
<td>Identifying, conceptualizing, and operationalizing relevant acceptance drivers of mobile payment systems</td>
<td>All the interviewees were students and they were coming from the same university, the results are less persuasive.</td>
</tr>
</tbody>
</table>

### 2.2 Usage intention

#### 2.2.1 Concept of usage intention

The usage intention refers to the psychological activities of consumers in using or purchasing the products and services provided by businessperson, which is similar to the purchase decision (Dahlberg et al., 2015; Reuver et al., 2015). According to scholars, the usage intention can be classified into positive usage intention and negative usage intention (Taylor, 2016; Schierz et al., 2010). Consumers with positive usage intention will develop a positive image towards products or services of certain companies, which will finally develop into a strong sense of consumption and usage (Karnouskos, 2004; Yang et al., 2015). In contrast, the negative usage intention will remove the interest and positive impression of consumers on certain products or services, thus preventing the consumption behavior of consumers (Ozcan and Santos, 2015).

As for the theoretical model that focuses on the usage intention of users, it has witnessed several development stages ranging from the initial theory of rational behavior, theory of planned behavior to the Technology Acceptance Model.
According to the theory of rational behavior, it classifies factors affecting the usage intention of consumers into two aspects, including the subjective regulations and behavioral attitudes (Kauffman et al., 2015). As for the theory of planned behavior, it proposes that the usage intention of consumers will not only be affected by the behavioral attitude and subjective regulations but also by non-subjective factors like perceived behavioral control factors (Oliveira et al., 2016). Based on the theory of rational behavior and perceived behavior, the Technological Acceptance Model integrates the external environment, perceived usefulness and perceived ease of use into the influencing factor model on the usage intention of consumers (Liu et al., 2015; Shin, 2009).

With the help of these theoretical models, it is possible to systematically analyze and figure out factors that will affect the usage intention of consumers, thus providing suggestions for the optimization and application of mobile payment.

2.2.2 Research on usage intention

The usage intention can be inferred from the psychological activities of consumers in the shopping process, and they will weigh the advantages against the disadvantages in purchasing commodities or services, which will directly pose an influence on the consumption decision of consumers. According to previous studies on the consumption intention and consumption behavior of consumers, in most cases, the usage and consumption intention of consumers is more likely to transform into the consumption behavior (Reuver et al., 2015). Therefore, the effective marketing stimulation and attraction of consumers will contribute to the transformation of the usage intention to the final consumption decisions.

Among theories that focus on the consumption and usage intention of consumers, most theories will analyze the formation mechanism of usage intention and prediction mechanism on the consumption behaviors. The research on the usage intention of consumers focus on the following aspects.

First of all is the research on the usage intention of consumers based on their attitudes. As has been proposed, the recognition of consumers’ consumption attitudes will contribute to the production of positive usage or consumption intention (Sang and Blecha, 2011). In other words, whether the attitude of consumers is positive or negative, it will inevitably pose influences on the consumption or usage intention of consumers.

Next is the research on the usage intention or consumption intention based on the perceived value. According to the research on the usage intention or consumption intention based on the perceived value, the perceived value of consumers on commodities or services will positively affect the usage intention or consumption intention of consumers (Slade et al., 2015; Kim et al., 2010). In other words, the higher the perceive value is, the stronger the consumption intention or usage intention of consumers will be.

In addition, research on the usage intention or consumption intention may also be analyzed from the Theory of Planned Behavior. The Theory of Planned Behavior was firstly proposed by Ajzen, and he was also the first one to make use of the theory of planned behavior of consumers to predict the consumption behavior of consumers,
which received widespread recognition and support from scholars (Taylor, 2016; Vallerand et al., 1992). It has been proved that the Theory of Planned Behavior of consumers will effectively predict the usage intention and consumption behavior of consumers.

With the constant development of Internet technology, the electronic business has also witnessed dramatic growth. Moreover, there are also great changes and revolutions in the consumption methods of consumers. In the market environment, the Internet environment has been taken as an important background and influencing factor on the usage intention of consumers (Liu et al., 2011). According to the empirical studies of Jarvenpaa and Todd, in the background of the online shopping, a series of factors such as the perception of online products or services, the service level and the shopping process experience will affect the usage intention of consumers (Jarvenpaa and Todd, 1997). In further analysis conducted by Chevalier and Mayzlin, in the process of shopping online, consumers will take the online comments of other consumers as important information sources for the products and services (Chevalier and Mayzlin, 2006). In other words, the evaluation information will pose an influence on the usage intention of consumers.

Currently, research and further analysis on the usage intention of consumers have been conducted from different thinking perspectives, which can be mainly classified into research on factors that would affect the usage intention and the prediction on the usage intention of consumers (Yang et al., 2015). A variety of internal and external factors have been considered to stimulate or change the usage intention of consumers, and the external factors include social classes, family environment, social culture, consumption environment and consumption method. As for the internal factors, they include the individual features of consumers, values and principles, subjective perception, attitudes and habits. These two types of influencing factors will mutually affect the final consumption decision of consumers.

2.2.3 Research on influencing factors of usage intention of consumers

According to different research objects and focuses, there are mainly three types of influencing factors of usage intention of consumers. The first type is the constructive factors in common theoretical models, which have been widely considered and applied in the information technology adoption and acceptance research, including the attitude, credibility, perceived usefulness (expectations on performance), perceived ease of use, subjective regulations, perceived behavior control, social influences and so on. The second type is based on the current models such as the privacy risk, value benefits, usage cost, personal innovation and security. As for the third type, it takes the features of research objects into consideration such as the payment situations of mobile payment, payment convenience and application platforms of mobile payment. Moreover, consumers’ behavior would mainly be affected by the research objects, so this research will classify the influencing factors of consumers’ usage intention of mobile payment into three types, including the basic influencing factor, consumer factor and the mobile payment provider factor.

In terms of the basic influencing factor, it refers to variables in the consumer behavior research model (Ting et al., 2016). Users’ perceived usefulness, perceived ease of use,
social impacts, expectations on performance and convenience factors and other factors will pose an influence on the usage intention of consumers on the mobile payment.

As for the consumers who act as the major determining factors of the life span of products, their influences should also be take into consideration. For instance, personal features of consumers will greatly affect the behavior intention of consumers, such as the gender, age, occupation, monthly income, education degree, cultural background and so on. According to the research of Mauricion and Paul (2003), by adding cultural variable elements into the research of the usage intention of consumers on mobile payment, they find out that the cultural background will pose great influences on the usage intention of consumers on the mobile payment. As for the psychological factors, they will also affect the usage intention of consumers on mobile payment (Liébanacabanillas et al., 2017). A variety of research has verified that the innovation of consumers will positively affect the usage intention of consumers on new products such as the mobile payment (Gu and Jongho, 2016). The perceived risk factor has been attached with more attention by scholars especially in the background of the electronic business era. It is assumed that the perceived risk will greatly affect the usage intention of consumers (Liu and Yi, 2017). There is a negative correlation between the perceived risk of mobile payment and the frequency of mobile payment, so does the correlation between the personal information and privacy security.

Influences posed by the mobile payment providers on the usage intention of consumers on the mobile payment should also be attached with attention. In exploring influencing factors on the usage intention of mobile payment, the service quality, brand credibility, platform security and system quality will obviously affect the usage intention of mobile payment, and the satisfaction degree of consumers will determine their reliance on the mobile payment.

Table 2.2 Summary of existing research on usage intention

<table>
<thead>
<tr>
<th>Author</th>
<th>Concepts/theories</th>
<th>Key findings</th>
<th>Contributions</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karnouskos, 2004; Yang et al., 2015</td>
<td>Usage intention</td>
<td>Concept of usage intention</td>
<td>Classification of positive usage intention and negative usage intention</td>
<td>Lack of practical examples</td>
</tr>
<tr>
<td>Kauffman et al., 2015; Oliveira et al., 2016</td>
<td>Theoretical model that focuses on the usage intention</td>
<td>The initial theory of rational behavior, theory of planned behavior to the technology acceptance model</td>
<td>Presentation of the theoretical models of the usage intention</td>
<td>First-mover advantage is not included in the model</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Focus of Study</td>
<td>Findings</td>
<td>Limitations</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Sang and Blech, 2011</td>
<td>Usage intention of consumers based on their attitudes.</td>
<td>Whether the attitude of consumers is positive or negative, it will inevitably pose influences on the consumption or usage intention of consumers.</td>
<td>Influences of attitudes on usage intention; a variety of internal and external factors have been considered to stimulate or change the usage intention of consumers. Only put the factor of ease if use and usefulness in the model.</td>
<td></td>
</tr>
<tr>
<td>Mauricio and Paul, 2003</td>
<td>Influencing factors of usage intention of consumers</td>
<td>Cultural background will pose great influences on the usage intention of consumers on the mobile payment.</td>
<td>Analyze the usage intention of consumers from the cultural perspective. Ignorance on other elements.</td>
<td></td>
</tr>
<tr>
<td>Shin, 2009</td>
<td>Reasons of consumers ‘adopting mobile payment service</td>
<td>System quality, information quality and service quality affect continuance intention through trust, flow and satisfaction.</td>
<td>Successfully extended TAM in the mobile payment context; incorporated the system characteristics and individual differences which pertain to m-payment. Did not incorporate actual usage behavior into the proposed model.</td>
<td></td>
</tr>
<tr>
<td>Zhou, 2013</td>
<td>Reasons of consumers ‘adopting mobile wallet</td>
<td>Perceived security and trust are the two main predictors of intention.</td>
<td>Highlights the moderating roles of demographics, self-efficacy, and social influence in the context of a new virtual environment. Fail to utilize users experience to analyze mobile user behavior.</td>
<td></td>
</tr>
</tbody>
</table>


2.3 Consumer psychology

2.3.1 Personal cognition

According to the modern psychology, by accepting the information conveyed by surrounding environment, people will develop a series of psychological activities such as sensory perception, thinking, learning and remembering, and this process is known as the cognition process (Schmitt, 2012). From the perspective of the cognition psychology to explore the usage or consumption behavior of consumers, it aims at exploring the influencing factors during the accepting and purchasing process of consumers, thus gaining a better understanding on the actual motivation and decision process of consumers’ usage intention or consumption decision.

Comparing with the traditional cognition theory, the modern cognition psychology attaches more attention to the exploration of the advanced cognition process of people, including the learning, thinking and comprehending process, behavior decision and so on. Studies find out that the cognition process of people indicates the linear development tendency (Haugtvedt et al., 2008). From the initial stage of cognition, attention to remembering, thinking and problem solution, it is the process of constant penetrating and deepening. In addition, the cognition storage of people’s knowledge would be presented in the form of network, and the new external stimulations will contribute to the transformation of the original model.

The adoption or acceptance of consumers on the mobile payment is a complicated process, which can be affected by a variety of cognition behavioral factors. According to the research on the usage intention and consumption decision, the accumulated experience of consumers and information stimulation from the external world will integrate into the decision making process of consumers, thus forming the knowledge information structure on the product or brand (Loken, 2006). When consumers make connections and comparison between the existed information and potential decisions of the products or services, they will make the final decision of accepting, purchasing or abandoning. As for the usage intention of consumers on the mobile payment, it is based on the cognition and understanding of the mobile payment, which is similar to the purchase decision behavior of consumers.

2.3.2 Degree of involvement

The degree of involvement refers to the psychological activities of consumers in evaluating products, and there is no widely accepted definition on the concept of involvement. According to Day, involvement refers to the degree of interest on something, or the degree of attractiveness of something towards individual perception value (Kardes, 1996). Antil defines involvement as the degree of individual interest and the degree of perceived importance in particular situations (Poiesz, 1989). Based on the personal demands, values and interest, the perceived degree of importance can be summarized as the involvement, which may differ to a large extent on different involvement objects. It has also been proposed that the involvement is the perception of individual interest and individual relation. Higher degree of involvement indicates the higher degree of individual relevance as well as stronger involvement degree and attention perception.
The degree of involvement reflects the degree of participation and the relevance of perception of consumers. It can be referred as the behavioral intention that may affect the usage or adoption decision of consumers. Among research on the influences of involvement on the usage intention of consumers, they mainly focus on the evaluation of perceived risks and perceived value. According to previous research, there is a correlation between the degree of consumers’ involvement and their behavioral intention (Haugtvedt et al., 2005). For instance, when consumers are actively collecting and accumulating information relevant to products or services, their perception and understanding of the product will be improved and strengthened, during which consumers will be brought with the experience of pleasure and excitement. As a result, the perceived value of consumers will be improved while the usage intention and consumption intention of consumers will also be adjusted.

2.3.3 Creativity
According to Rogers (2003), consumer creativity refers to the behavior of consumers in firstly purchasing or utilizing creative products, which can be analyzed from the diffusion and spread of products (Janssen and Jager, 2003). In the analysis on consumers’ adoption and usage of creative products, the creativity of consumers refers to the degree of independently making creative decision without sharing or communicating with other individuals, which is a kind of inherent personality feature. Comparing with the opinion of the inherent personality feature, the creativity of consumers may differ in different fields of products. In other words, the creativity of consumers could only be effective in selected fields (Fiedler, 2007). With the proposal of the consumer creativity concept, more and more research has been conducted on the dimensions of consumers’ creativity, measurement model on the creativity of consumers, the relationship between the creativity of consumers and their usage intention and willingness. In terms of the research on the relationship between the creativity of consumers and their usage intention, it is found out that the creativity of consumers will pose a positive influence on the adoption or usage intention of production.

2.4 Technology Acceptance Model

2.4.1 Theory of Reasoned Action
The Theory of Reasoned Action was put forward by Fishbein and Ajzen in 1975, which lays emphasis on the behavioral intention of individuals.

![Figure 2.1 Basic theory framework of the Reasoned Action Model, Yousafzai et al., 2010.](image)

According to the Theory of the Reasoned Action, actual behaviors of individuals are determined by their behavioral intentions, which indicate the tendency of individuals in paying sacrifices for certain behaviors. Behavioral intention is indispensable for the
actual behaviors, and other factors will affect the behavioral intention, thus affecting the actual behaviors (Yousafzai et al., 2010). The Theory of Reasoned Action is based on the premise that human beings are reasonable. In other words, before making the actual actions, people will collect as many information as possible to weigh the advantages against the disadvantages (Miller et al., 1992). Therefore, higher and stronger behavioral intention is more likely to lead to actual actions of people.

The behavioral intention is determined by the subjective regulations and behavioral attitude (Poss, 2001). The behavioral attitude would reflect the psychological evaluation of individuals on particular behaviors, and it is affected by the beliefs and evaluations of individuals on particular behavior. As for the subjective regulations, it reflects the pressure facing by individuals in taking measurements, which is affected by the regulated beliefs and motivations.

The Theory of Reasoned Action is one of the most important theories of researching people’s behavioral activities, and it can be applied to predict the behavioral intention and actual behaviors in various fields. However, there are limitations in the Theory of Reasoned Action although it illustrates the reasoned action and predict the behavioral intention and actual behaviors in different fields (Felton et al., 1995). On the one hand, it fails to further classify the behavioral attitude, which makes it difficult to distinguish the cognition factors and emotional factors in the attitude. On the other hand, in actual life, actual behaviors of individuals could not be totally controlled by individual willingness, and it may be affected by other non-willpower factors, so the prediction effectiveness of the Theory of the Reasoned Action will be weakened (Montano and Kasprzyk, 2015).

2.4.2 Theory of Planned Behavior

The premise that all human beings are reasonable of the Theory of the Reasoned Action leads to the fact that it is not applicable to predict behaviors that are not controlled by willingness (Armitage and Conner, 2001). Therefore, the perceived behavior control is introduced into the Theory of Reasoned Action, which is known as the Theory of Planned Behavior.

![Basic theory framework of the Theory of Planned Behavior](https://example.com/image)

Figure 2.2 Basic theory framework of the Theory of Planned Behavior, Armitage and Conner, 2001

According to the Theory of Planned Behavior, actual behavior of individuals is determined by the action willingness, and the latter one is commonly determined by the subjective regulations, behavioral attitude and perceived behavior control. The
controlled belief refers to the perception of individuals on their capabilities, resources and opportunities (Ajzen, 1991). As for the perceived contribution factor, it refers to the influencing degree of capabilities, resources and opportunities of individuals on their actual actions and consequences.

The Theory of Planned Behavior makes up for the insufficiency of the Theory of the Reasoned Action on predicting the non-willpower control.

2.4.3 Technology Acceptance Model

Based on the Theory of the Reasoned Behavior, Davis put forward the cognition and emotional factors by introducing the perceived usefulness and the perceived ease of use to study the acceptance behaviors of individuals on the information system or information technology (Frale et al., 1998). The basic theoretical framework of the Technology Acceptance Model is as following:

![Diagram showing the Technology Acceptance Model]

Figure 2.3 Basic theory framework of the Technology Acceptance Model, Venkatesh and Davis, 2000.

In the Technology Acceptance Model, there are five elements including the perceived usefulness, perceived ease of use, usage attitude, usage intention as well as the practical usage. The perceived usefulness refers to the direct or indirect benefits of utilizing or adopting the information system or information technology (Venkatesh and Davis, 2000). As for the perceived ease of use, it refers to the degree of ease or difficulty in adopting or utilizing the information technology or information system.

According to the Technology Acceptance Model, under the impacts of external variables, individuals will develop and cultivate perceptions of the usefulness or ease of use of certain information system or information technology. The perceived ease of use will strengthen the perception of individuals on the usefulness, thus further affecting the usage attitudes of individuals on the information system or information technology (Davis, 1986). Then the usage attitude will affect the usage intention of individuals, and the perceived usefulness will also pose a direct influence on the usage intention of individuals, thus affecting the practical usage behaviors of consumers.

The Technology Acceptance Model has been widely applied in the research of the adoption of information system and information technology. Considering the features of different fields, scholars extended the Technology Acceptance Model to add new variables in the models.

Based on the Technology Acceptance Model, Lui and Jamieson (2003) brought the credibility and risk variables to conduct research on the adoption behaviors of electronic business. According to the model, the credibility tendency includes the legal system credibility, the credibility of the third party, the trust in sellers’ capability, trust in sellers’ trustworthy and trust in the technology (Pavlou, 2003). By introducing
the credibility and perceived risk into the Technology Acceptance Model, this model proposes that the credibility will affect the perceived risk and trade willingness. There are five dimensions of the credibility, including the legal system credibility, the credibility of the third party, the trust in sellers’ capability, trust in sellers’ trustworthy and trust in the technology.

2.4.4 The Value-based Adoption Model

The Value-based Adoption Model makes use of the perceived value theory in the information technology acceptance field (Lin et al., 2010). The core point in the Value-based adoption model is the perceived value, and it thinks that the behavior intention of users is determined by the weight against the perceived gaining and perceived lose.

According to the model, the functional value and social value would pose great influences on the usage intention of consumers on the mobile payment. Moreover, the perceived value of consumers will mainly determine the usage intention of them, and the influencing factors of the perceived value of consumers include the usefulness, compatibility and ease of use (Chung, 2011).

2.5 Perceived risk

2.5.1 Concept of perceived risk

The concept of perceived risk is in the psychological field, and it was firstly introduced into the consumer behavior theory in the 43th Marketing Annual Meeting. In the purchase process, consumers may not always be able to predict and evaluate the results of products, and some results may be unpleasant (Mitchell, 1999). Therefore, the purchase behavior of consumers can be considered to be the risk taking behavior. Before making the final purchase decision of certain products or brands, consumers should make preparation for the potential negative consequences of the products or brands, and the risk can be interpreted as the perceived risk as the result of the subjective understanding (Slovic, 1993). The perceived risk lays more emphasis on the subjective feelings of consumers rather than the objective risks in the real world. Once the risks have not been felt by consumers, the objective risks will pose no influence on the purchase decision and behavior of consumers. This concept of perceived risk consists of two dimensions, including the uncertainty of the decision result and the consequence of wrong decisions.

A series of research has been conducted on the definition of perceived risk. According to Bauer and Schiffinger (2016), all the behaviors of consumers will lead to unpredictable consequences, and some of them may be unpleasant. In other words, risks may be involved into the decision and usage intention of consumers. When consumers are aware of the fact that the particular purchase decision may not satisfy their consumption goal, they will find the perceived risk, which can be classified into two factors, namely the uncertainty consequence as well as the danger of the consequence (Stone and Grønhaug, 1993). The perceived risk can also be defined as the subjective evaluation and judgment of people on the potential negative consequences or danger, which relies more on the intuition, impression, emotion, subjective feelings and judgment.

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2.5.2 Dimensions of perceived risks
Consumers may have to deal with the negative consequences of the perceived risks in the following four dimensions, namely the time loss, danger loss, self loss and financial loss. The time loss means that consumers have to spend time and energy to repurchase and select products when they could not find the satisfied products. As for the danger loss, it refers to the potential harms on health (Dan et al., 2008). The self loss refers to the embarrassment and negative feelings of consumers after the failed consumption. The financial loss can be easily understood as the loss of money. Similarly, other scholars propose that there are five dimensions of perceived risks, including the financial risk, function risk, physical health risk, psychological health risk and social risk (Featherman and Pavlou, 2003). These five dimensions are independent from each other without posing influences on each other. Although the importance of these five dimensions may vary, the decision and usage intention should be determined by these five dimensions comprehensively.

In reality, consumers can feel or perceive a variety of forms of risks, which can also be referred to as the different dimensions of perceived risks. In the Internet era, in addition to the perceived financial risk, the perceived psychological risk and the perceived time risk, the perceived privacy risk should also be taken into consideration. In the process of online shopping, the leakage of personal privacy information such as the telephone number and the browsing records (Montgomery et al., 2003). In the research of Gerrard, many shopping websites require the provision of personal information, and the widespread fear of information leakage and Internet hacker, many consumers prefer to go shopping in physical stores rather than go shopping online (Macintosh and Lockshin, 1997). Therefore, the privacy perceived risk of consumers in the mobile payment may prevent their online consumption behavior and mobile payment.

2.6 Summarization of the Literature Review
This chapter mainly introduces the factors that influencing the people’s usage intention which has already been studied in others’ previous research. This chapter starts with the introduction of the conception of Mobile Payment and Usage Intention. Then, perceived ease of use, perceived usefulness, consumer psychology, perceived risk and other factors are introduced with Technology Acceptance Model. With the help of literature review, the researcher understands people will collect as many as information as possible to weigh the advantage against disadvantages before acting(Miller et al., 1992) and people’s behavior can be easily influenced by the surrounded environment and their psychology activity. According to this chapter, the research strategy and research method are made, and the outcomes and conclusions are strongly motivated responding to the points stated in the Literature Review chapter.
Chapter 3 Methodology

This chapter focuses on the methodology issue of the research. Methodology involves a series of practices and theoretical analysis on methods that would be employed to focus on certain research topics. This chapter will present the methodology tradition and methodological approaches in this research. Moreover, it will also discuss the methods of data collection and analysis. Other issues related to methodology and methods will be discussed including the research reliability and validity, as well as ethical considerations.

3.1 Methodology tradition

In the complete research paradigm, there are three elements that are inevitable, including ontology, epistemology and methodology. Ontology is the pure principle that is prior to experience, which is by no means the subjective assumption of human beings but the objective and logical activities of concepts. It focuses on the nature and essence of reality rather than personal experience. As for the epistemology, it refers to the systematic theories on the methods, factors and results of the reasoning process, during which the different schools of thoughts will perform the logical and empirical working process. The methodology focuses on the ultimate methods of understanding and changing the world.

As for the research paradigms, there are mainly two paradigms including the positivism and interpretivism. Interpretivism is a kind of philosophical viewpoint gradually formed by mankind in the process of scientific research, mainly in the social sciences. The philosophical basis of interpretation comes from Idealism. It argues that the human experience of the world is not a passive perception and acceptance of the physical world of the outside world, but rather an active understanding and explanation. The ontology of interpretivism is based on the fact that the real world is the product of the explanation of human beings for different behaviors and conditions. That is, the truth of the real world is constructed objectively and uniquely from the subjective thoughts of human beings such as the classification of biological species, the classification of socio-economic system and so on. Epistemology of interpretivism advocates that the cognition of the complex world is realized through the study of the experiences and opinions of the people living in this world (Laudan, 1998). Researchers should understand it in real life and interpret it through scientific means and language. And reconstruct these concepts and meanings such as the interactive interview, participatory observation and other research methods.

Positivism is a Western philosophical school that emphasizes sensory experience and rejects the tradition of metaphysics, which is also known as empirical philosophy. It was originated in France and England from the 1930s to the 1940s and was proposed by French philosopher A. Schonsett, the first ancestor of sociology. Comte's six-volume Empirical Philosophy Course, which began to be published successively in 1830, is a sign of the formation of positivism. The basic characteristic of positivism is to summarize the task of philosophy as the research of phenomenon. Taking the
phenomenological point of view as a starting point, it is proposed to refuse grasping the sensory material through reason and pointed out that the phenomenon can be summarized by the laws of science (Lemke, 1998). It treats the relationship between philosophy and science as the central issue of its theory and seeks to dissolve philosophy in science. Positivism has profoundly influenced not only philosophy but also social science as a whole. The sociology of positivism founded by Comte was the mainstream of western sociology for the next one and a half centuries. Positivism is a philosophical thought. In a broad sense, any kind of philosophical system is positivist as long as it rejects extremist or metaphysical speculation, as long as it is based on empirical material.

This research will make use of the qualitative research method to explore and verify factors that will affect the usage intention of mobile payment among consumers. Aiming at exploring and analyzing factors affecting the experience and decision of consumers in using mobile payment, this research will rely more on the interpretivism rather than the positivism to draw out the summary and conclusion that is based on the perceptions and experience of consumers in the usage intention of mobile payment.

According to the interpretivism, the experience and perceptions of the world are resulted from the subjective explanations and understandings of human beings instead of the passive reception (Wahyun, 2012). Therefore, in order to find out factors that will affect the usage intention of mobile payment, this research will observe the users of mobile payment and conduct interview on consumers who have made use of the mobile payment to collect their feedback and perceptions on the usage of mobile payment. Based on their personal experience and the usage intention of the mobile payment, the researcher will collect and analyze the experience and perceptions of consumers in using the mobile payment. In terms of the selection of participants in the interview and observation, they come from different age groups. Generally speaking, the proportion of female participants and male participants is equally distributed. As for the occupations of participants, they may be colleagues, university students, teachers, staffs and housewives and so on. In other words, in order to avoid the influences of external factors such as the social status, the occupations of participants in this research will vary to a large extent.

3.2 Methodological approach

This research will conduct a systematic analysis on factors that will affect the usage intention of the mobile payment. Moreover, it will also explore the security issues behind the mobile payment to figure out the potential risks and corresponding strategies of dealing with the security risks of the mobile payment. To reach the research aims and objectives, it is necessary to make use of proper methodological approaches.

There are a large number of methodological approaches in the social science research, which are characteristic of different features, functions and application scopes. These diversified research methods have provided diversified tools for social science research. As two of the most important and widely applied research methods, the
qualitative research method and the quantitative research method are applicable to different research situations and positions throughout the development of different subjects. Both of the qualitative research method and the quantitative research method make use of the comparison to illustrate and analyze issues by focusing on the social phenomenon, exploring the truth, recognizing the essence and identifying the social rules (Daymon et al., 2011). They are pursuing after the objectiveness, authenticity and rules of research results with the help of different tools and operation methods. However, there are still differences in these two research methods. The theoretical basis of qualitative research method includes various schools of constructivism, post-positivism, hermeneutics and phenomenology. Although these schools have different perspectives, they are essentially different from positivism. However, the theoretical foundation of the quantitative research method is positivism, but the following three aspects really promote the development of quantitative research: first of all is Comte's positivist philosophy and methodology, the second is logical positivism, the third is the practical positivism in the United States. As for the differences in the research methods, the qualitative research tends to use data from access, observation and documentation to gather information and conduct research based on subjective understanding and qualitative analysis. Its main methods include: participation in observation, psychological analysis, in-depth interview, action research and participatory action research, case studies and other methods (Hovorka and Lee, 2010).

Although there are differences in the theoretical basis, research methods, research purpose and objectives, they are not mutually exclusive and mutually antagonistic. In fact, qualitative analysis contains part of the quantitative analysis of the ingredients in the quantitative research methods also include qualitative analysis, there is no single "qualitative" or "quantitative" research methods in modern social science research. For example, the case study method is generally considered to be the analysis of the study object only through the language description, so it is considered to be a qualitative research method. But in the process of conducting the case study method, it can also refer to a large number of statistical data, can also be based on research needs to establish specific problems model.

As for the methodological approaches, during the observation, the researcher will find the occasion where and how will people use mobile payment; during the semi-structured interview, the researcher will collect the feedback and opinions of consumers on their usage experience and intention of mobile payment. Based on recordings of the interview, the researcher will make use of notes and recordings during the interview to record the lingual and non-lingual reactions of interviewees.

3.2.1 Research strategy

The interview research method and observation research method will be applied in this research to collect the data and opinions from participants.

The interview research method refers to the process during which interviewer and interviewee would conduct interview face to face to understand the psychology and behavior of the interviewee as a kind of the psychological basic research method. Because of the differences in the nature of the research questions, the purpose or the
object, the interview method has different forms. According to the standardization of the interview process (Wahyuni, 2012), it can be divided into structured interview and unstructured interview. The interview research method can be applied to a wide range of occasions for that it can be simply to collect a wide range of analysis data in the narrative form. As a result, the interview research method has been widely applied in a variety of research and occasions. The interview research method is usually conducted in the oral form based on the collection of facts and materials of interviewees of interviewees, which are expected to be objective and unbiased to present and illustrate their understandings and opinions. In implementing the interview research method, it is necessary for the researchers to guarantee the interview environment in the relaxing and harmonious way, avoid posing additional pressure on the interviewees, make use of the insight, patience and responsibility to participate into the interview, guide and promote the interview towards the right direction, communicate well with interviewees, as well as record and reflect the real feedback and reaction of interviewees. In addition to the flexibility and adaptability of the interview research method in collecting information and opinions of interviewees, there are inherent limitations in the interview research method as a kind of the qualitative research method (Litchman, 2013). The presentation and conclusion of the research results of the interview rely much on the subjective preference and the understanding capacity of interviewers and interviewees, thus leading to the uncertainties and lack of objectiveness in the research results. Direct reasons that will lead to the bias and deviation in the research results include the bias of interviewers on the research topics and interviewees, the expectation effect posed by interviewers on the interviewees, as well as the suggestive or inductive questions proposed by researchers. Materials and information drawn from the biased questions and interviewing process will inevitably reduce the value and effectiveness of the scientific research. As a result, in conducting the interview research method, there are points and principles that should be followed and attached with more attention. In the interview, the researcher should avoid the influences posed by the subjective impression and preferences (Litchman, 2013). Meanwhile, endless conversations without any purpose should be abandoned to deviating the interview or conversation. Therefore, the conversation and interview plan should be prepared in advance including the concrete presentation form of key questions as well as the classification of potential responses from interviewees. Specifically speaking, preparations in advance include the form and method of conversation, expression forms and illustrations of questions, back-up plan for the interview, the recording and classification methods and standards. In the process of collecting the materials, interviewers are expected to gain a better understanding on the personal information of interviewees before selecting them including their experience, personalities, positions, occupations, professions, interests and so on (Litchman, 2013). Whether or not the interviewees are representative for the research and can provide valuable information for the research should also be taken into consideration. The communication skills and techniques may also be helpful for the researchers to establish the effective communication with interviewees and make timely adaption in the interviewing process to promote and guide the interview.
In respect to the approach to observation, it could fall into three different categories, namely controlled, naturalistic and participant observations (McLeod, 2015). In order to make it part of the lived work of participants, participant observation is applied to this study (McLeod, 2015). To conduct research into a religious cult with a belief in the end of the world, Leon Festinger applied this method. He got engaged with the cult to observe their reaction to the circumstance where the prophecy was not achieved. Participant observations can be either cover or overt. Covert refers to the situation that the research is conducted 'under cover'. The true identity and purpose of the person conducting the research are hidden from the group as the subject of research. The researcher is required to pretend to be a genuine member of the group. In contrast, overt indicates the circumstance where the researcher makes his or her true identity and purpose known to the group for permission of observation to be granted.

In this research, the researcher will invite six participants to go outside and attend activities like shopping, watching movies, playing, having meal and so on. The researcher will keep company with the participants to do everything and observe the participants to get data from day to night. The researcher will not tell the participants the aim of this observation but the ethical issues to ensure the results will not be influenced.

Here is the information of participants and interviewees during the observation and interview:

Table 3.1 The information of the participants and interviewees

<table>
<thead>
<tr>
<th>Observation</th>
<th>Gender</th>
<th>Age</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants(6)</td>
<td>Female</td>
<td>Under 20 years old</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20-40 years old</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Over 40 years old</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Under 20 years old</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20-40 years old</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Over 40 years old</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interview</th>
<th>Nationality</th>
<th>Gender</th>
<th>Age</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewees(15)</td>
<td>Germany(1)</td>
<td>Female</td>
<td>Under 20 years old</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20-40 years old</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Over 40 years old</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sweden(3)</td>
<td>Female</td>
<td>Under 20 years old</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20-40 years old</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>China(12)</td>
<td>Male</td>
<td>Under 20 years old</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20-40 years old</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Over 40 years old</td>
<td>2</td>
</tr>
</tbody>
</table>
3.2.2 Sampling
The process of sampling is indispensable in most research for that it is usually impossible to cover the overall range of targeting research objectives, which will be costly in time, energy and money as well. Samples collected for certain research are expected to be fully representative for all the research objectives. By analyzing and researching the features, feedback and reactions of research samples, it is possible for researchers to draw out relevant conclusions and evidence for further research with the help of the economical and effective research technique (Webb and Kevern, 2001). In order to gain a better understanding on consumers’ usage intention of mobile payment as well as their perceptions of the security issues in relation to mobile payment, this research will make use of the purposeful sampling method to collect information relevant to this issue.

The researcher needs to make evaluations and judgments on potential participants to make sure that they fit in with the research purpose and targeting groups before formally being invited to the research as participants. These potential participants will be provided with introductions to the research purpose, research forms and research content before the research and the agreement consensus will also be sent to them to make sure that these research participants are making decisions on their own. This research will make use of the interview research method and observation research to collect the data, feedback and opinions of consumers on their usage intention of mobile payment and their perceptions on the security issues of the mobile payment. Overall speaking, the interview will be distributed to 15 interviewees while there will be 6 participants to be observed. In order to keep the reliability and validity of this research, the interviewees and the participants are selected on purpose. Being considered of age, gender, nationality and the realization of mobile payment, then interviewees and participants are selected. Detailed information has already been shown in the Table 3.1. Both of participants and interviewees will be classified into three groups according to their ages. Participants aging less than 20 years old, aging between 21 to 40 years old and aging more than 41 years old will be classified into different participant groups to make a vertical comparison study on the impacts of age on their perceptions on the mobile payment.

3.3 Methods for data collection and analysis
3.3.1 Data collection
This research will make use of qualitative research method to collect research data for this thesis. In terms of the qualitative research method, researchers will collect the qualitative data by observing where and how will people use mobile payment, observing the reactions of interviewees, recording their opinions during the interview, during which the qualitative data will be collected for the social science research. Documents and scripts recorded in the interview and observation will provide the first hand and primary resources for further analysis and research on the opinions, actions and attitudes of interviewees.
3.3.2 Data analysis
Data collected from the observation and the interview will be further analyzed for the research purpose, thus formulating meaningful basis for further research and analysis. According to Lichtman (2013), there are three elements that are dispensable in data analysis, namely codes, categories and concepts.
Data collected from the qualitative research method such as interview survey is usually cumbersome without clear organizations and meanings. Therefore, the major responsibility of the data analysis process is to arrange and draw information from these raw data. The process of coding raw data collected from the interview is usually full of challenges, during which the researcher needs to summarize and conclude useful information from a large number of interviews and conversations. By coding these raw data, the researcher may conclude major topics or themes that are relevant to the research such as mobile payment, online payment, security issues, and advantages of mobile payment and so on.

3.4 Reliability and validity
First of all is the reliability analysis. Reliability refers to the consistency of results obtained by repeated measurements of the same object using the same method. In most cases, the reliability indicators are connected with the coefficient indicators that can be divided into three categories: stable coefficient (cross-time consistency), equivalent coefficient (cross-form consistency) and internal consistency coefficient (cross-project consistency). There are four main methods of reliability analysis: the retest reliability method, the reliability coefficient method and so on (Leung, 2015).

As for the validity analysis, it refers to the degree to which the measurement tools and techniques could measure the research objectives. The validity indicates the degree to which the measurement results can reflect the research content and purpose. The higher consistency between the measurement results and the research objectives, the higher the validity would be. In most cases, validity can be classified into three types, namely the content validity, the criterion validity and the structure validity (Leung, 2015). Validity has been considered to be one of the most important conditions and criteria in evaluating the measurement tools and methods. In social science research, the requirements on the validity of scale are high. It is of great significance to figure out the purpose and scope of the measurement, features and nature of the measurement object as well as whether there is a consistency between the measurement content and measurement objectives, thus making judgments on the degree to which the measurement result could reflect the measurement features and nature.(Patton,2015)

3.4.1 External validity
The external validity refers to the application and generalization of research result to other situations and cases. As a result, in order to enhance and improve the external validity of the research, researchers are suggested to provide more detailed information and descriptions on the research background, selection of research samples and participants, research findings, which are expected to strengthen the
rigorousness of the study. As for the improvement in the external validity, it will also contribute to the better understanding of readers on the research background, situations, application occasions and implications for the research (Bryman, 1989). In this thesis, it will take the external validity into consideration by exploring how the mobile payment will affect the usage intention of consumes and why consumers pay attention to the security issues of the mobile payment.

3.4.2 Construct validity
In order to improve the construct validity of the research, there are elements that could be applied to strengthen the construct validity, including the diversified sources of evidence for the research, selection of evidence chain as well as the access to primary informant. Constructive validity is the course of scientific exploration and research. The theoretical analysis is subdivided into simple reaction process and then the composition process theory (Allan, 2003). Constructive validity is oriented to the content representative data, reaction history data, internal structure data, the relationship with the variable as well as the result interpretation data. Homogeneity validity refers to the extent to which other measures of the same characteristics of the gauge measure correlations. Heterogeneity validity refers to the extent to which scales and the measurement methods that measure different features but the measurement methods that are theoretically related to the features are interdependent. When designing the scale, the researcher will firstly establish a theoretical model and derive a series of inferences and tests from it to gradually form a semantic logic network systematically linked by several features. It is a scale that contains more than one measure of the measurement object. The validity of the evaluation construct is to be carried out in the context of this scale.

3.4.3 Reliability and validity of the research
In most research, the reliability and validity of the research rely much on the quality of collected data and the data analysis process. Having identified principles and strategies of improving the reliability and validity of the research, the following steps would be implemented to guarantee the reliability and validity of the research (Ryan et al., 1992).

First of all, the amount of data collected for the research should be guaranteed in the interview, and the feedback from 15 interviewees in the interview and 6 observed participants in the observation will consolidate the reliability and validity of the research.

Secondly, the representativeness of participants should also be taken into consideration by making use of the proper sampling strategies and techniques.

Moreover, detailed discussion would be conducted on the research data collected from the interview.

The interview records and scripts will be recorded and analyzed from the objective perspective.

3.5 Ethical considerations
Different from natural science research, social science research is always carried out in a certain social environment. Therefore, in addition to scientific considerations,
researchers must consider many ethical and political issues in the design and conduct of research.

According to Bowen (2009), participation of research subjects must be voluntary and, in principle, there will not be much controversy. It is not permitted to force others to participate in experiments or investigations by using unethical or even illegal means. The voluntary premise is that participants must be informed about the purpose and process of the study, which requires that the researcher must be adequately informed. Furthermore, it has been made for sure that all the participants have been aware of the research purpose and methods, and the researcher has gotten their approval before the research. Moreover, participants have the right of drawing out from the research at any time according to their willingness and convenience. Lastly, all the information collected in this research will be used for the research and will never be leaked. Participants personal information will be protected throughout the research as well. (Christine et al., 2011)

In this research, before starting the interview and observation, all the interviewees and participants are asked to read and sign the informed consent form. In the form the purpose and methods of this study are briefly revealed. It also makes the promise that the data collected by researcher will be only used for study purpose and will never be leaked. Before starting observation and interview, all of them are told they can speak whatever they want and have right to stop observation or interview anytime.
Chapter 4 Empirical findings and data analysis

In chapter 4, it will present the empirical findings and conduct data analysis based on data collected from the qualitative research method. In this chapter, the findings will be presented based on the methodology and strategies which have been introduced in the previous chapters. The results will be shown based on two parts, the observation, the semi-structured interview and data analysis. The summary of the findings, mostly based on the answers of interview questions, will be given to give a conclusion of the findings.

The themes which is going to be used are listed and all of them are based on the transcribed observation and interviews. The resulting data has already been analyzed and the transcribed interviews have been coded. All steps including codes, categories, concept are following the 3Cs concept written by Litchman(2013) -codes, category and concepts. In the end, the relevant and appropriate categories in relation to the focus of our qualitative research are going to be kept. As a result, eight different themes have been identified.

4.1 The result of initial coding

There are eight different themes which were found through the thematic analysis of the transcriptions of the gathered data:

- Users’ experience of using mobile payment
- Tools used to support mobile payment
- Perceived ease of use can influence users’ usage intention of mobile payment
- Perceived usefulness can influence users’ usage intention of mobile payment
- Perceived risks can influence users’ usage intention of mobile payment
- Situations can influence users’ usage intention of mobile payment
- Reliance can influence users’ usage intention of mobile payment
- Suggestions for the mobile payment providers to improve the service

It is found that these themes can be used to answer research questions. Through the study and analysis, it is found that the first research question can be answered by the first two themes while the third research question can be answered by the last theme, and the second research question can be answered by the rest theme. In order to present clearly, the following content will be shown in three parts to illustrate how these themes answer three research questions. They are shown in Table 4.1, Table 4.2 and Table 4.3.

Themes to RQ 1
RQ 1: How do users make use of the mobile payment in their daily life and what are
the application situations of the mobile payment in the practice?

Table 4.1 The Themes and Categories for RQ 1

<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users’ experience of using mobile payment</td>
<td>• Can transfer money from one bank card to another at any time</td>
</tr>
<tr>
<td></td>
<td>• Pay the daily fee like water and electricity</td>
</tr>
<tr>
<td></td>
<td>• Felt very convenient to pay very cheap goods like breakfast, onions.</td>
</tr>
<tr>
<td></td>
<td>• It is still felt comfortable to pay some expensive things by mobile payment instead of large amount of cash.</td>
</tr>
<tr>
<td>Tools used to support mobile payment</td>
<td>• Wechat Payment on the mobile phone</td>
</tr>
<tr>
<td></td>
<td>• Alipay on the mobile phone</td>
</tr>
<tr>
<td></td>
<td>• Apple Pay on the mobile phone</td>
</tr>
</tbody>
</table>

Themes to RQ 2

RQ 2: How do users react to the mobile payment and what are the influences of factors on the usage intention of consumers in conducting the mobile payment?

Table 4.2 The Themes and Categories for RQ 2

<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived ease of use can influence users’ usage intention of mobile payment</td>
<td>• It is easy to get the account of mobile payment.</td>
</tr>
<tr>
<td></td>
<td>• It is easy to operate during the whole payment process- opening App, scanning and inputting code</td>
</tr>
<tr>
<td></td>
<td>• Highly depending on the quality of mobile phone and network</td>
</tr>
<tr>
<td>Perceived usefulness can influence users’ usage intention of mobile payment</td>
<td>• Can highly raise the efficiency of life.</td>
</tr>
<tr>
<td></td>
<td>• Can highly raise the quality of life.</td>
</tr>
<tr>
<td>Perceived risks can influence users’ usage intention of mobile payment</td>
<td>• Worried about the financial losses as a result of the mobile payment in accidents, operational mistakes and hacker invasion.</td>
</tr>
<tr>
<td></td>
<td>• The usage of mobile payment might leak my personal privacy information in the mobile payment process.</td>
</tr>
</tbody>
</table>
Situations can influence users’ usage intention of mobile payment

- Have strong willing to use mobile payment if the platform can offer a discount when paying
- When using mobile payment can save one’s a lot of time
- Lack money in credit card or cash in the wallet

Reliance can influence users’ usage intention of mobile payment

- The population around us use mobile payment
- The reputation of the mobile payment platform
- The laws made by government to protect the users
- The development of technology if the system of mobile payment can prevent the users’ account’s safety

Themes to RQ 3
RQ3: What are the suggestions for the mobile payment providers and developers in constructing and improving the mobile payment system and platform?

Table 4.3 The Themes and Categories for RQ 3

<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
</tr>
</thead>
</table>
| Suggestions for the mobile payment providers to improve the service | - Mobile payment program can be attached on much cheaper devices  
- More payment situations should be built to guide users  
- Raising the consciousness of protecting users themselves from mobile payment fraud  
- Mobile platform should cooperate with other financial institutions to avoid the conflict of interest  
- Laws should be perfected to protect both platforms and users  
- Technology, hardware and software should be updated |
4.2 **Empirical findings in observation**

Table 4.4 Summary of observation

<table>
<thead>
<tr>
<th>Participant 1</th>
<th>Participant 2</th>
<th>Participant 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>18 years old</td>
<td>18 years old</td>
<td>24 years old</td>
</tr>
<tr>
<td>Using mobile payment to take underground. Using mobile payment to pay the bill of borrowing the tennis court. Using mobile payment to buy the beverage of coin machine in the tennis court.</td>
<td>Using mobile payment to call cab and pay for it. Using mobile payment to buy the ticket to Disney. Using mobile payment to buy toys, pay for taking photos and beverage.</td>
<td>Using mobile payment to take underground. Using mobile payment to buy cigarette and beverage. Using mobile payment to have dinner.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant 4</th>
<th>Participant 5</th>
<th>Participant 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>24 years old</td>
<td>53 years old</td>
<td>50 years old</td>
</tr>
</tbody>
</table>

Participant 1 is one of the researcher’s friend who got to know in the university of Shanghai when they played tennis. At weekend, the researcher invited him to go to play tennis and observed him.

Participant 2 is one of the researcher’s little sister. She is 18 years old. The researcher took her to Shanghai Disney park at weekend and observe her.

Participant 3 is one of the researcher’s colleague. During the day before New year Festival, the researcher invited him to celebrate the festival and observe him.

Participant 4 is researcher’s girlfriend. She was invited to go shopping in Shanghai and be observed. Of course, the researcher transferred all the cost to her by the function of mobile payment at last.
Participant 5 and 6 are the parents of the researcher. Although they are over 50 years old, but they still know how to use mobile payment which has been admitted by most of people. The researcher went out with them to have fun on family day and observe them.

All of these participants are well educated and have ability as well as resources to use mobile payment normally.

The Table 4.4 is the summary of what the research have seen during the observation of finding where and how the participants use mobile payment in daily life.

4.3 Empirical Findings for RQ 1 during interview

RQ 1: How do users make use of the mobile payment in their daily life and what are the application situations of the mobile payment in the practice?

The main themes of the Research Question 1 are shown as below:
- Users’ experience of using mobile payment
- Tools used to support mobile payment

Theme 1: Users’ experience of using mobile payment

The interviewees were invited to share about their experience of using mobile payment. By analyzing their experience, it is found that most of interviewees said they would use mobile payment in many situations in their daily life. For example, they preferred to use mobile payment to buy breakfast; They could also use it to pay the bill of water and electricity instead of going to pay it in the bank; Moreover, by using the mobile payment platform, customer could transfer money from bank to bank, bank to mobile payment platform at any time, anywhere.

Respondent 1: “I usually go to buy cheap breakfast in the morning. These shops are on the side of road. These breakfast are cheap and popular. There will always be a long queue every time you go there. If you use cash to buy these food, the buyer need to check the cash if it is counterfeit and do calculation, then give you the change. This process will be very time-wasted, But if every one use mobile payment, it will only take several seconds for one person. “

Respondent 2: “Every month, I need to pay the electricity and water bill. Before using mobile payment, I have to go to bank or some pointed places to pay the bill. But with the help of mobile payment, all you need to do is to fill an personal information form at the first time you use it and take another 5 seconds to press the payment button.”
Respondent 5: “Because of my business, I usually need to transfer my money from one bank account to another. In the past, I have to go to bank myself to deal with this kind of operation and you have to pay some service charge. But by using the function of mobile payment, you can not only saving time and energy, but also the service is uncharged.”

Respondent 7: “When I go to do consumption in some senior places, it will be not safe to carry a lot of cash. By using mobile payment, it can easily solve this problem.”

Theme 2: Tools used to support mobile payment
The interviewees were asked about what kind of tools they used to support mobile payment. The apps called Alipay, Wechat Payment, ApplePay are the most popular app the interviewees used. Alipay and Wechat Payment can be only supported by mobile phones while ApplePay can both exist in mobile phone and Apple Watch.

Respondent 1: “My favourite tool is Alipay, because every shop and person have this kind of payment. You can apply it everywhere.”

Respondent 5: “I use both Alipay and Wechat Payment. I usually use Alipay to buy goods because Alipay is connected to Taobao which is the biggest e-commerce platform in China. However, there are still some situations you have to use Wechat Payment. Wechat is one of the most popular social communication software like the position of Facebook in other countries. You have to use the money in Wechat Wallet to deal with some business of relationship.”

Respondent 8: “I am a fan of Apple. So my Apple Watch can support ApplePay. However, it is not widely spread in China. Many shops have not accepted this kind of Payment.”

4.4 Empirical Findings for RQ 2 during interview

RQ 2: How do users react to the mobile payment and what are the influences of factors on the usage intention of consumers in conducting the mobile payment?

The main themes of the Research Question 2 are shown as below:
- Perceived ease of use can influence users’ usage intention of mobile payment
- Perceived usefulness can influence users’ usage intention of mobile payment
- Perceived risks can influence users’ usage intention of mobile payment
- Situations can influence users’ usage intention of mobile payment
- Reliance can influence users’ usage intention of mobile payment
Theme 3: Perceived ease of use can influence users’ usage intention of mobile payment.

The interviewees were asked about their feelings of ease of use when using mobile payment. By summarizing their statement, it is found that almost all of them felt it is very easy and convenient to use mobile payment. First of all, it is very easy to register an account as long as you have a phone number or an email. Another aspect is that paying process is much easier and faster than other traditional payment.

Respondent 4: “Nowadays, it is very easier for people to register an mobile payment account. In terms of my child, he have not to posses a bank card but only an mobile phone with an unique number. Then he is qualified to be an mobile payment user. Even though he does not have any bank card, I can transfer my money from my mobile payment account to his.”

Respondent 8: “Compared to those traditional payment methods like cash and bank card, mobile payment is much faster, easier and safer. When you use cash to buy something, you need to carry these money in your wallet or bag. It takes a lot of space and weighs a lot especially when you want to buy something expensive. And you may run the risk of receiving counterfeit and getting robbed or stole. While doing payment by mobile phone, all you need to do is opening App, scanning the QR code and confirming your ID by your fingerprint.”

Respondent 9: “It is truth that mobile payment bringing us a lot of convenience but we can not deny that it highly depending on the quality of mobile phone and network. All the mobile payment programs can only be run on the mobile phone and apple watch. Some of these devices are too expensive and not every one can afford the expense. And the ease of use is closely related to the network of the religion. Once I went to a remote shop to deal with business, the network there was too bad for me to pay money which ruined my using experience.”

Theme 4: Perceived usefulness can influence users’ usage intention of mobile payment

In the interview, interviewees have also been asked about their opinions on the usefulness of mobile payment, and they are also asked to share the positive influences of the usefulness of mobile payment on their life efficiency and quality.

Respondent 1: “When I buy something really cheap, sometimes I only have big denomination cash like 100 yuan and I want to buy goods under 5yuan. Under this kind of situation, I was always complained by the assistant cause it was not easy for them to give me change. For me, these changes will take a large space of my purse and I also worried about if I received counterfeit. So, compared to
the traditional payment, I prefer to use mobile payment. It can raise my life’s quality and efficiency.”

Respondent 2: “Every month, I need to pay the electricity and water bill. Before using mobile payment, I have to go to bank or some pointed places to pay the bill. But with the help of mobile payment, all you need to do is to fill an personal information form at the first time you use it and take another 5 seconds to press the payment button.”

Theme 5: Perceived risks can influence users’ usage intention of mobile payment
During the interview, the perceived risks have also been discussed. Interviewees need to consider their worries and concerns about the safety issues of the mobile payment. They have also been interviewed on more detailed experience of using the mobile payment such as the privacy information leakage or financial risks in relation to the mobile payment.

Respondent 10: “I have been experienced some horrible things during using mobile payment. Once my iphone was broken and I sent it to a shop to repair. Then my money in my mobile payment account was transferred. According to the expert, they analyzed that one way to decoding my cell phone was fingerprint. Because I left my fingerprint on the Home Button and the criminal used tape to achieve my fingerprint on the button and then succeed to unlock my mobile payment account.”

Respondent 13: “There are a lot of risks of using mobile payment. According to the news, some bad guys change the QR code of the shops to theirs, then the customers money was transferred to their account; Another news is a man was drunk one day, when he paid the fee of taxi, he misoperated- paid taxi driver 20000yuan instead of 20 yuan. And the taxi driver refused to give it back, claiming that this money was his tip.”

Respondent 14: “According to my personal experience, using mobile payment will lead to your personal information leaked. You may ask me why I am so sure that it is mobile payment leak my personal information. Because every time when I register an account, I have a kind of custom. I will coordinate the user name to this platform. For example, if I use Taobao, then my user name will be Li Taobao. If I use Amazon, then my user name will be Li Amazon. Since I have used mobile payment, crank call becomes more and more. One day, the voice in the phone called me, Li E. And this name represents that my information was leaked by a platform called E Le Ma.”

Theme 6: Situations can influence users’ usage intention of mobile payment
The mobile payment has been applied in a variety of situations and occasions, the analysis on these situational factors will contribute to a better understanding on the different occasions and situations of mobile payment. In exploring the various situational factors of mobile payment, this research classifies it into different
situations in which mobile payment is necessary, including the lack of sufficient money in the credit card or cash in the wallet, save in the waiting and consumption time and discounts in using mobile payment.

Respondent 6: “You know, at the first stage of developing mobile payment, the platform hosted a lot of activities. Like if you used mobile payment to buy something, you can get 1 yuan to 10 yuan discount in each transaction. Although this discount was not big money, but who would refuse it? So, mobile payment developed very quickly at that time. And today, people has realized the advantages of using mobile payment and cultivated the habit of using it.”

Respondent 9: “When I forget to bring cash or I have not enough money in my bank card, I will use mobile payment.”

Respondent 10: “In some big markets, they will divide checkout counter into cash only desk and electronic payment only desk. There always be a long queue before the cash only desk, then choosing mobile payment will be my best choice.”

Theme 7: Reliability can influence users’ usage intention of mobile payment
In this theme, Reliability refers to the psychological trustworthy and reliability of users or customers on the providers of products or services. The interviewee said other people’s behavior, the reputation of the mobile payment platform and the laws made by government to protect users may have the influence on the usage intention of consumers.”

Respondent 4: “Most of my colleagues, classmates, friends and relatives use mobile payment. When you do consumption together, you have to transfer money from each other sometimes. If you don’t use it, it seems would be hard to get on well with others.”

Respondent 8: “The reputation of the mobile payment platform can also have great influence on my usage intention. Besides Alipay, Wechat Payment, Applepay, there are a lot of other payment platform in China, but they are not as famous as the first three companies I mentioned. These low reputation platform may not provide as good services as others, and they have less ability to protect your money. While the platforms with good reputation, they can not only offer good services but also the number of users is large which means you can apply the mobile payment in more aspects and shops.”

Respondent 10: “These years, with the development of mobile payment, the criminals have turned their eyes on it. But the government has not made flawless laws to protect the users of it which let a lot of bad guys make use of the shortage, flaw to do crime. Of course, I believe in our government, he can do better and better in the future.”
Respondent 11: “Sometimes, you may see some news on the internet that whose mobile payment account was attacked or revealed and how many money did he lose. So, I worried about if the mobile system would easily be hacked by people. The reliance of mobile payment system and technology can be an important factor.”

4.5 Empirical Findings for RQ 3 during interview

RQ 3: What are the suggestions for the mobile payment providers and developers in constructing and improving the mobile payment system and platform?

The main theme of the Research Question 3 are shown as below:

- Suggestions for the mobile payment providers to improve the service

Theme 8: Suggestions for the mobile payment providers to improve the service
In this part, based on the situations that interviewees had mentioned above and their using experience for long years, they raised their suggestions to mobile payment providers and developers to improve the mobile payment service and platform. The interviewees offered their advice from many aspects such as laws, users, platforms and so on.

Respondent 5: “Nowadays, most of mobile payment programs were installed on the mobile phone and Apple Watch. The average price of intelligent mobile phone in China worth is 5000 yuan which is not small expenditure to a not rich family in a developing country. So, if a much cheaper device can be made to support mobile payment, the amount of users is sure to increase.”

Respondent 2: “Although we have already used mobile payment in many situations but it is not enough. More situations should be created to guide users. For example, mobile payment providers can create a simulation environment and invite users to experience the process of using mobile payment in it. Then, if the activity is successful, users can have strong sense of sympathy to this payment situation and they will be more willing to use mobile payment under this kind of situation.”

Respondent 6: “As a user and consumer, we should learn to protect ourselves by learning latest cases and cultivate a good habit of using mobile payment. For example, frequently using anti-virus software to check your mobile devices; don’t link to any suspicious wifi and website; turn to airplane mode when you sleeping. Users may not know as much as mobile payment providers, so they are obliged to teach users how to correctly protect themselves.”

Respondent 15: “With the development of mobile payment, the profit conflict among mobile payment and other financial institutions becomes more severe. And in order to guarantee the profit of traditional institutions like bank, the government has made a
lot of restriction to mobile payment platforms which may cause the lose of mobile payment users."

Respondent 14: “Since the mobile payment appeared, it has been years. With the number of users increase, the conflict between users and platforms become more which can not be solved peacefully and fairly. Laws and policies must be perfected to protect both users and platforms.”

Respondent 11: “Technology is developing fast. More and more advanced devices, software, hardware will be invented in the future. Mobile payment providers should keep the pace of development of technology, improving the facilities of mobile payment machines and systems, making it safer and more efficient.”
Chapter 5 Discussion

In this chapter, it will conduct an analysis on the empirical findings of this research based on the research design. Based on the literature review and research results of the interview, this chapter will further analysis the themes mentioned in chapter 4 and answer the research questions.factors that will affect the usage intention of customers on the mobile payment. The following content will be presented in two parts. Firstly, a deeper discussion based on empirical findings will be shown. Then, a brief conclusion will be made.

5.1 Discussion of the empirical findings

The aim of this thesis is to figure out when will users use mobile payment and what factors can influence the usage intention of mobile payment as well as the methods of improving mobile payment in different aspects.

5.1.1 Discussion of RQ 1

RQ 1: How do users make use of the mobile payment in their daily life and what are the application situations of the mobile payment in the practice?

The empirical findings for RQ 1 can be explained by two themes raised in chapter 4: Users’ experience of using mobile payment, Tools used to support mobile payment. 

Users’ experience of using mobile payment

Users’ experience here means the occasion where users apply mobile payment. By knowing more about it, mobile service providers can study where is their limitation of the market and then provide with more functions and services. The interviewees well know about the situations where they frequently use mobile payment. However, different people will use mobile payment in different occasion because everyone’s economic capability is different. If someone is poor, he will rarely go to consume in some senior places. Contrarily, the rich may not frequently go to some inferior shops. In Mallet’s (2007), Schierz, Schilke, and Wirtz’s (2010) research, all the data was collected from one area or one school. The result of their research may not be representative enough. While in this research, the 15 interviewees and the 6 participants who are observed are coming from 3 countries and they are in different age. They may not represent the all classes in the society, but the experience they share can make the result more convincible and representable. According to their replies, These situations can be concluded in three aspects: Paying fee in restaurants, supermarkets and other physical or online stores; Transferring money from each others’ account; Paying monthly or daily bill like the fee of electricity and water.

Tools used to support mobile payment

When it comes to the theme Tools used to support mobile payment, due to the reason that most of interviewees are Chinese, so the most popular mobile payment APPs can
only been in China and they are Alipay and Wechat Payment. These two payments can be installed in any applied in almost every store, shop in China while Apple pay can only be set up in the iphone, iwatch and its coverage is limited- only a part of shops can accept Apple Pay.

5.1.2 Discussion of RQ 2
RQ2: How do users react to the mobile payment and what are the influences of factors on the usage intention of consumers in conducting the mobile payment?

The empirical findings for RQ 2 can be explained by two themes raised in chapter 4: Perceived ease of use can influence users’ usage intention of mobile payment; Perceived usefulness can influence users’ usage intention of mobile payment; Perceived risks can influence users’ usage intention of mobile payment; Situations can influence users’ usage intention of mobile payment; Reliance can influence users’ usage intention of mobile payment

**Perceived ease of use can influence users’ usage intention of mobile payment**
According to the Technology Acceptance Model (Venkatesh and Davis, 2000), it proposes two key factors that will determine the usage intention and technology acceptance of customers, namely the perceived ease of use and perceived usefulness. The perceived ease of use can be summarized as the degree of usage ease and accessibility that is perceived by users or customers.

According to the replies of interviewees, the themes indicate that customers generally hold a positive attitude towards the perceived ease of use of mobile payment. For most interviewees, the access to the mobile payment function is easy and convenient, which can be inferred from the widespread popularity of various mobile payment platforms and channels. Both businessperson and stores have begun to provide customers with optional payment channels including the mobile payment; As for the usage process and procedure of mobile payment, it has already been simplified and standardized to make sure that most of users can gain a better understanding of its operation and application; But to some users who are in remote area, the quality of mobile devices and local network have played a negative role for the effective application and promotion of mobile payment.

**Perceived usefulness can influence users’ usage intention of mobile payment**
Perceived usefulness stays in a close relationship with the expectations of customers on the value and usefulness of products or services. It acts as the driven force for customers to try new things such as the mobile payment. In other words, mobile payment with more effective and efficient functions and effectiveness is more likely to arouse the usage intention of customers.

According to the communication during the interview, it is found that interviewees hold a generally positive attitude towards the perceived usefulness of the mobile payment. The mobile payment gets customers rid of the restrictions posed by physical distance and cash payment, and the connection to the Internet through the mobile
payment will greatly improve the payment efficiency and consumption experience of interviewees especially in the offline consumption process. And by using mobile payment, users don’t need to worry about the changes any more and will have no chance to receive counterfeit which decrease the risk in life. Davis (2000) also proved that the perceived usefulness and the perceived ease of use play an important role in influencing people’s usage intention in his Technology Acceptance Model. The perceived ease of use will strengthen the perception of individuals on the usefulness, thus further affecting the usage attitudes of individuals on mobile payment.

Many other researchers like Mauricion and Paul (2003), Sang and Blecha (2011) and others have proved these two factors can deeply influence users’ usage intention of mobile payment. But their collected data in their research is out of date. Especially during these years, the technology of the making mobile phones, the quality of network and many other related aspects have developed much. The usefulness and ease of use of using mobile payment have changed a lot, either. Their collected data can not reflect the true situation at the present. Meanwhile, there should be more factors that can influence usage intention. While this research has fixed parts of these gaps.

**Perceived risks can influence users’ usage intention of mobile payment**

Perceived risks may be developed and formed before the practical usage or consumption process, which is common and natural for customers to image and develop their expectations and concerns on potential risks of their behaviors or decisions.

In previous study, Zhou (2013) also expressed that perceived security and trust are the two main factors which consumers concern when they do shopping. If consumers are aware of the fact that particular purchase decision may not satisfy their consumption goal then their actual behavior will change their behavior. Zhou’s conclusion is similar to this research, while he failed to pay attention to user experience when analyzing mobile user behavior.

According to the interview, the interviewees showed their attitude to the perceived risks in using the mobile payment, which can be further analyzed and classified into the financial risk and privacy risks. The most concerned risk is financial risk. According to the official report released by China Internet Association in 2017, the government detected 2,053,501 malicious programs in 2017, nearly 50% more than that in 2016 (1,477,450). Besides, 18.17% of them could cause users’ financial loss and another 13.56% had potential financial risks. Another concerned risk is privacy risk. The interviewee once experienced the violation of privacy himself. According to the media, a big data company sold over 0.1 billion pieces of personal information a day during 8 months and the total information reached 4000 GB even after being compressed. The leaked information included URL, telephone number, user behaviors and other over 40 kinds of information. Some of invaders can even hack user’s personal account. According to the above report and the interviewees, perceived risk indeed has great influence on the intention of using mobile payment.
**Situations can influence users’ usage intention of mobile payment**

Situations can be an important factor of influencing user’s usage intention of mobile payment while it is ignored by many previous research. The exploration on situational factors aims at identifying occasions and situations in which the usage intention of customers will be aroused and motivated. Based on the research analysis on the favorable situational factors of the mobile payment, mobile payment providers can cultivate and promote more favorable situations and occasions to promote the application of the mobile payment.

The first favorable situational factor for the promotion of the mobile payment is the lack of sufficient money in the credit card or cash in the wallet, and it has been recognized by many interviewees that they are more likely to make use of the mobile payment in such occasion. As a result, it can be summarized that the mobile payment still acts as the complementary payment for customers, which calls for more promotion among targeting customers. Customers may have also been attracted by the convenience brought by the mobile payment such as the less waiting time. It might be concluded that the improvements in the convenience and effectiveness of the mobile payment will increase its attractiveness to more customers. Moreover, other improvements that can be made in terms of the attractiveness of the mobile payment include the financial benefits such as discounts for customers, which may be one of the most direct and attractive factors to increase the usage intention of customers. Clear and helpful guidance on the usage and application of the mobile payment is also considered to be effective in arousing the usage intention of customers.

**Reliance can influence users’ usage intention of mobile payment**

Comparing with the convenience, response speed and favorable conditions that may be brought by the mobile payment, customers also tend to attach more attention to the reliance of the products and platforms that provide the mobile payment services, which can be inferred from the research results of the interview. Reliance of customers on the mobile payment can be affected by both the external environment and the providers of the mobile payment. In terms of the external environment, with the increasingly widespread application of the mobile payment, the government and relevant supervision departments should take up the supervision responsibilities to formulate laws and regulations to protect the rights and benefits of users of the mobile payment. Support and supervision from reliable institutions such as the government and relevant industrial institutions will increase the reliance of customers on the legality and operation standards of the mobile payment, thus persuading more of them into making use of the mobile payment. In addition to the external supervision and regulation, the qualification and reliance of mobile payment providers should also be attached with more attention, which in fact plays a vitally important role in affecting the reliance and usage intention of customers such as maintaining good social reputation and continuously updating the software or hardware of mobile payment which will give a sense of security to users and give them a kind of reliance. More requirements are reached, more people will use mobile payment. More people use, more reliable it will be, which is a virtuous cycle.
5.1.3 Discussion of RQ 3  
RQ 3: What are the suggestions for the mobile payment providers and developers in constructing and improving the mobile payment system and platform?

The empirical findings for RQ 3 can be explained by one theme mentioned in the last part of chapter 4: Suggestions for the mobile payment providers to improve the service.

**Suggestions for the mobile payment providers to improve the service.**

Based on the empirical study, this research proposes implications for the development and promotion of the mobile payment in the future.

First of all is the promotion of the mobile payment, which will improve the perceived ease of use and perceived usefulness of customers. The empirical results show that perceived usefulness and perceived ease of use have a significant positive effect on consumers' usage intention. In addition, the perceived ease of use indirectly affects the willingness to use by increasing perceived usefulness. Since the mobile payment service in the mobile payment scenario in most countries is still in the initial stage, consumers are still lacking in-depth understanding of the usefulness and ease of use of mobile payment in the payment scenarios. According to the Financial Newsletter, the number of mobile payment users is less than the number of online payment users. One of the methods to improve this situation is to find out more payment scenarios which can give customers strong sense of admission, intimacy and encourage customers to make shopping. Therefore, mobile payment service providers must unite merchants to make the publicity efforts to increase their awareness of the usefulness and ease of use of mobile payments, which aims at cultivating the habit of using mobile payments in more and more payment scenarios.

Secondly is the widespread collaboration between different parties such as financial institutions, governments and platform of mobile payment to increase the reliance of customers. It is known to all that quite a lot profit of banks is contributed by Intermediate Business and Deposit. Nowadays, mobile payment platforms can provide more convenient or cheaper services for customers, like transferring money between financial institutions. People are more likely to deposit money on mobile payment platform, which threatens the profit of banks. Therefore, the government and other authorized institutions make a lot of restrictions on mobile payment platforms to support banks, which is actually not good for consumers. In order to increase the reliance of customers in mobile payments in the payment scenarios, multiple parties need to work together. The government must further improve the relevant legal system and balance the conflict of profits between mobile payment platforms and other financial institutions to effectively protect the benefits of consumers.

In addition, relevant laws and regulations should be formulated in the mobile payment market, which aims at decreasing the perceived risks of customers. The empirical results show that perceived risk has a significant negative effect on the usage intention of customers. According to the data and the content of interview, it is found that...
consumers using mobile payments in the payment scenarios are mainly worried about two types of risks: financial risk and privacy risk. The main reason for the above two kinds of risks is that the mobile payment market in the mobile payment scenarios is not standardized enough, leading consumers to have a higher sense of unease about using mobile payments in the payment scenarios. In order to reduce the perceived risk of consumers, mobile payment service providers should establish a sound compensation policy to protect consumers from the loss of profits caused by the use of mobile payments in the payment scenarios, and reduce consumer perceived financial risks. Furthermore, related companies in the mobile payment industry must further strengthen consumer privacy protection, reduce incidents of consumer privacy leakage caused by hacking and system failures. Meanwhile, users should also be well taught about how to avoid financial fraud and protect their assets.

Last but not least, according to other reflection of interviewees, the empirical results show that the reliance will indirectly affect the usage intention of customers through the perceived risk, perceived usefulness, and perceived ease of use. Mobile payment system can be improved by following aspects. First, mobile payment service providers must constantly improve their mobile payment products and consciously abide by social norms and establish a trustworthy corporate image in the minds of consumers. Second, when businesses and stores provide mobile payment settlement services, they must establish a secure payment environment and strictly follow the procedures to ensure that they do not infringe the interests of consumers. Third, third-party certification agencies should establish a sound mobile payment industry standard as soon as possible to provide reference suggestions for consumers to choose mobile payment products. Fourth, systems and software service providers must constantly improve the relevant technologies of mobile payment to ensure that consumers can use mobile payments smoothly and securely in the payment scenarios. Fifth, a much cheaper device installed with mobile payment app should be manufactured to meet the demands of the people that are not so rich.
Chapter 6 Conclusion and further study

In chapter 6, it aims at summarizing and concluding the research results to figure out factors that will affect the usage intention of customers. It will also present suggestions for the sustainable development of mobile payment from the perspective of arousing the usage intention of customers. Further, about the researchers’ contribution will be explained. Moreover, based on the limitations of this study, this chapter will reflect on improvements that could be made to contribute to the wider application of the mobile payment.

6.1 Research conclusions

In this research, it intends to analyze the mechanism, functions and features of mobile payment from the practical perspective based on the interview on users of mobile payment, and it finally aims at figuring out crucial factors that will affect the usage intention of consumers, thus providing suggestions for mobile payment providers on the improvement of the mobile payment products and services in more application occasions. It will make use of the qualitative research method to explore and verify factors that will affect the usage intention of mobile payment among consumers. Aiming at exploring and analyzing factors affecting the experience and decision of consumers in using mobile payment, this research relies more on the interpretivism rather than the positivism to draw out the summary and conclusion that is based on the perceptions and experience of consumers in the usage intention of mobile payment.

Based on the interview on interviewees, this research has explored factors that will affect the usage intention of customers on the mobile payment from perspectives of perceived ease of use, perceived usefulness, reliance, perceived risks, situational factors, usage intention as well as the practical usage. The research conclusions are as following.

The perceived ease of use, perceived usefulness and perceived risks are important factors that will affect the usage intention of customers. And the perceived risks stay in an important relationship with the usage intention of customers, and its effects should be attached with more attention. As for the perceived ease of use and perceived usefulness, they will pose a positive influence on the usage intention of customers.

As for the reliance, it does not stay in an obviously positive or negative relationship with the usage intention of customers. However, it will pose indirect influences on the perceived risks, perceived ease of use and perceived usefulness of customers, thus further affecting the usage intention of customers. The situational factors will indirectly affect the usage intention of customers by affecting the perceived ease of use and perceived usefulness, so the influence of the situational factors should also not be ignored.
According to the interviewees’ responses on the use of mobile payment, the suggestions are made in this study to help enhance the positive influence and weaken the negative influence on usage intention. To enhance the convenience of mobile payment, the thesis suggests mobile payment providers to find out more payment scenarios and provide more functions for mobile payment. The most important suggestion is that mobile payment platform should cooperate with other financial institutions and avoid the conflict of interests, in order to bring benefits to users. As for perceived risk, it has been shown that the finance and privacy of users are under threat. Therefore, the government is suggested to issue the related laws and policies to protect both users and mobile payment platforms. At the same time, users should also learn more knowledge about financial fraud to protect themselves. Other suggestions are made for the purpose of providing users better experience, such as update the software and hardware of mobile payment in a timely manner to ensure security and convenience, lower the fees of using mobile payment, find out more scenarios for users to apply mobile payment, etc.

6.2 Contribution

This study focuses on the development of information systems, from the perspectives of users’ perception and experience. Specifically, the thesis investigates the use of mobile payment. Then, the study identifies five important factors which can have great influence on the usage intention of mobile payment and three of the factors, i.e. perceived usefulness, perceived risks and perceived ease of use have already been indicated by other researchers (Zhou, 2013., Shin, 2009., Kim, Mirusmonov and Lee, 2010). Compared to the former researchers’ thesis, this research is based on the background of that all the technology including mobile technology, intelligent phones, network and many other aspects in our lives have developed much, the results in this thesis can reflect the newest feeling and opinion about mobile payment. Meanwhile, compared to the former research, this thesis considers more aspects like business chain and the people from different countries, areas are interviewed to make the results more comprehensive and persuasive. Focusing on these factors, this thesis has made a lot of useful suggestions for the related parties. For mobile payment providers or platforms, these suggestions can help them know well about the consuming habits of their users and extend their consumption channels to increase profits; for users, they can be provided with more comfortable mobile payment services. Further more, users can know more about how producers and other commercial tenants attract consumers to use their product, then users have stronger ability to judge if the product is worthful or if their consuming product is reasonable, which can help them avoid to be mislead by producers and commercial tenants. ; for both of users and mobile payment providers, they can obtain more protection from the government or other authorized institutions.

6.3 Limitations and further research

Limitations of this research can be summarized as the following points. First of all is the selection of research interviewees. The restrictions of time and energy may
prevent the overall selection of typical interviewees at the same time, and the limitations of interviewees to the university may further affect the reliance and applicable of the research results. Moreover, the interpretation of the research results of the interview may involve the subjective understandings of the interviewers, so misunderstandings may exist in terms of the analysis of the qualitative data collected from the interview.

There are recommendations to improve the validation and reliance of the research. It is suggested that the further research may invite more interviewees from different cultural and educational background to enrich the research samples. Moreover, the coding and analyzing of qualitative data calls for the participation of more interviewers to avoid the influences of personal preference or understanding. Last but not least, the suggestions should be given much specifically. It is better to get advice from professional institutions to get more detailed information instead of listing broad conception.
**Reference**


Davis, F. D. (1986). A technology acceptance model for empirically testing new end-user information systems. *Mit Sloan School of Management*.


Appendices

Appendix A: Informed consent form for Master Thesis

Analysis on the Usage Intention of Mobile Payment

Researcher: Siliang Chen

Dear Sir/Madam,
I am a student at Linnaeus University. I am currently writing a master’s thesis titled “Analysis of the Usage Intention of Mobile Payment”. The thesis aims at figuring out crucial factors that will affect the usage intention of consumers, thus providing suggestions to the providers of mobile payment product/service providers for the improvement of their products and services. The improvement of the mobile payment products/services will in turn improve the user experience.

For that reason, I am collecting data from the users of mobile payment with the help of interview. I would be benefited if you could answer the questions. One thing that has been made for sure is that the collected data will remain confidential and be used for academic purpose only. I am applying ethical approval for the study from Linnaeus University.

The data gathered from the interview and meeting will be solely used for the purpose of the academic research with respect to master thesis. Your views and opinions will only be shared with the researchers. Your full name wouldn’t be disclosed during and after the research and a written permission of recording the conversation of the meeting is requested.

As one of the research participants, you are selected because you well-educated background and you have experiences with using mobile payment. I believe that your knowledge and experience will be a useful contribution in my research.

Yours sincerely
Siliang Chen

Guidelines
Please follow the guidelines shown as below:
1. The interview will be held by distant video or face to face, and it will last for about 20 minutes.
2. The interview will be recorded by my computer or my mobile phone and the answers are written down as notes.
3. Your participation in this study is completely voluntary and you are allowed to drop the interview anytime.
4. You are allowed to decline to answer any questions.
5. Inform the researchers if you have any privacy requirements.
The results will be shown if you need.

Questions for Interview

1. Can you tell me something about your background?
2. Have you ever heard of or made use of the mobile payment? If so, can you tell me the first experience of using mobile payment?
3. Can you please tell me about your experience of making use of the mobile payment?
4. What kind of app has been mainly involved into the usage of the mobile payment?
5. How do you evaluate the ease of use of the mobile payment?
6. Could you provide an example of the ease of use of the mobile payment?
7. Do you think the app that you use for mobile payments is easy? If yes, what makes it easy for you? If not, what do you think is difficult?
8. Do you think that the mobile payment is useful or not? If you perceive the mobile payment as useful, in what ways have it has improved your life efficiency and quality?
9. What factors will affect your reliance on mobile payment providers and platforms?
10. What improvements are needed to improve the reliance on the mobile payment?
11. Have you ever been worried about the safety issues of the mobile payment?
12. Have you been troubled with the privacy information leakage or financial risks in relation to the mobile payment?
13. In what situations are you more willing to make use of the mobile payment?
14. What is the most important factor that will affect your usage intention of the mobile payment?
15. What advice would you give to mobile payment providers to improve the mobile payment usage and experience?