Faculty of Business

Determinants and Consequences of the Use of Digital Finance Platform for Personal Financial Management in Rural China

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STATEMENT OF ORIGINAL AUTHORSHIP

Declaration

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Curtin University Human Research Ethics Committee has approved this thesis with the approval number HRE2017-0871. The survey has been conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007).

Signature: 

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ABSTRACT

China has become a leading nation with the largest online population and fastest-growing digital finance market in recent years. Digital finance penetrates rapidly in rural areas and plays an important role in promoting financial inclusion which is one of the key policies of the Chinese government for developing rural China. Even though the advantages of digital finance are significant, issues for personal financial management (PFM) using digital finance platform (DFP) are still existing in rural China. Thus, this research aims to investigate the determinants influencing the use of digital finance platform to manage personal finance and its consequences on rural residents in China. The conceptual framework of this research is developed by integrating two theories – the Unified Theory of Acceptance and Use of Technology (UTAUT) by adding an additional antecedent – perceived risk; and the DeLone and McLean Model of Information Systems Success. Notably, the conceptual framework comprises five antecedents to the use of DFP – performance expectancy, effort expectancy, social influence, facilitating conditions, and perceived risk; and two consequences of the use of DFP – user satisfaction and net benefits. This research employs a quantitative approach using a questionnaire survey. A total of 403 valid responses, covering six provinces and 28 villages, are collected by ways of online and offline modes. The collected data are analysed using partial least squares structural equation modelling (PLS-SEM) to test the hypothesised relationships. The result shows that performance expectancy, effort expectancy and facilitating conditions positively influence the use of digital finance platform among rural residents in China. Besides, user satisfaction and net benefits of managing personal finance in rural China can be enhanced by using the digital finance platform. The findings contribute to extending the existing literature by integrating two theories in examining the use of digital finance platform for personal financial management, as well as providing practical insights for digital finance platform developers, financial products providers and the Chinese government to improve the rural digital finance system in China.

Keywords: *Digital Finance Platform, Personal Financial Management, Rural China, Digital Finance, Online Finance, Internet Finance, Unified Theory of Acceptance and Use of Technology), DeLone and McLean Information System Success Model.*

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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
DFP	Digital Finance Platform
CFA	Confirmatory Factor Analysis
CMB	Common Method Bias
CR	Composite Reliability
CI	Confidence Interval
D&M Model	DeLone and McLean Model of Information System Success
EE	Effort Expectancy
FC	Facilitating Conditions
HTMT	Heterotrait-Monotrait Ratio of Correlations
IP	Internet Protocol
IDT	Innovation Diffusion Theory
MPCU	Model of PC Utilization
MM	Motivational Model
NB	Net Benefits
PLS-SEM	Partial Least Squares Structural Modeling
PE	Performance Expectancy
PFM	Personal Financial Management
P2P	Peer-to-Peer
PR	Perceived Risk
RMB	Ren Min Bi
SCT	Social Cognitive Theory
SI	Social Influence
SPSS	Statistical Package for Social Science
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
TTF	Task Technology Fit
US	User Satisfaction
USE	Use of Digital Finance Platform to Manage Personal Finance
UTAUT	Unified Theory of Acceptance and Use of Technology
VIF	Variance Inflation Factor

CHAPTER ONE: INTRODUCTION

1.1 Research Background

China is one of the largest investors and users of digital technologies in the world, and the digital ecosystem created by Chinese internet companies provides digital services to every aspect of users' (Woetzel et al. 2014). Especially in the field of finance, China has taken a world- leading position in digital finance with more than 680 million online Chinese population and over twelve trillion RMB digital finance market size in year 2015 (Ngai et al. 2016). Gomber, Koch, and Siering (2017) describe digital finance as digitizing all the products and services in the financial industry. Digital finance comprises the novel financial products, financial-related software and innovative forms for interaction and communication of financial customers, and enables users to make payments, investments and savings via the internet instead of visiting the physical facilities (Gomber, Koch, and Siering 2017).

Since year 2010, the countries of Group of Twenty (G20) acknowledge that the essential role of financial inclusion is moving the world economy to be more innovative, vibrant, inter-connected and inclusive (Global Partnership for Financial Inclusion 2016). The report from Manyika et al. (2016) states that two billion people in the world are still not able to access the formal financial services. Thus, policy makers and academics should pay attention to digital finance due to its positive effects on financial inclusion, poverty reduction and economics growth (Ozili 2018). The prevalence of digital finance enhances the level of financial inclusion and enable poor households to gain more opportunities to be involved in personal financial management (Ellis and Lemma 2010).

Inclusive finance means all-encompassing use of formal financial services, which is a critical financial project and policy of the Chinese government in recent years (Chinese State Council 2015). It is also one of the key topics discussed at the Group of Twenty (G20) Summit in year 2016. In order to achieve the financial inclusion, the Chinese government pays close attention to digital finance as it enables the provision of formal financial services to the poor in the developing countries in an affordable and convenient way (Ozili 2018; Allen et al. 2016; CGAP 2017). According to Weihuan, Arner and Buckley (2015), the Chinese government considers digital finance as a

crucial instrument for attaining inclusive finance. Specifically, the prosperity of digital finance facilitates and benefits not only urban Chinese but also the rural population, whereby the vulnerable groups such as the poor, the young and farmers could obtain equal opportunity to access financial services as well. For instance, the annual data report of Yu'ebao (the largest funds platform in China) manifested that the total number of users reached 250 million at the end of year 2015, one-seventh of which are rural residents (China News 2016). People in rural areas are able to digitize their personal financial management with the proliferation of digital finance likewise.

Personal financial management (PFM) is demonstrated as managing individual and family important resources to achieve financial success, which includes making decisions on spending, saving, protecting and investing in financial resources (Garman and Forgue 2011). It is classified into personal income management, personal investment management and personal risk management (Peterson and Strode 2013). Cash deposits, purchasing bonds, stocks, mutual fund, real estate and derivatives are the most prevalent approaches for personal investment (Gedmintiene and Visockaite 2016). Besides, digital finance platform is described as the platform that supports the functions of digital finance and provides financial services and products to the public in digitalized basis via mobile phone, the internet, and other electronic channels and devices (Hu and Zheng 2016). It enables the public to access financial services and products over the internet and Internet Protocol (IP) network (Hu and Zheng 2016). In China, various digital finance platforms are available to perform personal financial management such as Yu'ebao (one of the sub financial applications from Alipay platform), Tencent Wealth, Baidu Finance, Lufax and Renrendai Peer-to-Peer (P2P) lending platform. Those platforms allow users to make payment, save money, trade stock, lend and loan money, purchase funds and so forth. Some of them even enable investors with very small amount of money (e.g. RMB1) to purchase funds and receive yield every day.

1.2 Problem Statement

During the past decade, the Chinese government has been continuously focusing on the enhancement of well-being in the national poor regions. Notably, the national agenda has been advocated to solve "three rural issues", which means supporting the development of agriculture, rural areas and farmers (Lin and Wong 2012). Cao (2016)

notes that there is a strong economic and household income growth in rural China, and the consequential increase in the demands for personal financial management among rural residents. However, personal financial management among rural residents through traditional financial institutions is still underserved due to the unbalanced-allocated financial resources between urban and rural China, notably insufficient financial capital provided (Luo and Gao 2012), difficulties of meeting credit requirement by rural Chinese (Zhao 2016) and limitation of financial institutions in rural regions (Chen 2013).

Digital finance possesses the characteristics of low barrier to entry (Claessens, Glaessner, and Klingebiel 2002) and ease of use (Hertzum, Jørgensen, and Nørgaard 2004; Abroud et al. 2015). Regarding infrastructure, based on the statistics from China's Ministry of Industry and Information Technology (MIIT China 2018), the penetration rate of mobile phone has achieved 102.5%, among which, 79.8% of the overall mobile phone users could access 3G and 4G Internet in China. In the rural China context, approximate 117 million rural household could access the Internet by the end of year 2018 (MIIT China 2019). On the back of the internet accessibility, the rural residents with low-income will be exposed with a wide range of innovative digital financial products and services and could manage personal finance and solve financial difficulties with less cost and geographical constraint (Li 2016; Malady 2016).

The research focusing on rural China is crucial. Even though the advantages of digital finance are significant and the number of rural DFP users increases rapidly year by year (CNNIC 2016), issues such as inadequate category of rural financial products, inefficiency of financial supervision, lack of guidelines and knowledge on personal financial management are still existing in the use of DFP in rural regions (Wang 2018). That may lead to unwise PFM behaviors arising from the difficulty in choosing appropriate PFM activities (Ministry of Agriculture of China 2010). It is necessary to study the current demands and influences of PFM via digital finance platform of rural Chinese in order to improve the rural digital finance system on timely basis and promote inclusive finance.

1.3 Research Gaps

This research investigates the factors influencing the use of DFP to manage personal finance, and its consequences on rural residents. The prior studies on Chinese rural digital finance mainly focus on the deficiencies and countermeasures of the current financial system under digital era (Zhao 2016; Ma and Xiao 2017). These studies identify that weak rural financial service system, insufficient financial infrastructure, monopoly of rural finance supply, large outflow of rural capital, rigorous credit rationing for rural residents and active informal credit market are the main weaknesses of current financial system in rural China; and provide the theoretical solutions by utilizing internet instruments for system optimization generally. However, most of the studies do not investigate the context of rural personal financial management (Hu and Zheng 2016; Sun 2016a). In addition, the difficulties of developing digitized personal financial management in rural region and its impacts on rural commercial banks are also explored in extant studies (Cao 2016; Lu 2014). Nevertheless, the factor that may motivate or impede the rural Chinese to perform personal financial management on DFP and the consequences of using DFP have not been widely investigated. Even though the prior studies examine factors such as compatibility, advantages, ease of use and perceived risk in digital finance platform which could significantly influence the intention to use the DFP, these studies place little attention to the actual use of DFP in rural context (Xia and Hou 2016; Lin 2015). Therefore, this research fills the research gap by focusing on the factors and consequences of digital finance in managing personal finance among rural residents in China.

1.4 Research Questions

The research attempts to answer the following research questions:

1. What are the determinants of the use of DFP to manage personal finance?
2. What are the consequences of using DFP to manage personal finance?

1.5 Research Objectives

To answer the stated research questions, this research aims to identify the determinants that motivate rural Chinese to use DFP for personal financial management and discuss its consequences of its use.

Specifically, the research objectives are to identify:

1. The determinants of using digital finance platform for personal financial management among rural residents in China; and
2. The consequences of using digital finance platform for personal financial management among rural residents in China.

1.6 Research Scope

This research focuses on only digital finance platform and personal financial management in rural China. The main purpose of the research is to examine the determinants and consequences of using DFP to perform personal finance by Chinese rural residents. According to Guan et al. (2010), China can be mainly divided into six geographical regions – Northwest, North Central, Northeast, Southwest, South Central and Southeast without the repetition and concentration of samples in a certain part of China. Thus, the geographical scope is limited to the rural areas of main land China selected from those six geographical regions. Questionnaire survey was conducted among the residents of the villages who utilize DFP to manage personal finance and over 18 years old. Those people identified as non-rural residents, under 18 years old and non-digital-finance platform users are excluded from the survey.

1.7 Definition of Key Terms

The following definitions give further explanation of several key terms used in this research as listed below：

Digital Finance

Digital finance refers to digitizing all the products and services in financial industry (Gomber, Koch, and Siering 2017). It is also known as “Internet Finance” or “e-finance” in previous studies (Gattenio 2002; Barbesino, Camerani, and Gaudino 2005).

Digital Finance Platform

Digital finance platform refers to the platform which provides financial services and products to the public over the internet and IP network (Hu and Zheng 2016).

Personal Financial Management

Personal financial Management is demonstrated as managing individual and family important resources to achieve financial success, which includes making decisions on spending, saving, protecting and investing in financial resources (Garman and Forgue 2011).

Performance Expectancy

Performance expectancy refers to the extent of users' belief and perceptions of obtaining benefits from using the system (Venkatesh et al. 2003). In the context of this research, performance expectancy is defined as the extent to which digital finance platform improves the convenience, efficiency, effectiveness and usefulness on personal financial management.

Effort Expectancy

Effort Expectancy reflects how easy or difficult of using digital finance platforms to perform personal financial management activities (Venkatesh et al. 2003). Therefore, this research defines effort expectancy as the ease of use, ease of being skilful in using DFP and ease of interacting with DFP on managing personal finance.

Social Influence

Social influence reflects the influence of other important people's (e.g., family, relatives and friends) expectation about using certain systems (Venkatesh et al. 2003). In this research, social influence is defined as the extent to which other people influence rural residents' decision on using DFP to manage personal finance.

Facilitating Conditions

Venkatesh et al. (2003) describe facilitating conditions as individual who has ability and technical resources to use the system. Thus, the research describes facilitating conditions as the assistance availability and compatibility of DFP as well as users' necessary knowledge, resource and control toward using DFP for personal financial management.

Perceived Risk

Perceived risk refers to the risk that is perceived by users towards using the system (Martins, Oliveira, and Popovič 2014). The risks towards digital personal finance may include those of financial loss and account security (Xia and Hou 2016). In the context of this research, perceived risks are defined as the extent of concerns on the risk arising from managing personal finance on DFP by rural residents.

User Satisfaction

It is defined as users' response to the information system output (DeLone and McLean 2003). User satisfaction measures the extent of satisfaction toward using an information system (Urbach and Müller 2012). It is described as the satisfaction level on digital finance platform meeting the needs of personal financial management in the research.

Net Benefits

Net benefits in the updated D&M model are demonstrated as the balance between positive and negative outcomes that individuals receive from using the system (DeLone and McLean 2003). Thus, this research defines net benefits as the extent of the DFP user can gain benefits from conducting personal financial management.

The Use of Digital Finance Platform

DeLone and McLean (DeLone and McLean 2004) define the use as the measurement of any activities such as visiting, navigating, retrieving information and executing a transaction within the website. This research measures the use of DFP by the extent of conducting personal financial management activities on DFP.

1.8 Outline of the Thesis

The structure of this thesis is indicated as follows. This chapter summarizes the overall research by providing a brief knowledge and idea of PFM and DFP to readers. The background, purpose, scope of the research and key concepts used in this research are demonstrated in this chapter. Chapter Two provides a comprehensive literature review on the underpinning theories, and empirical studies relating to the use of DFP for personal finance and consequences of using DFP. The hypotheses are also formulated in this chapter. Chapter Three explains the research methodology adopted in this

research and exhibits the design of questionnaire survey, procedures of data collection, research ethics and reliability test of the questionnaire. Chapter Four illustrates the descriptive statistical analysis and results generated from Statistical Package for Social Science (SPSS) and Partial Least Squares Structural Modeling (PLS-SEM). The research findings and discussions are presented. Chapter Five provides a summary as well as both theoretical and managerial implications of the research. Limitations and future directions of the research are outlined.

CHAPTER TWO: LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Introduction

This chapter commences with a background on the extant literature regarding personal financial management and its usage in rural China in section 2.2. In section 2.3, the definition and evolution of digital finance and DFP, and the use of DPF in rural China are presented. Then two underpinning theories: the Unified Theory of Acceptance and Use of Technology (UTAUT) and DeLone and McLean Information System Success Model (D&M IS Success Model) are discussed in section 2.4. Since the reason for rural Chinese choosing DFP to manage personal finance are yet to be investigated, the potential antecedents of using DFP are shown in section 2.5. Furthermore, the consequences of utilizing DFP to manage personal finance are discussed in-depth in section 2.5 as well. During theoretical review, the hypotheses are built, and the conceptual framework is constructed.

2.2 Personal Financial Management and Rural China

Personal financial management or personal finance is about managing financial resources to meet the long-term or short-term financial goal by an individual (Keown 2013). The basic elements of personal financial management include spending, saving and managing money, utilizing of credit and debit, and investing (Tennyson and Nguyen 2001). In order to achieve the successful personal financial management, it is critical for an individual to possess the basic financial literacy (or financial knowledge) for making sound and advanced financial decision (Huston 2010). Besides, financial literacy is also necessary for personal financial management in order to have a good knowledge on the principals of assets, liability, risks, taxes, banking and so on (Lu 2011). Apart from financial literacy, creating and implementing an appropriate financial plan are the key elements to manage personal finance effectively. There are five major steps during financial planning: evaluating personal financial health, defining financial goals, developing action plan, implementing financial plan, reviewing and revaluating the financial plan (Keown 2013). In addition, individuals need to conduct money budgeting, investment, paying income tax, repaying credit cards and other personal financial activities to put the plan into action (Lu 2011). In general, decent financial literacy, proper financial plan, and appropriate and timely

financial actions are the crucial factors to attain a sound personal financial management.

The Chinese government defines rural China as the areas that are not included in the cities and towns and may contain market towns and villages (National Bureau of Statistics of China 2008). By the end of year 2016, approximate 590 million people are rural residents which are almost 43% of the total Chinese population. Even though the income for rural residents has been growing and accumulating significantly in past decades, the financial literacy and financial awareness among the rural residents are still very low (Liu 2018). Specifically, a laggard development of rural financial market, limited credit financing channels, and defective social security system are the main issues leading to the inferior personal financial management circumstance in rural China (Zhang 2017; Zhou, Arner, and Buckley 2015). Yao (2013) depicts that a comprehensive study on the demands, current status and constraints of the personal financial management in rural China is one of the important steps to optimize the current unsatisfactory situation.

2.3 Digital Finance and Rural China

Digital finance refers to digitizing all the products and services in financial industry (Gomber, Koch, and Siering 2017). It could also be described as "internet finance" (Barbesino, Camerani, and Gaudino 2005) or an earlier synonym called "e-finance" (Gattenio 2002). Digital finance is related to the financial markets and services being transacted over electronic means (Allen, McAndrews, and Strahan 2002).

Various digital finance platforms have been created to support different types of financial service. Three novel business models, namely, new financial services products, mobile micro-payments and digitized businesses emerged based on the characteristic of digital finance (Manyika et al. 2016). Specifically, innovative financial services on the DFP include digital payment and wallets, P2P landing, personal financial planning, insurance, supply chain financing, cash management and digital salary payments (Dewan and Chen 2005). For example, the digital finance platforms such as EasyPaisa (Pakistan), HelloCash (Ethiopia) and Zuum (Brazil) deliver the online payment and wallets services to users. Apart from that, Kubo

(Mexico), MicroEnsure (Asia and Africa), GuiaBolso (Brazil) and Ezetap (India) are the digital finance platforms providing different kinds of financial services globally.

The evolution of digital finance in China occurred since three decades ago (Hu and Zheng 2016). In the first period, traditional financial industry was gradually transformed due to the trend of internalization from 1990s to 2005. Technological and infrastructural supports of financial industry are improved during this period. In second period, the third-party payment and settlement system was prospered rapidly during the year 2005 to year 2011, where traditional finance system was threatened by the expansion of digital finance technologies. The third period of evolution began since year 2011 when numerous financial services emerged on internet such as internet-based money funds, network loans and crowd funding (Zong and Zhu 2014). As a result, there are five major business models for digital finance platform (DFP) currently, which include internet-based traditional financial services (e.g., online banking, stock trading and sales of financial products), third-party payment, Peer-to-Peer (P2P) lending platform, network crowdfunding, internet virtual currency, and supply chain finance (Zong and Zhu 2014; Zhu et al. 2016).

The prevalent use of digital finance platforms has helped millions of poor rural residents to obtain financial services at affordable costs (Zhou, Arner, and Buckley 2015). service quality, rural Chinese are able to access the financial services with digitalized approaches. According to the report of the People's Bank of China, millions of rural Chinese are the users of third-party payment (e.g. Alipay) and peer-to-peer lending (e.g. LuFax); and increased innovative financial products (e.g. Jinyinong) are provided to satisfy the diverse needs of peasants in China (Bai et al. 2018). Even though DFP brings convenience and advancement of financial services to Chinese peasants, the deficiencies are still significant along with the use of DFP. For example, rural Chinese are exposed to network lending risks such as credit default risk, leaking of privacy, embezzlement of money, and illegal use of private information for fund raising (Huang 2017). Thus, it is necessary to improve the education of basic financial knowledge on rural Chinese, and then enhance their abilities to identify the financial risks on digital finance (Ding 2016).

2.4 Theoretical Underpinning

There are two underpinning theories in this research, namely, the Unified Theory of Acceptance and Use of Technology (UTAUT) and DeLone and McLean Information System Success Model (D&M Model). The constructs adopted from the UTAUT model are: performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating conditions (FC). Meanwhile, the constructs adopted from the D&M model are user satisfaction and net benefits.

2.4.1 Unified Theory of Acceptance and Use of Technology

UTAUT is the main theory used to examine the factors of using digital finance platform to manage personal finance in this research. Venkatesh et al. (2003) developed the model of UTAUT by integrating eight prominent user acceptance of technology theories to explain the adoption of complex technologies. Those models are Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), TAM2, Motivational Model (MM), Theory of Planned Behavior (TPB), Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT) and Social Cognitive Theory (SCT). A unified model is developed based upon the similarities of concept and empirical studies covered by these eight theories. The UTAUT theory holds four decisive constructs which influence users' acceptance and use behavior: performance expectancy (PE), effort expectance (EE), social influence (SI) and facilitating conditions (FC) (Venkatesh et al. 2003) which are shown in Figure 2.1 below. Extant studies empirically indicate that UTAUT is superior to other competing models in virtue of its high robustness of the key constructs to predict users' intention and use of system (Park, Yang, and Lehto 2007; Zhou 2012; Venkatesh et al. 2003). Majority studies adopt this model by conceptualizing the intention to adopt the system before actual system use behavior. However, this research considers behavioral intention as a proxy for the use of system since one of the objectives of this research is to investigate the impact of DFP, where is impossible to be examined without the precondition of actual system use. The direct or indirect correlations between the constructs and actual use behavior are also supported by various studies (Tai and Ku 2013; Yu 2012; Venkatesh et al. 2003).

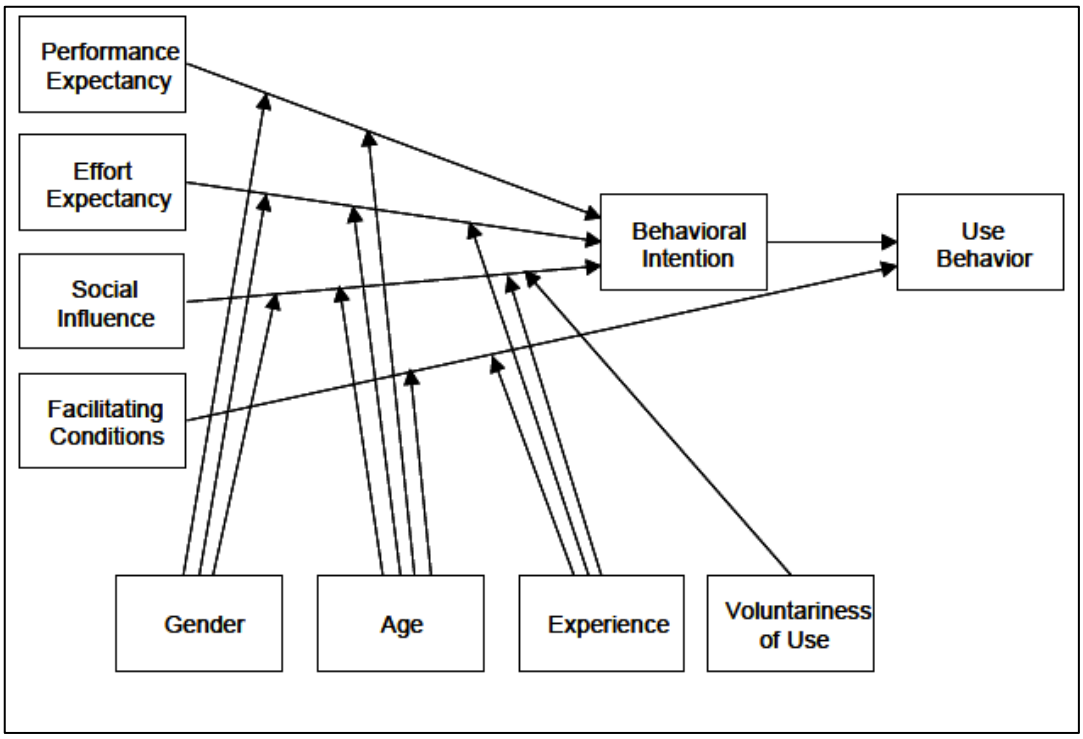

Figure 2. 1: Unified Theory of Acceptance and Use of Technology

Source: Figure reproduced from Venkatesh et al. (2003)

However, UTAUT has its limitation as well. UTAUT may not be able to provide adequate coverage of concept since the model measures new constructs by statistically selecting the best four items from existing models (Dishaw, Strong, and Bandy 2004). Notwithstanding the limitations, prior studies successfully use UTAUT to interpret the acceptance of internet banking (Im, Hong, and Kang 2011), online stocking (Wang and Yang 2005), mobile banking (Zhou, Lu, and Wang 2010) and location-based services in China (Zhou 2012). Therefore, UTAUT can offer a robust basis for identifying the factors influencing the acceptance and use of system as set forth in this research.

The definitions of four key constructs provided by Venkatesh et al. (2003) are briefly outlined as below:

1. Performance expectancy refers to the level of an individual's belief in using a certain system and obtaining benefits in job performance.

2. Effort expectancy is defined as the extent of ease that a user perceives from using the system.

3. Social influence refers to the perception of individual on other's beliefs towards using a new system.
4 Facilitating conditions means the individual perceives the infrastructure would exist to support the system usage.

(a) Performance Expectancy

The first construct of UTAUT model is performance expectancy (PE). The term is analogues to the relative advantage in innovation attribute (Rogers 2003). Venkatesh et al. (2003) depicted that the concept of performance expectancy is mainly derived from the major principles of five models, namely (i) particularly perceived usefulness in Technology Acceptance Model; (ii) job fit in Model of PC Utilization; (iii) extrinsic motivation in Motivational Model; (iv) outcome expectation in Social Cognitive Theory; and (v) relative advantages in Innovation Diffusion Theory. Perceived usefulness refers to the extent to which and individual believes the job performance can be enhanced using innovative technology (Davis 1989). Extrinsic motivation refers to the extent to which an individual would obtain perceived valued outcomes when performing an activity (Chong 2013). Thompson et al. (1991) and Jeng and Tzeng (2012) describe job fit as the extent to which an innovative technology increase individual's job performance. Besides, relative advantage refers to the benefit from using an innovative technology after comparing to the costs (Rogers 2010). In addition, performance expectancy is the most significant predictor for users' intention with significant value at all facts in model-validation (Venkatesh et al. 2003).

(b) Effort Expectancy

The notion of effort expectancy is developed by combining the perceived ease of use in TAM, complexity in MPCU, and the ease of use in IDT to describe the perception of an individual on how easy or complex the system will be used (Venkatesh et al. 2003). Specifically, perceived ease of use is described as the perception of an individual can be free of effort or easy to use a new technology (Jeng and Tzeng 2012). Moreover, complexity refers to the relative difficulty of using and understanding a new technology, that can impact the acceptance of innovative technology negatively (Rogers 2010). Venkatesh et al (2012) demonstrate that performance expectancy and effort expectancy are two essential to predict the factors that influence the intention of behaviors and use of the technology. It implies that consumer consider and evaluate

the implied effort required to accept or use a technology before determining to purchase or use it. Consumers then determine whether the efforts put on are aligned with the benefits gained from accepting and using the technology. Effort expectancy is also found significant in the application of voluntary and mandatory usage positions. However, it tends to be less significant with the continuous use of the system over a long period as the ease of using system increases by practice. Venkatesh et al. (2003) point out that effort-oriented constructs will become less significant after learning hurdles are eliminated.

(c) Social Influence

Roger (2010) states that the social notion as a factor influences the decision making on accepting and using a technology of a customer. In general, social influence includes two categories: social norms and critical mass. The social norm is classified into information influence and normative influence. Specifically, the informational influence is described as an individual gaining information from other individuals. The normative influence refers to the expectation of other individuals that a user confirms to in order to obtain a reward or prevent from punishment (Hsu and Lu 2004). In the research of Venkatesh et al. (2003), individual's perception on other people's opinion towards using a new system is known as social influence. The social influence concept is derived based upon several models including subjective norm from TRA and TAM2 models, image from IDT model and social factors in MPCU model. Social influence includes subjective culture of individual's reference group, individual's perception of others' opinion, interpersonal agreements and the perceived level on using an innovative system which could improve individual's image or status of personal social system (Venkatesh et al. 2003).

Individual may choose to use a new system to comply with other people's opinions (Wang, Meister, and Gray 2013). Venkatesh et al (2003) observe that social influence is not salient in voluntary context but becomes significant when the use is mandatory in the early stage. As social impact diminishes, individuals will become more experience with the innovative technology over time.

(d) Facilitating Conditions

Facilitating conditions is the fourth key construct of the UTAUT model, which is developed from the notions of compatibility from IDT, perceived behavioral control in TPB and facilitating conditions from MPCU. Facilitating conditions are decided by three elements: 1) perceived behavioral control; 2) facilitating conditions; 3) compatibility (Venkatesh et al. 2003). According to the previous studies regarding the use and adoption of information technology, which illustrate that facilitating conditions have a positive influence on the intention to use the information system (Jong and Wang 2009; Lakhal, Khechine, and Pascot 2013) and use behavior towards the system (Moore and Benbasat 1991; Venkatesh et al. 2003; Venkatesh, Thong, and Xu 2012). Facilitating conditions has a directly positive influence on the use of system (Venkatesh, Thong, and Xu 2012). Venkatesh et al (2003) state that the individual needs more support from the organization as there are concerns towards the use of newly-introduced system. As time progresses, an individual gets used to interacting with the new system and becomes less dependent on the organization and more on experience.

2.4.2 DeLone and McLean Information System Success Model

The initial D&M model is developed by DeLone and McLean (1992) for evaluating the success of information system. After ten years, the D&M IS Success Model (DeLone and McLean 2003) is updated to explain the impact of the use of digital finance platforms and the extent to which it could support the personal financial management of rural individuals. It is revised to include six constructs namely, Service Quality, Information Quality, System Quality, (Intention to) Use, User Satisfaction and Net Benefits as presented in Figure 2.2 (DeLone and McLean 2003; 2004).

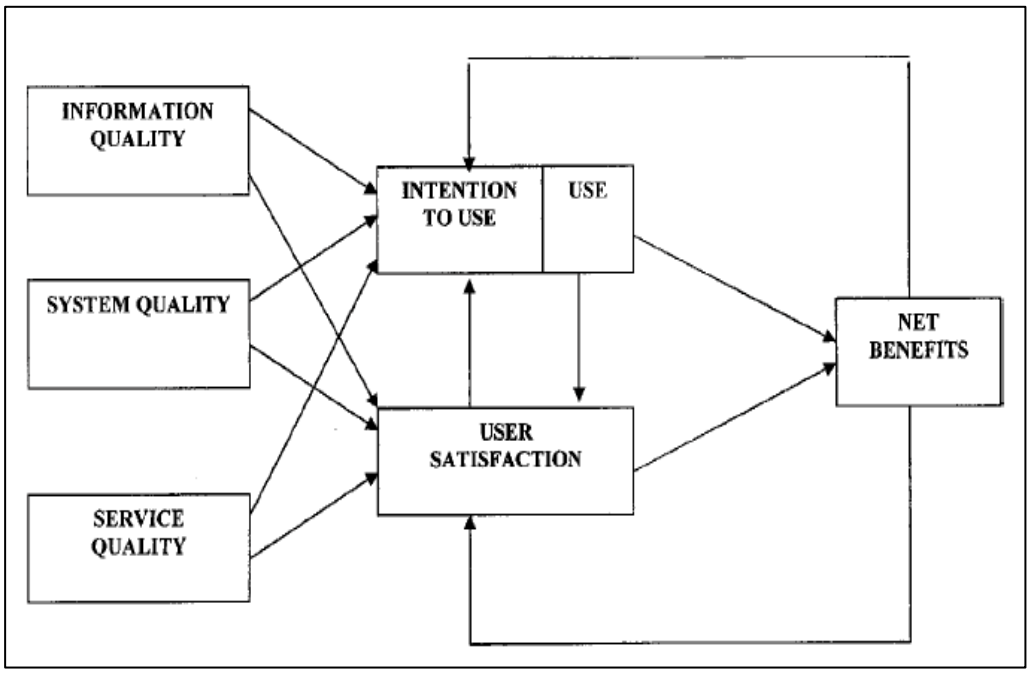

Figure 2. 2: Updated DeLone and McLean Information System Success Model

Source: Figure reproduced from DeLone and McLean (2003)

The first four constructs of D&M are the determinants of intention towards using technology, and the latter two constructs are used to examine the effectiveness of the system (DeLone and McLean 2003). DeLone and McLean (2003) illustrated that the constructs are interrelated, where (i) system use and user satisfaction are affected by information quality, system quality and service quality; (ii) user satisfaction and system user interact with each other in both positive and negative direction; (iii) The net benefits can be predicted directly by system use and user satisfaction. Several prior studies employ D&M as the underpinning theory in the field of e-commerce and digital finance. For instance, Lee and Chung (2009) apply the model to examine the satisfaction and trust of mobile banking, Chong, Cates, and Rauniar (2010) employ the model to evaluate the perceived benefits of online student loan, and Tam and Oliveira (2016) combine with Task Technology Fit (TTF) to investigate the impact of mobile banking on individual performance. Nevertheless, Mardiana, Tjakraatmadja, and Aprianingsih (2015) critiqued that D&M model lacks fundamental theory to predict the intention without the integration with UTAUT and Technology Acceptance Model (TAM).

According to Gay (2012), the model could be separated into three stages, namely, system design stage (system quality, service quality and information quality), system delivery stage (system use and user satisfaction) and system outcome stage (net benefits). As the purpose of this research is to adopt D&M information success model to examine the impacts of actual system use, it only focuses on the user satisfaction and net benefits of the model in system delivery and outcome stage, and their relationships with the actual system use. Those factors directly reveal the impacts of system on users instead of evaluating the quality and performance of information system. However, the details of other main constructs that are not examined in this research will be briefly discussed as well.

(a) Information Quality

Information quality is one of the main constructs in D&M information system success model. It is also called knowledge quality in the study of Wu and Wang (2006). Information quality is also described as information use fitness (Wang and Strong 1996). It can focus on the content delivered by the information system (DeLone and McLean 2003). Floropoulos et al. (2010) state that information quality emphasizes on comparing the sender's expected meaning of information with receiver's interpretation of the same information. There is a variety of studies describing the characteristics of information quality. DeLone and McLean (2003) used the metrics: completeness, ease of understanding, personalization, relevance and security to measure the success of e-commerce. Besides, the system measures information quality by using the actual level of information produced compares with the needs from the user in terms of reliability, completeness, accuracy, relevance and so on (Floropoulos et al. 2010). Information quality also can be considered as the perceived characteristics of information such as reliability and accuracy by the instructor online (Chen 2010). Information quality is a very important construct to encourage not only the intention to use or use of information system, but also user satisfaction (DeLone and McLean 2003).

(b) System Quality

The quality of system is the expected feature of a system to provide the information that users can be used for decision making (DeLone and McLean 2003). System quality is defined as the measures of the information processing system itself by DeLone and McLean (1992). The study of Wu and Wang (2006) demonstrated the

dependent relationship between system quality and operational features. Maes and Poels (2006) suggest that system quality is able to be measured only if an individual perform a particular task on the system. System quality is measured by the availability of hardware and software application supported for the user (Gülbahar 2007). The main parameters used to measure system quality include accuracy, flexibility, accessibility, reliability, ease of use and user friendliness of the information system (Floropoulos et al. 2010; Acton et al. 2009). In the updated of Information System success model, DeLone and McLean (2003) demonstrate the measurement of system quality in framework which comprises data quality, ease of use, portability, functionality, reliability, flexibility, importance and integration. System quality also plays a significant role on encouraging the system use (or intention to use of system) and user satisfaction (DeLone and McLean 2003).

(c) Service Quality

Organizations consider quality issue as the critical issue for the management and decision making of the company. DeLone and McLean added service quality into the updated Information System success model, which DeLone and McLean (2003) described it as the overall support from service provider. Further, Petter, DeLone, and McLean (2013) defined service quality as the support of the information system department. They adopted four dimensions of service quality, namely assurance, empathy, responsiveness and reliability, to measure the success of e-commerce. Assurance refers to the perception of user belief that the system can solve the problem. Regarding empathy, the system should be empathetic, prompt and reliable to provide the service upon on the demands from the user. Service performance and anticipated service level are also used to measure service quality. Further, DeLone and McLean (2003) agreed that the measurement of constructs should be on a tangible response of the system instead of practical aspects. Ultimately, the metrics include tangible, responsiveness, assurance, empathy and reliability are concluded as the intended measures for service quality. According to the updated Information System success model (DeLone and McLean 2003), service quality can affect both of intention to use (or use) and user satisfaction of the information system.

(d) System Use

System use is one of the key elements in D&M information system success model. DeLone and McLean (2004) argued that the measurement of system use does not simply refer to the time spent on using information system, but also the quality, appropriateness and nature of the system. In the earlier term, Davis (1989) reveals that system use should be the actual usage of the system that relates to the job. At present, system use can be illustrated as the actual use, depth of use and importance of use in the study of Petter and DeLone (2009). In the case of measuring e-commerce success, nature of use, navigation patterns, number of site visit and number of transactions executed are adopted as the metrics to represent the system use (DeLone and McLean 2003). With regards to the interrelationship between system use and other constructs, information quality, system quality and service quality can jointly affect the system use. Besides, system use, and user satisfaction can mutually affect each other. The potential interlink relationship also exists between system use and net benefits (DeLone and McLean 2003; Petter, DeLone, and McLean 2013).

(e) User Satisfaction

According to DeLone and McLean (1992), user satisfaction serves as a critical construct in the information success model. It is defined as the response of user to the information system output. The study conducted by Etezadi-Amoli and Farhoomaad (1996) illustrated that quality is a significant factor that drives performance and leads to user satisfaction. Seddon and Kiew (1997) state that information quality, system quality, information system usefulness are the strong predictors of user satisfaction. The users' satisfaction also can be explained by the level of satisfaction of users with the information system and system output (Petter, DeLone, and McLean 2008). Stripling (2017) depicts that user satisfaction could be measured by accuracy, adequacy, ease of use, effectiveness, efficiency and overall satisfaction of the information system. However, Al-Ghazali et al.(2015) noted that the majority of studies did not identify the difference between system satisfaction and information satisfaction. Satisfaction derived from system use and from information use are not the same constructs (Ghobakhloo, Tang, and Zulkifli 2013; Wixom and Todd 2005). In terms of e-commerce, user satisfaction is explained by consumer's feeling or reaction on the experience obtained from an e-commerce system (Molla and Licker 2001). Explicitly, user satisfaction is a construct that should comprise the satisfaction of user

from the perspective of system, information and service of the e-commerce. DeLone and McLean (2003) indicate that user satisfaction can be a potential construct mutually affecting the system use (or intention to use) and net benefits.

(f) Net Benefits

Regarding to system outcome stage, the earliest information system success model identifies two system outcomes: individual impact and organizational impact (DeLone and McLean 1992). In year 2003, the model has been updated and assessed only one outcome of the information system: net benefits (DeLone and McLean 2003). Petter and McLean (2009) described net benefits as the information system's influence on an individual, organization, industry and so on. It is typically measured by perceived usefulness, effect on work practice and performance. However, Wu and Wang (2006) expressed the importance of measuring perceived net benefits, which refers to the extent of user perception that the benefits can be derived through the use of the system. Besides, few information system studies measure net benefits as relative advantage. From the individual perspective, relative advantage of information system is explained by perceived usefulness (Petter, DeLone, and McLean 2008). Financial metrics are frequently used to measure relative advantage at the level of organization (Tang and Morteza 2013). Al-Ghazali et al. (2015) explain net benefits as relative advantage, which is described as the extent to which user can be benefited in using mobile banking. There is an interlinked relationship between user satisfaction, system use and net benefits. Specifically, the expected gained from the system can motivate the system use and then become net benefits to the user (DeLone and McLean 2003). It means that high system use can provider higher level of satisfaction net benefits to the user.

Therefore, both UTAUT and D&M models are adopted in this research to investigate the factors influencing users on using the DFP for personal financial management and the consequences of using the platform. Both models are appropriate for the research of information system (Venkatesh et al. 2003; DeLone and McLean 2004) while, DFP is considered as an information system designed to perform finance-related functions. Specifically, Martins, Oliveira, and Popovič (2014) and Shin (2009) recognize UTAUT as a more complete model that in assessing users' acceptance behaviour to predict users' behavioral intention and usage behavior of digital finance (Abdullah, Rahman, and Rahim 2018; Al-Qeisi 2009; Tarhini et al. 2016; Foon and Fah 2011).

Furthermore, D&M model is employed to evaluate the consequences (user satisfaction and net benefits) on the use of DFP for personal financial management. It is considered as an advantageous, strong and parsimony model for investigating main dimensions of information system service usage behavior and their internal correlations (DeLone and McLean 2003). Previous studies show the consistent result that use of information system can improve user satisfaction and net benefits of the user (DeLone and McLean 2003; 2004; Molla and Licker 2001). Thus, these two theories are appropriate and relate closely to the research.

2.5 Hypotheses Development

There are seven hypotheses developed in this research. The hypotheses include the potential relationships between the use of digital finance platform, and performance expectancy, effort expectancy, social influence, facilitating conditions, perceived risk, user satisfaction and net benefits.

2.5.1 Performance Expectancy and Use of Digital Finance Platform

The root constructs of performance expectancy in UTAUT model include perceived usefulness, relative advantage and outcome expectation (Venkatesh et al. 2003). On the one hand, several empirical studies clarify the association between performance expectation and the use of digital finance platform. Perceived usefulness has been considered as a significant factor affecting the intention to use digital finance (Park, Yang, and Lehto 2007; Eriksson, Kerem, and Nilsson 2005). Roger (2010) states perceived relative advantages have a positive relationship with the use of innovative technologies. Furthermore, according to Tan and Ouyang (2004), the performance expectancy could impact the behavioural intention which then influences the use of system positively. On the other hand, personal finance involves investment activities, for instance, online stocking, which is critical to seize the stock information in timely and useful basis (Tai and Ku 2013). Compared with conventional approach, the usefulness of managing personal finance through digital platform is critical since it allows rural users to obtain financial information and services with higher efficiency without the limitation of location and time (Yiu, Grant, and Edgar 2007).

With respect to rural context, the performance expectancy of user also plays a critical role on determining the degree of digital finance platform usage. Kishore and Aloysius

(2016) find that performance expectancy is one of the reasons that motivate rural people's intention to use digital finance services. Moreover, Behl and Abhinav (2016) indicate that the diffusion of using mobile banking services is positively driven by the perceived usefulness of rural users. In rural China, the higher usefulness (performance expectancy) of the digital information system that rural Chinese perceive, the more perceived satisfaction on the system they have, which thereby positively influence rural Chinese actual use behaviour of the system (He 2008). Further, Wang and Zhang (2017) state there is a significant and positive relationship between perceived usefulness (performance expectancy) and the rural residents' use of internet finance services via the available platforms. In other words, the use of digital finance platform by rural residents can be driven by the degree of expected usefulness they perceive towards the platform.

Despite the above supporting arguments, the understanding of the relationship between performance expectancy and use of digital finance platform to manage personal finance is still inadequate for the reasons as follows. Firstly, Abdullah, Rahman, and Rahim (2018) observe the insignificant association between performance expectancy and behavioural intention thereby not affect the use of digital finance technology. Secondly, Tai and Ku (2013) reveal the performance expectancy is associated with high level of behavioural intention on using the digital finance platform for personal investment, however, the linkage between intention and actual usage of the platform is still not investigated in the study. Thirdly, there is lack of research studying the relationship of these two constructs in term of personal financial management in rural China. Sun (2016b) shows that performance expectancy is a salient factor that tempts people to purchase internet financial product for personal financial management since managing personal finance via internet-based platform instead of physical financial institution allows user to access financial trends almost at anywhere at any time (Zhao and Cheng 2016).

To sum up, it is meaningful to study the association between these two variables for identifying whether performance expectancy can provide greater motivation for rural Chinese to manage personal finance on digital finance platform. Based on the above statements and UTAUT theory, this research gives a comprehensive analysis on how

performance expectancy influences the use of digital finance platform. Therefore, the first hypothesis is proposed:

H1*: Performance expectancy positively relates to the use of digital finance platforms to manage personal finance among rural residents in China.*

2.5.2 Effort Expectancy and Use of Digital Finance Platform

Perceived ease of use and complexity are the two key constructs pertain to effort expectancy (Venkatesh et al. 2003). There are several reasons that explain the consistent association between effort expectancy and the system use behaviour. Moore and Benbasat (1991) report that effort expectancy (ease of use and complexity) has a significant relationship with the use of information systems. Regarding the researches of China, effort expectancy is used by Van Raaij and Schepers (2008) to investigate virtual learning environment adoption, mobile payment (Wang and Yi 2012) and mobile internet banking (Deng et al. 2010). Yan (2003) states that people in China prefer adopting the basic and easy-to-use technology to advanced and less friendly counterparts. Digital finance platforms, for instance, Yu'ebao enables users to perform fund investment and cash management simply and easily using mobile phone applications (Zhang 2014).

The association between effort expectancy and use of digital finance platform is also noticeable in rural aspect. Studies show that ease of use is one of the critical incentives for the users in rural area that encourage them to use the digital finance platform (Kishore and Sequeira 2016; Behl and Pal 2016). Regarding rural Chinese, such as farmers who prefer to use the innovative information system with simple and easy operation due to their low educational level and limited ability to handle the system (Wu 2012). It implies that the less effort expectancy the rural users perceived on the new information system, the greater willingness for them to accept and use the system. This statement is also supported by the study of He (2008), which espouses that if the rural Chinese user perceives that the information system is easier for use (with low effort expectancy), the users' acceptance of the system will be higher.

Nevertheless, this research disputes the association between effort expectancy and the use of digital finance platform to manage personal finance in rural China is not yet fully studied according to the existing literatures. First of all, Tarhini et al.(2016) find

that effort expectancy does not significantly affect users' acceptance and use of digital finance platform. Zhou (2010) and (2012) also failed to support the direct association between effort expectancy and the behavioural intention and usage behaviour of using online banking platform in China, even though the indirect effect between these variables are still existing. Furthermore, there is insufficient research to draw the relationship between these two variables in terms of personal financial management and rural China. Effort expectancy (ease for use) needs to be considered as a critical factor influence rural Chinese residents for the use of digital finance platform to manage personal finance owing to low educational level, and poor knowledge and ability towards using innovative information system (Wu 2012; He 2008).

Taken together, examining the association between these two constructs provides an inclusive view on whether effort expectancy can influence rural Chinese on using digital finance platform to manage personal finance. Thus, aligning the above arguments with the UTAUT theory, the second hypothesis of this research is:
H2*: Effort expectancy positively relates to the use of digital finance platforms to manage personal finance among rural residents in China.*

2.5.3 Social Influence and Use of Digital Finance Platform

Social influence is developed from subjective norm, social factors and image, which reflect the influence of other important people's (e.g., family, relatives and friends) expectation about using certain systems (Venkatesh et al. 2003). Karahanna et al. (1999) illustrate that the adoption of information technology services by individuals is expected to be influenced by peers and friends. The concept of social influence theory (Kelman 2017) also supports that when important people suggest using a certain technology, individuals may comply with the suggestion. Previous studies successfully espousing the consistent association between social influence and use of the information system in the context of wireless finance (Kleijnen, Wetzels, and De Ruyter 2004), internet banking (Schepers and Wetzels 2007), and 3G services (Wu, Tao, and Yang 2007).

From the rural perspective, Kishore and Sequeira (2016) states that rural people can be influenced mildly by surrounding people on making decision regarding utilizing mobile banking platform. The reason behinds the rationale is that innovative

technology such as digital finance platform may create uncertainties, and this will compel people to use their social network to obtain suggestions on using the technology (Tarhini et al. 2016). Studies of Wang, Zhou, and Zhang (2018) and He (2008) illustrate that social influence can positively impact rural Chinese behavioural intention towards the Internet and mobile communication services (which pertain to platforms for digital finance as well), and affects the actual usage behaviour ultimately. The aboves espouse the original statement regarding the positive associations between social influence, and BI and usage behaviour on UTAUT.

Despite these supporting arguments, the association between social influence and the usage bahaviour is not yet researched completely. On the one side, the study of Mu (2017) indicate that the inconsistent result is found among the studies on the association between social influence and the use of digital finance platform to manage persoanl finance in China. Further, social influence has only a weak association with the usage bahaviour regarding mobile banking services in rural area (Kishore and Sequeira 2016). Social influence even does not influence users' bahaviour intention according to Venkatesh and Morris (2000) and Chau and Hu (2001). On the other side, there are few studies to link the social influence to the use of DFP for personal financial managemenst in rural China. However, using digital finance platform can create risk and uncertainty for the rural users (Wang, Zhou, and Zhang 2018), and this may induce the users to consult the surrounding people (such as friends, parents and collegues) for having better knowledge on the platform and making decision (Tarhini et al. 2016).

Thus, this research depicts the relationship between these two constructs, which provides perspective on how social influence affects the behaviour of rural Chinese on using of DFP for personal financial management, and hypothesized that:
H3*: Social influence positively relates to the use of digital finance platforms to manage personal finance among rural residents in China.*

2.5.4 Facilitating Conditions and Use of Digital Finance Platform

Venkatesh et al. (2003) describe facilitating conditions as an individual who has the ability and technical resources to use the system. Using digital finance platform requires devices such as smart phone, computer, or laptop as well as access to the Internet to support the management of personal finance (He 2008). There are several

explanations for the association between facilitating conditions and use of digital finance platform. The expanding advanced facilities and devices (such as internet and smart phone) increases the accessibility of digital finance platform (Mu 2017). Besides, people with higher proficient on using the internet and computer also lead to higher rate of adopting electronic banking services (Ghalandari 2012). The studies of Yu (2012) and Venkatesh et al. (2003) also successfully support the relationship between facilitating conditions and the use of mobile banking and information system respectively.

In rural context, Cheng (2006) indicates that the environmental factors can improve rural users' motivation, and then influence their behaviors. It aligns with the result of Wu (2012)'s research, which reveals the positive relationship between facilitating conditions and the usage behavior of rural user. The association of these two variables also exists among the rural residents in China. According to the statistics of China Internet Network Information Center (CNNIC 2016), as the penetration rate of accessing internet and using smart phone is gradually growing in rural China, the rate of adopting digital finance by rural residents is rapidly increasing as well. The poorer the facilitating conditions (with low internet coverage rate, mobile and laptop usage rate), less people utilize online financial services in rural areas of China (Leng and Chen 2017).

However, this research disputes that the review of the association between facilitating conditions and the use behavior is still inadequate. Firstly, several studies show the inconsistent findings regarding the relationship of these two variables in rural perspective (Behl and Pal 2016), but Wu (2012) indicates otherwise. Secondly, the research on the linkage of facilitating conditions and use of DFP for personal financial management towards rural China is still absent. With the fast-growth rate of internet accessibility, and digital devices and infrastructure usage in rural China, a growing number of users can utilize the digital finance platform and even manage personal finance on the platform (CNNIC 2016). Therefore, the research hypothesis proposed is as follows:

H4*: Facilitating conditions positively relates to the use of digital finance platforms to manage personal finance among rural residents in China.*

2.5.5 Perceived Risk and Use of Digital Finance Platform

Digital finance platforms provide services on both payment and investment aspects. From the investment perspective, investors make decision based on the comparison between potential earning and risks. Featherman and Pavlou (2003) define perceived risk as the potential loss in pursuing a desired outcome of using an electronic service. Perceive risk towards digital personal finance may include the risks of financial loss and account security (Xia and Hou 2016). Wang et al. (2003) define perceived risk as the threats of security and threats absents in a digital finance system. Thus, UTAUT model which includes the perceived usefulness and ease of use (effort expectancy) are not adequate to explain the incentives of using digital finance platform to manage personal finance as it lacks a perspective of financial risk (Venkatesh, Thong, and Xu 2016). Expanding the UTAUT model with the concern of perceived risk is also supported by previous studies, which can make a more comprehensive review on users' acceptance behaviour especially in financial perspective (Martins, Oliveira, and Popovič 2014; Shin 2009).

In rural areas context, the perception of risk regrading digital finance platform also plays a salient role in inflencing the use of the platform (Behl and Pal 2016). Behl and Pal (2016) specify that the usage of online banking platform is driven by low-risk perception towards the platform. Further, the risk of digital finance is also a concern in Chinese financial system due to current limitations of law and regulation to supervise the newly developing financial technology in China (An et al. 2015). Accoring to the study of Huang (2017), rural residents in China are also exposed to the financial risk and fraud, for instance, the rural users suffer from losing money on P2P lending platform due to misappropriation of funds by the platform owners. Therefore, the perception of financial risk is also a factor that cannot be ignored in the context of rural Chinese financial research. Moreover, Ostlund (1974) and Martins, Oliveira, and Popovič. (2014) find perceived risk negatively affects the acceptance and usage of innovative services. Therefore, this research hypothesises that:

H5*: Perceived risk negatively relates to the use of digital finance platforms to manage personal finance among rural residents in China.*

2.5.6 Use of Digital Finance Platform and User Satisfaction

User satisfaction measures the extent of satisfaction toward using an information system (Urbach and Müller 2012). Consumers with high satisfaction are reflected by the behaviors such as repeat purchases and repeat visits (DeLone and McLean 2003). Bailey and Pearson (1983) are one of the pioneers who study satisfaction in using computers. They define user satisfaction by using 39 factors and conclude that user satisfaction is the outcome of users' attitude responses to IS. Financial services in rural China is still under satisfied (Zhe and Gan 2011). Users of traditional financial services may switch to Internet finance in order to improve satisfaction by enjoying faster, more convenient and higher flexible services (Evanschitzky et al. 2004). Using Internet services could positively affect users' satisfaction (Choi and Sun 2016). Nui Polatoglu and Ekin (2001) indicate that early adopters of financial services on the Internet have higher satisfaction than other users.

Furthermore, Yoon (2010) espouses that the use of digital finance platform can significantly influence the user satisfaction towards the financial services in China. In rural area context, previous studies show consistent results on the significant association between use of information system and users' satisfaction (Li et al. 2012; He 2008). Li (2012) specifies that the satisfaction level of rural users regarding e-learning is enhanced by using the related information system. The association between these two variables in rural perspective is also existed in the study of Shah (2013). Moreover, there is lack of research on use of digital finance platform and user satisfaction in China especially in the rural areas. Most of the prior studies focus on the perspective of e-learning and e-commerce than digital finance and China context (Li et al. 2012; DeLone and McLean 2004; Molla and Licker 2001). Taken together, ability to depict the relationship between these two variables to identify how the use of DFP influence rural residents' satisfaction level on personal financial management. Therefore, the research hypothesizes that:

H6*: Use of digital finance platforms positively relates to user satisfaction in personal financial management among rural residents in China*.

2.5.7 Use of Digital Finance Platform and Net Benefits

Net benefits in the updated D&M model is demonstrated as the balance between positive and negative outcomes that individuals receive toward using the system

(DeLone and McLean 2003). Seddon (1997) defined net benefits equals all past and future benefit less all past and future cost of using IS. In terms of adopting digital finance platforms, net benefits of individual users can be measured by investigating the extent of cost and time saving, individual productivity, usefulness and task performance (e.g., returns and losses on investment and profitability) (Urbach and Müller 2012). Prior studies report that managing personal finance via the Internet may enhance net benefits by means of cost reduction (Hans 2002), saving processing time (Chen and Jin 2017), and improving investments decision-making (Ding, Huang, and Verma 2011).

In the context of rural China, Lend and Cheng (2017) and Wang and Zhang (2017) show that the physical financial institutions are still very limited, especially in the poor areas of rural China. Rural residents need to spend relatively longer time and transportation fee in order to reach the institution for financial services. Thus, with the growing accessibility of the internet, smart phone and laptops, rural Chinses can access the financial services via digital platforms, this reduce the cost and time to a certain extent and enhance the net benefits from using the DFP (Leng and Chen 2017; Ma and Xiao 2017). Based on the extant literature, the use of DPF and net benefits are still not widely studied in terms of personal financial management and rural China (Huang 2017; Chen 2013). Therefore, the research hypothesizes that:

H7*: Use of digital finance platforms positively relates to net benefits of personal financial management among rural residents in China.*

2.6 Conceptual Framework

In the premise, a conceptual framework of this research is developed based on the adopted theories and the series of hypotheses, which is exhibited in Figure 2.3.

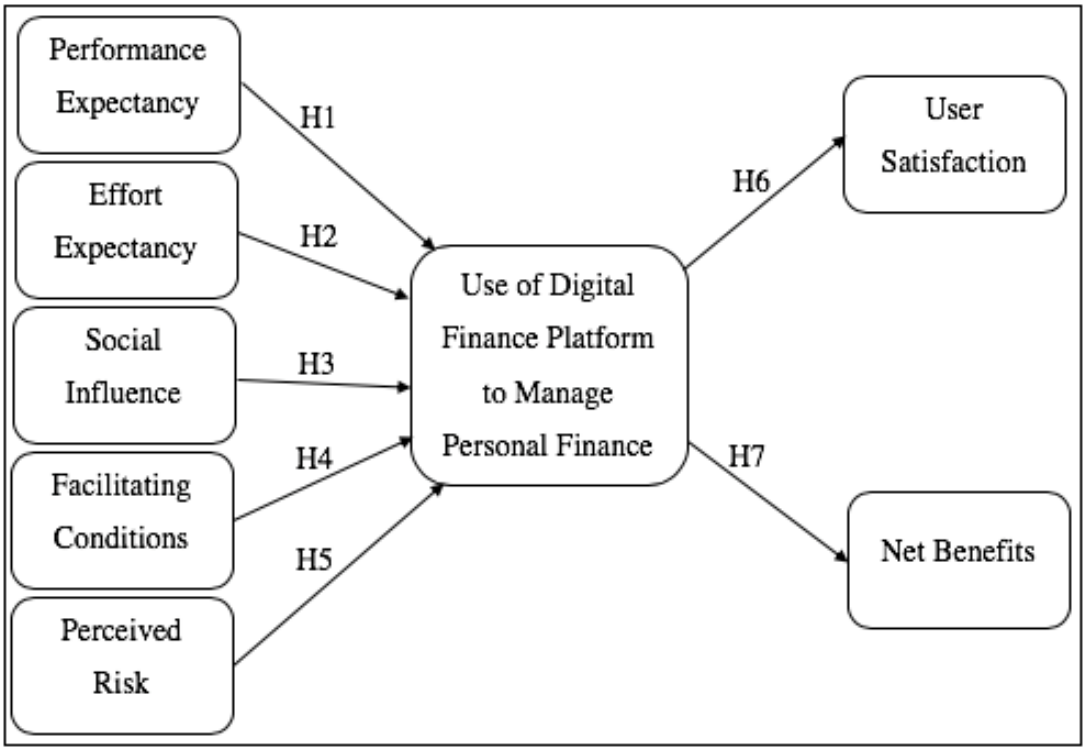

Figure 2. 3: Conceptual Framework of the Research

2.7 Summary

This chapter discusses personal financial management and digital finance in rural China. Comprehensive literature review on the two underpinning theories - UTAUT and D&M IS success model, and the constructs within the theories is undertaken. The hypothesized relationships between variables of this research is proposed by reviewing the extant literatures. All of the hypotheses will be empirically tested, and the results will be demonstrated in the following chapters. A conceptual framework is constructed in order to provide a clearer depiction of the overall study of this research.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to a series of procedures used to perform the data collection and analysis (Walliman 2005). It indicates the principals and methods adopted in the research. Methodology also provides the explanation for a specific method employed. In this section, the methodology is clarified to ensure the accuracy and implications regarding the extant research in DFP for personal financial management in rural China. Further, the research design, instruments, method for data collection and sampling procedures are explained. In general, this research utilizes the non-probability multistage sampling methods to target the respondents, and to whom the questionnaires are distributed through both social network platform and face-to-face in China.

3.2 Research Design Overview

This research conducted a cross-sectional survey in the selected villages by means of online and offline. A descriptive-analytical research design is chosen to study rural Chinese's use of DFP for personal financial management. The descriptive research is employed as it is advantageous to depict the characteristics of a population (Zikmund et al. 2013). Moreover, based on the study of Zikmund et al. (2013), a survey under self-administrated is developed could be used to clarify the uncertain problems and test the hypotheses. The respondents must be those who are currently using the DFP to manage personal finance to clarify the motivation or impediment, and consequences on using DFP through survey. Further, respondents must be rural Chinese residents aged 18 years old and above since the majority of financing products (e.g. funds and stocks) in the market are not open for the person who is under 18 years old in China. It is able to assure the authenticity of collected data to a certain extent. The questionnaires were dispersed by two means online and offline. The offline survey was conducted by directly face-to face, while the online survey was conducted by asking the respondents to answer the questionnaire through a Wenjuancxing (online questionnaire platform) link.

3.3 Variables and Measurements

The variables of the research model are divided into two types: exogenous and endogenous variables. Performance expectancy, effort expectancy, social influence, facilitating conditions and perceived risk are considered as exogenous variables, while, the use of digital finance platform, user satisfaction and net benefits are described as endogenous variables. Further, the measurements of each variable are explained.

3.3.1 Exogenous Variables

The exogenous variables are the factors whose value is independent from the position of other variables under research (Engle, Hendry, and Richard 1983). Premised on UTAUT, this research adopts five exogenous variables namely, performance expectancy, effort expectancy, social influence facilitating conditions, and perceived risk (Venkatesh et al. 2003; Yu 2012; Tai and Ku 2013; Martins, Oliveira, and Popovič 2014). These studies measured the proposed variables in terms of general system use, and the use of mobile banking and mobile stocking. Meanwhile, perceived risk is adopted from Kishore and Sequeira (2016). The operationalization of exogenous variables is shown in final questionnaire (refer Appendix: 1.0). The seven-point Likert scale is used to measure all the items of the research.

(a) Performance Expectancy (PE)

Performance expectancy is the benefits that user expects to obtain from using a system to perform a particular activity (Venkatesh et al. 2003). Yu (2012) measured the performance expectancy by the extent of performance improvement, time saving, convenience and usefulness enhancements in mobile banking system. Meanwhile, in the study of Tai and Ku (2013), performance expectancy is measured by efficiency improvement of the online stock trading system. Therefore, this research examined the performance expectancy by the extent to which digital finance platform improves the convenience, efficiency, effectiveness and usefulness on personal financial management.

(b) Effort Expectancy (EE)

Venkatesh et al. (2003) states EE reflects the perceived ease of use and complexity by the user of system. Deng et al. (2010) extract the percieved ease of use to act as the proxy of effort expectancy to explain the mobile banking adoption behaviour. Yu

(2012) evaluated the influences of EE by mesuring the extent to which information system is easy to use, to interact and to learn to use it. Besides, clearness and understanableness of the system are the items for measuring EE as well (Tai and Ku 2013). Thus, ease of use, ease of being skilful at using DFP and ease of interacting with DFP on managing personal finance are the indicators for measuring effort expectancy in this research.

(c) Social Influence (SI)

Social influence is illustrated by the extent to which users' decision is influenced by other's suggestion and expectation on using a system (Venkatesh and Morris 2000). Foon and Fah (2011) and Yu (2012) measures the social influence by examing the expectation from the aspects of important people and friends of the users. The studies also evaluate the supports of working and studying environments to determine the influence from social perspectives. Generally, this research measures the social influence by the extent to which other people influence rural resident's decision on using DFP to manage personal finance.

(d) Facilitating Conditions (FC)

Facilitating conditions is defined as the ability and resource to use a system (Venkatesh et al. 2003). Existing studies measure facilitating conditions by the supports of living and working environment, system compatibility, help availability as well as the supports of necessary knowledge and resources of using the system (Foon and Fah 2011; Yu 2012). Therefore, the measurement items to examine facilitating conditions include the assistance availability and compatibility of DFP as well as users' necessary knowledge, resource and control toward using DFP.

(e) Perceived Risk (PR)

Perceived risk is the risk that users would believe to encounter on interacting with a system such as security and financial risks (Xia and Hou 2016). Martins, Oliveira, and Popovič (2014) illustarate that perceived risk may come from the perception of lossing privacy control, financial losses and system prerformance errors of the system. Perceived risk in this research is measured by the extent of concerning on the risk arising from managing personal finance on DFP by rural residents. The measurement

items of each variable are carefully selected to fit the digital finance adoption in managing personal finance among rural residents in China.

3.3.2 Endogenous Variables

The endogenous variables are the use of digital finance platform to manage personal finance and its consequences namely, user satisfaction and net benefits. A seven-point Likert scale is used to measure the items from 1 (strongly disagree) to 7 (strongly agree). The detailed measurement items of each endogenous variable are demonstrated in the questionnaire (refer Appendix: 1.0)

(a) Use of Digital Finance Platform (USE)

The first endogenous variable is the use of digital finance platforms regarding personal financial management. DeLone and McLean (2004) define the use as the measurement of any activities such as visiting, navigation, retrieving information and executing a transaction within the website (extent the scope to the applications of smartphone in this research). Combining the similar measurement of use in literatures regarding online finance services such as online banking and internet student loan (Tam and Oliveira 2016; Chong, Cates, and Rauniar 2010), this research measured the use of DFP by specifying the extent of using the most popular personal financing activities on DFP in China.

(b) User Satisfaction (US)

Wu and Wang (2006) measure user satisfaction as the sum of people's pleasure and displeasure feelings on using a system based on the overall feeling, extent of meeting users' needs and the effectiveness and efficiency of the system. Chong et al. (2010) indicate the user satisfaction can be measured by customer's needs achievement, information exchange efficiency and overall satisfaction regarding the service. User satisfaction also can be measured by the level of repeats on visiting the system or purchasing the services (DeLone and McLean 2003). For the purpose of this research, user satisfaction is measured by five items, for example, the satisfaction level on digital finance platform meeting the needs of personal financial management.

(c) Net Benefits (NB)

Based on DeLone and McLean (2016), the net benefits (net impacts) is measured by the improvement of decision-making, cost reduction and profits improvement. It also can be evaluated by time saving and increase of return on investments (DeLone and McLean 2004). Wu and Wang (2006) state the benefits of system are difficult to be evaluated in numeric basis, therefore, perceived system benefits could be adopted as surrogates to measure the net benefits. Five items are used to measure net benefits. For instance, user may strongly agree or disagree that DFP enables the user to complete personal financial management more quickly.

3.4 Questionnaire Design

In this research, the questionnaire survey is the main approach adopted to collect primary data. The questionnaire is constructed based on various studies of UTAUT and D&M models, then selected the most appropriate questions to determine the use of DFP for personal financial management. The questionnaire is divided into five sections and twelve pages for ease of reading and completion. A seven-point Likert scale is used to measure the items with the scales from strongly disagree to strongly agree according to the measurement scales adopted from similar researches of UTAUT and D&M models (Van Raaij and Schepers 2008; Wu and Wang 2006). McDaniel and Gates (2006) indicate that Likert scale is appropriate for measuring the attitude of respondent regarding the constructs. Seven-point Likert scale is adopted since the reliability, validity and discriminating power of the data collected under that scale are higher (Preston and Colman 2000). In addition, numerous successful studies also utilize the Seven-points Likert scale to measure the items in the similar research (Van Raaij and Schepers 2008; Tarhini et al. 2016; Kijsanayotin, Pannarunothai, and Speedie 2009). Therefore, the scale is appropriate for this research.

The whole questionnaire shown in Appendix: 1.0 is written in English and translated into Chinese (refer Appendix: 2.0) by the researcher. The translated questionnaire was checked by a Chinese language expert who is an independent translator with bilingual skills in English and Chinese, familiar with the aims of the survey and has a good knowledge of Chinese culture. The translated questionnaire allows the mother tongue language to be easily understood by the rural Chinese respondents. There are twelve pages in the questionnaire. It commences with a cover page which exhibits the purpose

of the survey, ethics approval number and researcher's contact information. After that, the page used to filter invalid respondents is presented. The explanations of key terms (e.g. digital finance, and digital finance platforms) of the survey and filter questions towards actual use of DFP, age and village information are included in this page. If the respondent does not fulfil the requirements stated in the questionnaire, he or she must leave the online site survey immediately. Specifically, the online questionnaire system would not be progressed once respondents selected a negative answer for confirming the qualification of them. Thus, section one is mainly responsible for filtering invalid respondents and collecting the information about the name of most frequently-used DFP, devices used to access DFP and its usage experiences.

In section two, the information of specific activities on DFP are collected to ensure the respondent is a real DFP user. For instance, if respondent specified the most frequently-used DFP Yu'ebao which is a type of funds in section one but choose "disagree" towards purchasing funds in this section, this questionnaire will be considered as invalid due to incoherency. Besides, this section also contains the instruments developed from UTAUT model to measure the attitude regarding utilizing DFP to manage personal finance. Section three collects measures user satisfaction towards utilizing DFP, meanwhile, section four collects the information about net benefits obtained by using the DFP to manage personal finance. The constructs of both sections are developed from the D&M model and adopted the seven-point Likert scale to measure the attitude of respondent. Finally, section four is designed to collect demographic information of respondent regarding gender, age, educational level, occupation and monthly income.

3.5 Questionnaire Pre-testing

Sekaran (2016) depicts pre-testing as testing the questionnaire's appropriateness and comprehension by few people to ensure it is understandable and clear for the formal respondents. The measurement errors could be identified through pre-testing procedure, thereby enhancing the reliability and validity of questionnaire (Hair et al. 2006). There are three steps regarding developing the valid instruments of the questionnaire. Firstly, the measurement questions used in the survey are adopted from the valid items of existing studies (Tam and Oliveira 2016; Venkatesh et al. 2003; Yu 2012; Tai and Ku 2013; Wu and Wang 2006) and then paraphrased to fit the research

objectives. Secondly, the English questionnaire has been translated into Chinese language by the Chinese expert mentioned in section 3.4 of this thesis. Then, cognitive interviews were held to ensure the accuracy and consistency of the translations of Chinese version questionnaires and forms. It is a process to identify the problems in translated items; examine whether the meaning of items in English is consistent with the meaning in Chinese; and ensure the respondent could understand the items accurately (Mehrotra 2007; Willis 2015). The Chinese version questionnaire, consent form and participant information statement were distributed to five Chinese university students and five Chinese rural residents, who are the current users of DFP with Chinese language as their mother tongue. They were requested to answer the questionnaires and provide their own understandings on each question to the researcher. Then, the translated items were modified to ensure the respondents have the same understanding as the researcher intended.

The major helpful feedback received from the selected respondents include splitting a long table into few pages for easy reading, minor changes of wording and putting additional annotations to explain the terminologies. Therefore, the questionnaire has been modified based on the suggestions accordingly. Specifically, the questions regarding the measurement items of performance expectancy, social influence and perceived risk, including PE3, PE5, SI3 and PR2 are re-worded to make a clearer interpretation for the respondents. Besides, the explanations of digital finance and digital finance platform are added into the questionnaire to ensure the respondent have basic knowledge on them before involving in the research.

The English questionnaire, consent form and participant information statement were modified based on the changes made in Chinese version. Finally, both improved questionnaires were sent to the supervisors of the researcher for instruments validity check. Then, the final questionnaires and forms in both English and Chinese are revised and approved by the supervisors (refer to Appendix 1.0 to 6.0). Thus, the measurement and translation errors of the questionnaire have been reduced by conducting the pre-testing.

3.6 Sampling Procedures

This research uses probability sampling method to randomly select the sample from population who are the rural residents using digital finance applications in China. According to the statistics from China Internet Network Information Center (2016), target population has reached over 173 million in year 2015. The data source is primary, which is collected using questionnaire survey. Rural residents are selected from the villages in six different provinces to participate in answering the survey questionnaire. The survey instruments are translated into Chinese language in order to provide a clear and understandable illustration of the questions to respondents.

3.6.1 Sample Size

Deciding the sample size is crucial for a questionnaire survey method when multiple regression is involved (Swanson and Holton 2005). This research utilises two approaches to validate the minimum sample size of the research. Cochran's formula (1977) is one of the methods for calculating the sample size with a large population and unknown variability. Assuming maximum variability ($p = 0.5$), the adequate sample size of this research is approximate 384 with 95% confidence level (for a 95% confidence level, z is 1.96) and ±5% (e) precision level. The formula of Cochran is presented as:

$$n_0 = \frac{z^2 pq}{e^2} = \frac{1.96^2 0.5 \times (1 - 0.5)}{\pm 0.05^2}$$

(Cochran's formula: n_0 = 384 = sample size, z = 1.96, 95% confidence level, p = 0.5 = estimated proportion of an attribute, $q = 1 - p$, and e = ± 0.05 = precision level)

Apart from the formula of Cochran, software package, namely, GPower 3.1 (Cunningham and McCrum-Gardner 2008) is utilized to determine the minimum sample size for this research as well. Numerous of free software are available to calculate the sample size such as eQuery and PS Power and Sample Size (Dupont and Plummer 1997). GPower is selected due to its ease of use, usefulness in a wide range of studies, ability to deal with both simple and complex sample size calculation. The function that calculates sample size is based on pre-designed effect size at three levels (small, medium and large) between the groups in accordance with the principles of Cohen (Cunningham and McCrum-Gardner 2008; Charan and Kantharia 2013). Ultimately, with 0.15 (medium) effect size, 0.05 α error probability, 0.95 power, and

5 predictors, the minimum required sample size for this research is 138. Furthermore, according to the previous studies on digital finance in China, the sample sizes used are 300 (Laforet and Li 2005), 224 (Zhang 2017) and 142 (Son and Davidson 2015).

3.6.2 Sampling Technique and Procedures

This research utilizes multistage sampling method to select target villages. China is a large country with 34 province-level divisions, 334 prefecture-level regions and 2,851 county-level regions in year 2016 (NBSC 2016) . Thus, multistage sampling method is appropriate to select target respondents by narrowing down sampling units at each stage (Bennett et al. 1991). The first procedure of sampling is to divide the main land of China into six main regions namely, Northeast, North Central, Northwest, Southeast, South Central, and Southwest based on the geographic distribution in Figure 3.1 (Guan et al. 2010) to ensure a fair distribution of samples to a certain degree. This is to avoid the concentration of samples in a certain part of China.

Figure 3. 1: Division of Regions in China

Source: Figure reproduced from Guan et al. (2010)

The provinces-level divisions within each region are listed in alphabetical sequence and labeled numerically as presented in Table 3.1. A province is randomly drawn from

each region by using the online tool called as the Research Randomizer. The Research Randomizer randomly picks the numbers which corresponds with the name of provinces. This procedure results in six provinces-level divisions drawn, namely Hebei, Shanxi, Xinjiang Uyghur AR, Sichuan, Hunan and Guangdong.

Table 3. 1: List of Provinces-level Divisions in Each Region

I. Northeast			
1.	Beijing	5.	Liaoning
2.	Hebei	6.	Shandong
3.	Heilongjiang	7.	Tianjin
4.	Jilin		
II. North Central			
1.	Nei Mongol (Inner Mongolia)	2.	Shanxi
III. Northwest			
1.	Gansu	4.	Shaanxi
2.	Ningxia Hui Autonomous Region (AR)	5.	Xinjiang Uyghur AR
3.	Qinghai		
IV. Southwest			
1.	Chongqing	4.	Sichuan
2.	Guangxi Zhuang AR	5.	Xizang AR (Tibet)
3.	Guizhou	6.	Yunan
V. South Central			
1.	Anhui	4.	Hunan
2.	Henan	5.	Jiangxi
3.	Hubei		
VI. Southeast			
1.	Fujian	4.	Jiangsu
2.	Guangdong	5.	Shanghai
3.	Hainan	6.	Zhejiang

Note: The selected provinces are highlighted in yellow.

Following the similar step above, prefecture-level regions listed in Table 3.2 are randomly drawn from each province-level division using the Research Randomizer. This procedure results in the following prefecture-level regions: Baoding city, Linfen city, Urumqi city, Chengdu city, Xiangxi Autonomous Prefecture, and Guangzhou city.

Table 3. 2: List of Cities in Each Province-level Division

I. Hebei					
1.	Baoding	5.	Hengshui	9.	Tangshan
2.	Cangzhou	6.	Langfang	10.	Xingtai
3.	Chengde	7.	Qinhuangdao	11.	Xiongan New Area
4.	Handan	8.	Shijiazhuang	12.	Zhangjiakou
II. Shanxi					
1.	Changzhi	5.	Linfen	9.	Yangquan
2.	Datong	6.	Lvliang	10.	Yuncheng
3.	Jincheng	7.	Shuozhou	11.	Xinzhou
4.	Jinzhong	8.	Taiyuan		
III. Xinjiang Uyghur AR					
1.	Altay Prefecture	6.	Hami	11.	Kizilsu Kirghiz AP
2.	Aksu Prefecture	7.	Hotan Prefecture	12.	Tacheng
3.	Bayingolin Mongol AP	8.	Ili Kazakh AP	13.	Turpan City
4.	Bortala Mongol AP	9.	Kashgar Prefecture	14.	Urumqi City
5.	Changji Hui Autonomous Prefecture (AP)	10.	Karamay City		
IV. Sichuan					
1.	Aba Tibetan and Qiang AP	8.	Guangyuan	15.	Neijiang
2.	Bazhong	9.	Lushan	16.	Panzhuhua
3.	Chengdu	10.	Liangshan Yi AP	17.	Suining
4.	Dazhou	11.	Luzhou	18.	Ya'an
5.	Deyang	12.	Meishan	19.	Yibin
6.	Garze Tibetan AP	13.	Mianyang	20.	Ziyang
7.	Guang'an	14.	Nanchong	21.	Zigong
V. Hunan					
1.	Changde	6.	Loudi	11.	Yongzhou
2.	Changsha	7.	Shaoyang	12.	Yueyang
3.	Chenzhou	8.	Xiangtan	13.	Zhangjiajie
4.	Hengyang	9.	Xiangxi Tujia and Miao AP	14.	Zhuzhou
5.	Huaihua	10.	Yiyang		
VI. Guangdong					
1.	Chaozhou	8.	Jieyang	15.	Shenzhen
2.	Dongguan	9.	Maoming	16.	Yangjiang
3.	Foshan	10.	Meizhou	17.	Yunfu

Table 3. 2: List of Cities in Each Province-level Division (continued)

4.	Guangzhou	11.	Qingyuan	18.	Zhanjiang
5.	Heyuan	12.	Shanwei	19.	Zhaoqing
6.	Huizhou	13.	Shantou	20.	Zhongshan
7.	Jiangmen	14.	Shaoguan	21.	Zhuhai

Note: The selected cities are highlighted in yellow.

According to the National Bureau of Statistics of China (2016), Chinese rural areas are mainly divided into three levels: county, township and village divisions. In order to ensure the selected villages are valid for research, the villages must fulfil the criteria such as basic support of devices and internet infrastructure, sufficient population to complete the survey and accessible geographically. If one of the criteria is not met, other villages will be picked by repeating the above random selection procedure until all the requirements are satisfied. Initially, six villages were randomly selected from each of the city by repeating the random selection procedures level by level. The detailed procedures are exhibited in Figure 3.2. However, in the actual course of data collection, the number of respondents from those six villages are far from achieving the proposed sample size of 400. Consequently, a further 22 villages are randomly selected to participate in the survey to reach the target sample size. Finally, a total of 28 villages are involved in this research.

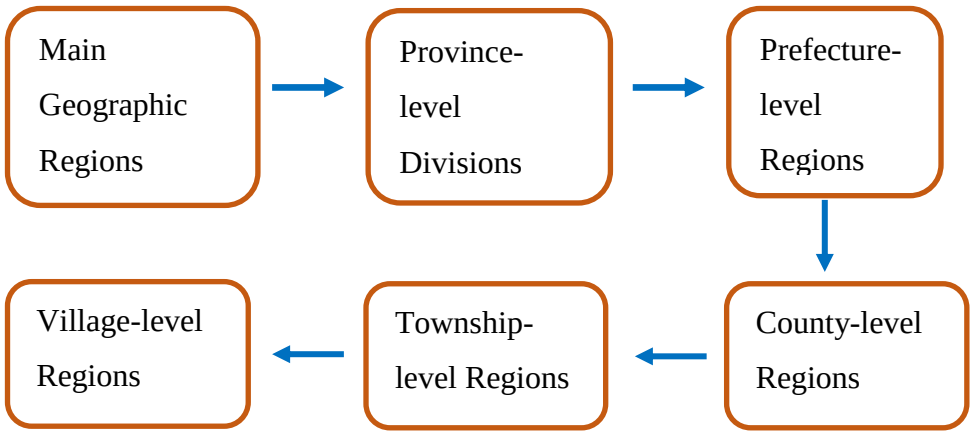

Figure 3. 2: Sampling Procedures Flow Chart

Besides, convenience sampling method is employed to select the target respondents from the selected village. Specifically, the list of residents in each village can be viewed on a social media called QQ. After that, the researcher contact the residents shown on the list and districted the questionnaire survey personally via the platform.

3.7 Data Collection Methods

This research adopts two feasible approaches for distribution of the survey questionnaires. Online questionnaires were administered by way of social network platforms at the 15 villages of the 4 provinces, namely Hunan, Shanxi, Sichuan and Xinjiang. Further, 13 villages in two provinces - Guangdong and Hebei are selected, where the questionnaires are hand-distributed to the users who satisfied the criteria to participate in the survey. Ultimately, 181 offline and 222 online questionnaires are collected in three months' period.

In China, numerous chat groups are created in social network platforms such as QQ, WeChat and Baidu Tieba which gather people with common interest, jobs or location to communicate with each other and share information effectively. Therefore, searching chat groups through the social network platforms is the main method to look for targeted users of these four provinces to conduct online survey. More specifically, the researcher utilizes "chat group research" function on QQ platform to enter the name of village into search bar, then the available chat groups of this village and part of village residents' information are presented. However, only the user who has joined in the group can view the information of the whole group members. Therefore, the request for joining the group is sent to group administrators. Once the request is approved, the online survey link, consent forms and participant information statement are posted to the group members who meet the survey criteria – equal or over 18 years old, current residents of the village and user of DFP in managing personal finance. However, when administrators rejected the requests, questionnaires were directly sent to the group members whose information are accessible to the public. Ultimately, 222 valid online questionnaires from 15 villages are collected.

3.8 Response Rate

A total of 250 questionnaires are distributed by hand with 181 valid questionnaires are received, translating to 72.40% response rate. Meanwhile, 469 questionnaires are distributed online with 222 valid forms received, giving a response rate of 47.33%. In sum, a grand total of 719 questionnaires are distributed. 403 completed questionnaires are received with the remaining 316 questionnaires are discarded due to incomplete answer, incoherent selection, and not meeting the survey criteria such as under 18 years old, resident of other villages or non DFP user. This translates to an overall

response of 56.05%. The sample size (403 respondents) of this research is considered as adequate and representative based on the calculation in section 3.6.1 of this thesis and previous studies (Laforet and Li 2005; Zhang 2017; Son and Davidson 2015). Besides, Sekaran and Roger (2016) state that the adequate response rate of questionnaire survey is 30%, thus the response rate (56.05%) in this research is deemed to be sufficient.

Table 3. 3. Questionnaire Survey Response Rate

Data Collection Approach	No. of Form Distributed	No. of Form Used for Analysis	Percentage (%)
Offline	250	181	72.40%
Online	469	222	47.33%
Total	719	403	56.05%

3.9 Data Analysis Method

Four major phases are involved in the data analysis, namely preliminary data analysis, descriptive data analysis, measurement model and structural model analysis. Partial Least Squares Structural Equation Modeling (PLS-SEM) is the main technique for statistical analysis while Statistical Package for Social Science (SPSS) and SmartPLS are adopted to perform the above-mentioned analyses accordingly.

3.9.1 Partial Least Squares Structural Equation Modeling

This research utilizes the software called SmartPLS 3.0 and employ Partial Least Squares Structural Equation Modeling (PLS-SEM) technique to test the relationship between the potential factors and the use of DFP as well as the relationship between the use of DFP and user satisfaction and net benefits. There are multiple endogenous constructs in this research. Therefore, SEM is adopted due to its capability of examining the multiple dependences in one study analysis (Teo and Noyes 2011). Further, it allows the measurement of the reliability and validity of theoretical constructs to be simultaneously assessed with the testing of the relationship between those constructs (Barclay, Higgins, and Thompson 1995). Specifically, SEM is divided into two streams, namely CB-SEM (covariance-based SEM) and PLS-SEM (variance-based SEM) (Hair, Ringle, and Sarstedt 2011). Table 3.4 below demonstrate the main criteria for selecting the technique which are appropriate for this research.

Table 3. 4: Rules of Thumb for Choosing CB-SEM or PLS-SEM

Criteria	PLS-SEM	CB-SEM
Research Goals	• For exploratory research or extending an existing structural theory	• To test theory or compare two theories
Measurement Model Specification	• For formative measured constructs	• If additional specification of error term is required
Structure Model	• For complex structural model	• For non-recursive model
Data Characteristics Algorithm	• Data cannot meet the CB-SEM assumption • Relative low sample size • Non-normal data	• Data meet CB-SEM assumption
Evaluation of Model	• Latent variable scores are required in subsequent analysis	• Global goodness-of-fit is required • Measurement model invariance is required

Source: (Hair, Ringle, and Sarstedt 2011)

In this case, PLS-SEM is chosen to conduct the statistical analysis because this research is not intended to confirm an existing theory but extends the UTAUT theory by adding an additional antecedent – perceived risk and then combine it with D&M theory. PLS-SEM is appropriate for theory development and prediction. Besides, formative constructs are part of the structural model in this research, PLS-SEM is eligible to measure the formative constructs without constructing specification modification that is required by CB-SEM (Hair et al. 2016). Using CB-SEM for formative constructs may result in failure of explaining the covariance of all indicators (Chin 1998b). In addition, it is complicated to use CB-SEM for handling both formative and reflective constructs (Urbach and Ahlemann 2010). Moreover, the sample size required by PLS-SEM is relatively low. Several alternative statistical software is available to be used for size calculation such as SmartPLS, WarpPLS, PLS-GUI, ADANCO and etc. (Ramayah et al. 2016). In this research, SmartPLS 3.0 is used to test the structural model since it can work well with complex model, both formative and reflective constructs, and developing theory research (Hair et al. 2012).

3.9.2 Reflective and Formative Models

There are two types of measurement model in this research: reflective and formative measurement models. In the reflective model, all measures of a construct are caused by that construct and expected to be highly correlated with each other (Hair et al. 2017). The causality and arrow direction of the model flows from the construct to the measures since all the measures are expected to be equally valid regarding the underlying construct (Jarvis, MacKenzie, and Podsakoff 2003; Petter, Straub, and Rai 2007). Conversely, in formative model, the measures are assumed to be the cause of the constructs; are not interchangeable and not correlated with each other (Hair et al. 2017). Formative measures are integrated to make for the conceptual and empirical meaning of the construct (Petter, Straub, and Rai 2007). The causality direction of the formative model is from measures to the construct (Hair et al. 2017). In reflective measures, loadings are used to represent the correlation among measures and component scores. Meanwhile, weights are calculated to examine and interpreted the formative measures because it indicates the significance of each measurement item in formatting the component. The guidelines for selecting the measurement model of this research are demonstrated in Table 3.5 below:

Table 3. 5 Guidelines for Selecting the Measurement Model

	Reflective	**Formative**
Construct Nature	• Construct is independent of the measures	• Construct is a combination of its measures
Causality Direction	• Measures are expressed by the construct • Direction: from construct to measures	• Measures define the construct • Direction: from measures to construct
Characteristics of items for measuring the construct	• Items have a common theme • Items should be interchangeable and correlated • Dropping or adding an item may affect the content validity of the construct	• Items may not share a common theme • Items should not be interchangeable and not correlated • Dropping or adding an item may affect the content validity of construct
Measures covary	• Measures may covary with one another • Variation of one measure may change other measures	• Measures may not covary with one another • Variation of one measure may not affect other measures

Source: (Jarvis, MacKenzie, and Podsakoff 2003; Hair et al. 2017; Coltman et al. 2008)

In this research, perceived risk (PR) and the use of digital finance platform (USE) are considered as formative constructs according to the guidelines (Venkatesh et al. 2003; Kim, Ferrin, and Rao 2008; Pee, Woon, and Kankanhalli 2008) since each measure item jointly define the meaning of construct. Specifically, the constructs are the combination of their measures; the directions of causality are from measures to constructs; the measurement items share different themes; the items are not interchangeable and not correlated. With regards to the reflective model, performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC) and net benefits (NB) and user satisfaction (US) are measured as reflective constructs (Venkatesh et al. 2003; Li 2010) since those constructs are unidimensional and the measures are expressions of the constructs; the causality directions are from constructs to the measures; the measures of each constructs have a common theme; and the measures are interchangeable and correlated. Thus, the degree of users' attitudes towards the constructs determines how user rate all of the items.

3.9.3 Preliminary Data Analysis

Hair (2010) depicts the quality and meaningfulness of research findings could be affected by the preliminary data analysis. It is an essential procedure to make sure the data from the collected questionnaire fulfill requirements for further statistical data analysis. In this research, preliminary analysis is required to ensure the usefulness, reliability and validity before testing the proposed model (Hair et al. 2010). Tabachnick and Fidell (2007) state that preliminary test can facilitate the interpretation of research results and findings as the test make a better comprehension regarding the relationship between the variables. The data screening towards missing data and normality check are conducted in this research.

3.9.4 Descriptive Data Analysis

Descriptive analyses are mainly separated into three parts. Firstly, the demographic analyses are conducted to reveal the frequency and valid percentage regarding the gender, age, educational level, occupation, income level and location information of the respondents based on the current latest report of CNNIC (2016). Secondly, the name, frequency and experience of the use of digital finance platform are illustrated. Thirdly, the descriptive analyses in respect of measurement constructs include performance expectancy, effort expectancy, social influence, facilitating conditions,

perceived risk, use of digital finance platform, user satisfaction and net benefits are conducted by examining the mean and standard deviation.

3.9.5 Measurement Model Analysis

In reflective model, the internal consistency reliability, indicator reliability (outer loading), convergent validity and discriminant validity are examined to ensure the validation of the measurement model (Ramayah et al. 2016; Lewis, Templeton, and Byrd 2005). Specifically, internal consistency reliability can be better valued by composite reliability (CR). The acceptable value range is from 0.600 to 0.900 (Gefen, Straub, and Boudreau 2000). Any value above 0.900 is no desirable, as it implies all the indicators are measuring the identical fact and not able to make valid construct reliability assessment. Besides, indicator reliability is to examine the degree to which an indicator is consistent with what it aims to measure (Urbach and Ahlemann 2010). The loading value equal or above 0.700 is acceptable. However, if the loading value is below 0.700, but with a high average variance extracted (AVE) score, the value still has possibility to be accepted. Further, convergent validity is to measure an individual indicator that is actually measuring that construct (Urbach and Ahlemann 2010). AVE is used as the value to reflect this validity and explained as the degree to which a construct describes the variance of its indicators. Average variance extracted that equal or above 0.500 is assumed ad satisfactory (Hair et al. 2017). Finally, discriminant validity is used to assess if the indicators do not accidentally measure something else (Urbach and Ahlemann 2010). In this research, cross loading, Fornell and Larcker's criterion, and Heterotrait-Monotrait ratio of correlations (HTMT) are adopted to test the true correlation between two variables when the variables are perfectly estimated (Henseler, Ringle, and Sarstedt 2015). Then, bootstrapping is performed to further check whether 90% confidence interval of HTMT contains the value range from -1 to 1. If not, it can be assumed that two constructs are empirically different (Fornell and Larcker 1981). The indices mentioned above regarding reflective is exhibited in Table 3.6.

Table 3. 6 Indices for Reflective Measurement Model Analysis using PLS-SEM

No.	Assessment	Criterion	Guidelines
1	Internal Consistency	CR	CR>0.9 (Not Desirable) CR>0.7-0.9 (Satisfactory) CR>0.6 (for exploratory research)
2	Indicator Reliability	Indicator Loadings	Item loading>0.708 (Recommended) If loading>0.7, 0.6, 0.5, 0.4 is adequate if other items' loadings are able to complement AVE and CR
3	Convergent Validity	AVE	AVE>0.5
4	Discriminant Validity	Cross-Loading	Each indicator' loadings are the highest for their designated construct
		Fornell & Larcker's Criterion	The construct's square root of AVE should be greater than the correlations between the construct and other constructs in the mode
		HTMT Criterion	HTMT .90 (Gold, Malhotra, and Segars 2001) HTMT inference using bootstrapping technique (Henseler, Ringle, and Sarstedt 2015)

Regarding formative measurement model, there are two major analyses required to be tested, namely collinearity among indicators, and significance and relevance of outer weights. Firstly, the indicators in formative model should not have high correlations among indicators (collinearity) (Hair, Ringle, and Sarstedt 2011). Variance inflation factor (VIF) is calculated to verify the collinearity in PLS-SEM. There is a potential collinearity issue if VIF is above 3.3 or 5 (Diamantopoulos and Siguaw 2006; Hair, Ringle, and Sarstedt 2011). Lastly, the significance and relevance of the formative indicators must be evaluated. The out weight of each formative indicator should be significant by conducting bootstrapping (Hair et al. 2017). Meanwhile, the formative indicator can be omitted if the out loading of it is less than 0.500 and not significant (Hair et al. 2017). The guidelines for assessing formative measurement model is summarized in Table 3.7.

Table 3. 7 Guidelines for Assessing Formative Measurement Model Validity

No.	Validity Type	Criterion	Guidelines
1	Collinearity among Indicators	VIF	If VIF>3.3 OR >5, it indicates a potential collinearity problem (Hair, Ringle, and Sarstedt 2011; Diamantopoulos and Siguaw 2006).
2	Significance and Relevance of Outer Weights	AVE	Outer weight from each formative indicator is significant. If not, it still can be retained based on content validity (Hair et al. 2016). Besides, formative indicator can be omitted when its outer loading<0.5 and not significant (Hair et al. 2016).

3.9.6 Structural Model Analysis

Urbach and Ahlemann (2010) illustrate that validating the structural measurement model enable the researcher to systematically examine if the proposed hypotheses of the model are supported by the data collected. There are five steps to assess the structural model validity. In the first step, lateral collinearity need to be evaluated by calculated the VIF scores to ensure there is no collinearity issue existed that may mislead the findings (Diamantopoulos and Siguaw 2006). In the second step, the significance and relevance of the structural model relationship are evaluated by examining the path coefficient significance (Hair et al. 2017). Specifically, there is a strong positive relationship if the coefficient value approximate to +1, meanwhile, a strong negative relationship exists if the coefficient value close to -1. In the next step, the coefficient of determination (level of R^2) to test the predictive accuracy of the model. In the fourth step, Cohen's f^2 can be used to estimate the effect size of the predictor constructs (Cohen 1988). It indicates the strength of an endogenous construct that explain an endogenous construct base on R^2 (Hair et al. 2017). According to Cohen (1988), the large, medium and small effect size values are: 0.35, 0.15 and 0.02. In the last step, the predictive relevance (Q^2) needs to be examined using Stone and Geisser's Q^2(Geisser 1974). If the value is above 0, it means that there is a predictive relevance between exogenous and endogenous (Hair et al. 2017). The results of this research regarding structual model analysis are shown in the following chapter based on the guideline provided in this section.

3.10 Ethics

Based on the policy of Curtin University, the ethics application form and data management plan are required to be completed and submitted for the ethics approval from Human Research Ethics Committee before commencing questionnaire survey. For the purpose of this research, the ethics application has been approved with an approval number HRE2017-0746 by the Research Integrity Department (refer the Ethics Approval Letter attached in Appendix 7.0), which implies the survey instrument are not inappropriate and the procedures of data collection are in accordance with the policy of Curtin University.

3.11 Summary

To sum up, the measurement of each variable, research design, sampling and data collection procedures are discussed in this chapter which serves as a basis to assure the accuracy of the results and findings of this research. Further, the ethics approval and the technique of statistical analysis have been illustrated briefly. Chapter Four provides an in-depth discussion of data analysis.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter primarily demonstrates the results and findings of data collected from the research questionnaires. Specifically, the overview of questionnaire is presented to recall the main variables analyzed in section 4.2. Then, section 4.3 exhibits the data screening and management results towards managing missing data, normality check and common method bias for checking the quality of data. Further, descriptive data analysis is demonstrated in section 4.4. Subsequently, other two major data analyses, namely, measurement model assessment and structural model assessment are presented in section 4.5 and section 4.6. Then, the results of hypotheses tests are revealed in section 4.7. This chapter also discusses the main findings of the research in section 4.8. Lastly, the chapter ends with a summary.

4.2 Research Questionnaire Overview

The questionnaire survey has been conducted in China among rural residents in six provinces. The questionnaire commences with cover letter where study purpose, ethical consideration and researcher's contact information are included. There are five sections included in the questionnaire as illustrated in Chapter Three of this thesis. Section one includes types of most frequently-used digital finance platform, frequencies of using the platform, device used to access the platform and utilization experience of respondents. Sections two contains the respondents' attitudes regarding the use of DFP, performance expectancy, effort expectancy, facilitating conditions, social influence based on UTAUT model by adding perceived risk of DFP usage for personal financial management. Section three and section four set out to measure respondents' attitudes toward user satisfaction and net benefits. Finally, section five collects demographic information of the questionnaire participants, which are useful for identifying the characteristics of the samples.

4.3 Data Screening and Management

Data screening is the fundamental step priori to conducting data analysis to inspect the error of data and avoid inappropriate and incorrect results (Field 2013). In accordance with Levy (2006), data screening is a crucial before analyzing data for the following reasons: (i) checking the accuracy of raw data; (ii) identifying and dealing with outliers; (iii) managing missing data; and (iv) managing the issues of response set. The details of data screening procedures such as dealing with missing data, normality check and common method bias regarding the UTAUT and D&M model variables are conducted based on the study of Hair (2007).

4.3.1 Missing Data Management

The raw data collected from questionnaire must be checked for completeness and consistency before starting data analysis. Missing data could affect the validity of results and findings, which is one of the barriers in the procedure of analyzing data in social research (Hair 2007; Lin and Hsieh 2010). Therefore, it is a critical to identify and manage the missing data, for example, missing answer or even missing the whole section. In this research, the questionnaires with any missing answer have been removed and treated as invalid data since those missing data would impact the measurements of data using Partial Least Squares Structural Equation Modeling in SmartPLS. Every question of online questionnaire has been preset as required question before sending to the participants. If the participant misses answering any required question, he or she would not be able to submit the questionnaire until completed it. However, as mentioned, 250 offline questionnaires are distributed among Guangdong and Hebei rural residents in different villages. As a result, a total of 219 (87.6%) are returned. Among that, 181 (72.40%) returned questionnaires are considered as valid, where 38 questionnaires are removed due to missing answers.

4.3.2 Normality Check

According to Hair et al. (2006), normality test refers to examining whether the collected data is well-modelled by normal distribution. There are two approaches for testing the univariate normality in the manners of graph and statistics (Hair et al. 2006). Pearson's skewness parameter, as well as plotting histogram for graphical analysis by visual checking and comparing the normal distribution with the collected research data value could be adopted for statistically test. Visual assessment of histogram of each study variable (constructs from extended UTAUT model and D&M model) is the main method for checking the normality in this research. The histograms for visual inspection are exhibited in Appendix 8.0, which shows that all study variables which assessed visually are reasonably acceptable.

Further, the normality effect would be diminished if the sample size is more than 200 (Hair et al. 2010). However, Field (2009) depicts the univariate normality evaluation could be improved by checking the skewness and kurtosis values with the histogram as the statistical techniques used for normality test are sensitive to the research data size. Table 4.1 illustrates the values of skewness and kurtosis of each construct. The acceptable range (i.e. ±2.58 at 0.01 significance level or ±1.96 at 0.05 significance level) for skewness and kurtosis has been specified by Hair et al (2006). In this case, all values regarding skewness and kurtosis of the variables are allocated within the acceptable scope.

Table 4. 1: Skewness and Kurtosis Statistics for Construct Variables

Construct Variable	**Skewness**	**Kurtosis**
Performance Expectancy	-0.289	-0.065
Effort Expectancy	-0.616	0.196
Social Influence	-0.172	-0.876
Facilitating Conditions	0.049	-0.169
Perceived Risk	-0.389	-0.156
Use of Digital Finance Platform	0.582	0.412
User Satisfaction	-0.328	-0.305
Net Benefits	-0.128	-0.851

Note: N=403, Standard error for skewness statistic = 0.12, Standard error for skewness statistic = 0.24

4.3.3 Common Method Bias

Lastly, Common Method Bias (CMB) is also investigated for the data. As the data was collected in the same period and with same questionnaire, this may result in common method bias (CMB). The existence of common method bias may lead to underestimate or overestimate the relationship between the latent constructs and measures; therefore, it is critical to test for the CMB of the data before the validity and reliability tests (Craighead et al. 2011). Harman's single-factor test is conducted to test the CMB in this research according to previous studies (Martins, Oliveira, and Popovič 2014; Zhou 2011; Yoon and Steege 2013). The purpose of the test is to examine whether one factor accounts for the majority of variance (Podsakoff et al. 2003). According to Podsakoff et al (2012), common method bias exists when one factor can explain over 50% of the variance under measures. Harman's single-factor test is conducted on all the 37 items for this research. Appendix 10.0 demonstrates that the most co-variance explained by one factor is 27.28% which is smaller than the threshold of 50%. In conclusion, the result indicates that common method biasness is not a likely contaminating and complicating the research results.

4.4 Descriptive Data Analysis

A total of 403 questionnaires collected are valid for analysis. The respondents are the rural Chinese from different backgrounds. This section provides the analysis of demographic profile, use of digital finance platform and users experience. Besides, the descriptive statistics of each construct and item are presented in Table 4.2.

4.4.1 Demographic Profile

The details of demographic profile are summarized as displayed in Table 4.2.

Table 4. 2: Demographic Information of Participants

Variable		**Frequency (N)**	**Percentage (%)**
Gender	Male	194	48.14
	Female	209	51.86
Age	18-19	55	13.65
	20-29	253	62.78
	30-39	73	18.11
	40 and above	22	5.46
	Minimum	**Maximum**	**Mean**
	18	49	25.64
Educational Level	Primary school and below	1	0.25
	Junior high school	47	11.66
	Senior high school/ Technical school/ Secondary vocational school	103	25.56
	College	83	20.60
	University degree and above	169	41.94
Occupation	Student	139	34.49
	Freelancer	128	31.76
	Agriculture and farming laborer	42	10.42
	Enterprise/ Corporation employee	30	7.44
	Rural migrant	16	3.97
	Commercial/ service industry employee	11	2.73
	Manufacturing/ production enterprise employee	10	2.48
	Technology professional	8	1.99
	Others	8	1.99

Table 4. 2: Demographic Information of Participants (continued)

	Enterprise/ Corporation mid-level manager	6	1.49
	Enterprise/ Corporation top-level manager	3	0.74
	Party and government organ and institution employee	1	0.25
	Unemployed/ laid-off	1	0.25
Monthly Income	No income	69	17.12
	Below 500 yuan	24	5.96
	501-1000 yuan	27	6.70
	1001-1500 yuan	33	8.19
	1501-2000 yuan	32	7.94
	2001-3000 yuan	90	22.33
	3001-5000 yuan	91	22.58
	5001-8000 yuan	28	6.95
	Above 8000 yuan	9	2.23

(a) Gender and Age

As shown in Table 4.2, 194 (48.14%) respondents are male and 209 (51.86%) are female. The number of male rural Chinese users is slightly higher than female. The use of digital finance platform to perform personal financial management is prevalent among the young adults whose age are between 20 to 29 years old, representing a large majority of 62.78%. None of the user in the sample is above 49 years old. The frequency of the detailed age breakdown is shown in Appendix 9.0. Precisely, about 11.663% of respondents are 22 years old being the dominant group. The youngest age is 18 with 32 respondents (7.94%,). There is only one respondent aged 49 years old (0.25%). Table 4.2 also demonstrates that the average age of overall participants is 25.638 years old.

(b) Educational Level

The highest educational levels of participants are exhibited in Table 4.2, where approximate 41.94% (169) of participants attained a Degree from university, followed

by 25.56% (103) of the respondents completed a senior high school or equivalent. About 20.60% (83) of the respondents have college qualification and 11.66% (47) completed junior high school level of education. Only 1 respondent (0.25%) received primary school education. In general, the majority of the users who utilize digital finance platform to manage personal finance in rural China are those with tertiary education.

(c) Occupation

Table 4.2 reveals that student is the largest group, representing about 34.49% (139) of the total respondents. The second largest group is freelancer comprising about 31.76% (128) of total respondents. None of the participant is retire, and only a respondent is an employee from party and government institution. Therefore, the data indicates that students are the main users of digital finance platform in rural China.

(d) Monthly Income

As the Table 4.2 presents, about 22.58% of the respondents earn RMB3001-5000 per month. A similar proportion of respondents (22.33%) have a monthly income in the range of RMB2001-3000. It is noted that about 17.12% of respondents have no income and almost close 6.00% of respondents earn an income of RMB500 or less per month. A relatively few respondents of about 2.23% have an income of 8000 Yuan or more per month.

(e) Geographical Profile

Table 4.3 shows the geographical breakdown of the respondents. A total of 28 villages are selected to conduct the survey. The numbers of respondents from each region are: 95 respondents from Hebei, 86 from Guangdong, 54 from Hunan, 57 from Shanxi, 57 from Sichuan and 54 from Xinjiang.

Table 4. 3: List of Selected Villages

Province	Village Name	Frequency (N)	Percentage (%)
Hebei	1. Maguantun	47	-
	2. Houtang	26	-
	3. Zhanghetun	9	-
	4. Jianggezhuang	6	-
	5. Maojiaying	5	-
	6. Qiantang	2	-
		95	**23.57**
Guangdong	1. Zhonglou	44	-
	2. Banhu	26	-
	3. Jingang	4	-
	4. Mumian	4	-
	5. Madong	3	-
	6. Longgang	3	-
	7. Maogang	2	-
		86	**21.34**
Hunan	3. Zhuquedong	22	-
	1. Xiadu	20	-
	2. Xinglongzhai	12	-
		54	**13.40**
Shanxi	1. Libao	34	-
	2. Nanzhoubi	10	-
	3. Dongzhoubi	7	-
	4. Dongfengbao	6	-
		57	**14.14**
Sichuan	1. Huapaifang	22	-
	2. Hongyansi	15	-
	3. Gongjiacun	13	-
	4. Yigengsong	7	-
		57	**14.14**
Xinjiang	1. Chaiwobao	17	-
	2. Baiyanggou	13	-

Table 4. 3: List of the Selected Villages (continued)

	3. Banfanggou	13	-
	4. Dongliang	11	-
		54	**13.40**
Total	**28 Villages**	**403**	**100.00**

(f) Digital Finance Platform Usage Frequency and Experience

The screening questions of the questionnaire ask whether the survey participants are the current users of DFP to manage personal finance and over 18 years old. Once the positive answers were given by the participants, they are asked to indicate the DFP that they use frequently and the frequency of use to measure the tendency of users towards using DFP for personal financial management. Table 4.4 presents the findings.

More than half of the respondents, 333 (82.63%) DFP users specified that Yu'ebao is the most frequently used platform for managing personal finance. It is followed by Alipay (5.71%), which has a comprehensive financing application where Yu'ebao is one of the sub functions of it. Tencent Finance is the third largest platform with 28 (6.95%) users who adopt it to conduct personal finance. The findings suggest the popularity of these DFPs among rural Chinese. Regarding the frequency of DFP usage, 109 (27.05%) respondents perform the personal finance on DFP for above 30 times during the last six months. 104 (25.81%) users utilize the DFP around 11-20 times in last half of year. A minority of about 2.73% of the respondents who have never accessed the DFP to manage personal finance in the past half of year.

Smart phone is the most frequently used device to access the DFP, commanding 74.94% of respondents. The second popular device is laptop (13.15%), followed by Tablet (8.93%) and desktop (2.98%). There is no respondent considering TV as a device to perform personal finance in DFP. Further, most of the users (58.31%) have 1-3 years' experience of using DFP, followed by 20.60% accessing the DFP for 4-6 years and 16.63% of the respondents have less than I year experience of use. 18 respondents even have used DFP for over 6 years.

Table 4. 4: Digital Finance Platform Usage Frequency and Experience

Items		Frequency (n)	Percentage (%)
Name of Digital Finance Platform (DFP)			
	Yu'ebao	333	82.63
	Tencent Finance	28	6.95
	Alipay	23	5.71
	Jingdong Finance	8	1.99
	Ant Fortune	6	1.49
	Zhangle Wealth	2	0.50
	Eastmoney Fortune	1	0.25
	Xianjinbao	1	0.25
	Heidoujinfu	1	0.25
Frequency of Using DFP in Last 6 Months			
	None	11	2.73
	1-10 times	99	24.57
	11-20 times	104	25.81
	21-30 times	80	19.85
	Above 30 times	109	27.05
Devices Used			
	Desktop	12	2.98
	Laptop	53	13.15
	Smart Phone	302	74.94
	Tablet	36	8.93
Years of Using DFP			
	Less than 1 year	67	16.63
	1-3 years	235	58.31
	4-6 years	83	20.60
	More than 6 years	18	4.47

4.4.2 Descriptive Statistics

Sekaran and Bougie (2012) define descriptive statistics as a set of methods for summarizing a collection of information to constitute a preliminary idea in respect of the distribution of measured variables. In this research, the descriptive statistics involve the assessments of mean and standard deviation which are presented in Table 4.5. If the value of mean is higher, the perceptions of the variables or items of the respondents are more positive.

Mean (or expected value) of random variable represents the central location the variables, which is calculated using the sum of all data score and divided by the number of items. The mean values of the variables are: 5.228 for performance expectancy, 5.192 for effort expectancy, 4.730 for facilitating conditions, 4.666 for social influence, 4.623 for perceived risk, 5.361 for user satisfaction, 4.997 for net benefits and 4.452 for the use of digital finance platform. The mean values range from 4.452 to 5.361, which are greater than the midpoint of the scale 3.500. Therefore, it can be assumed that the respondents have positive attitudes on the use of digital finance, and its perceived antecedents and consequences in rural China.

Standard deviation is used to assess the variability (or diversity) of the variables and computed as the square root of variance. It measures the degree of variation from the mean (Hair et al. 2010). The lower the standard deviation, the closer distance to the mean, and vice versa. As shown in Table 4.5, the values of standard deviation of the variables are: 0.901 for performance expectancy, 1.005 for effort expectancy, 0.996 for facilitating conditions, 1.321 for social influence, 1.290 for perceived risk, 0.888 for user satisfaction, 1.098 for net benefits and 0.782 for the use of digital finance platform. In general, the range of standard deviation for this research from 0.782 to 1.321. There is a narrow spread of the data values from the mean. Therefore, the statistical requirement is met for the subsequent confirmatory factor analysis (CFA).

Table 4. 5: Descriptive Statistics

Item Code	Variable/Item	Mean	Standard Deviation
Performance Expectancy		**5.228**	**0.901**
PE1	Using the digital finance platform would make it easier to perform my personal financial management.	5.533	1.199
PE2	I would find the digital finance platform useful in personal financial management.	5.261	1.312
PE3	I believe that the digital finance platform would improve the effectiveness on personal financial management.	5.365	1.237
PE4	Using the digital finance platform would improve the quality of personal financial management.	5.007	1.519
PE5	I would use digital finance platform to manage personal finance anyplace.	4.973	1.515
Effort Expectancy		**5.192**	**1.005**
EE1	Learning to use the digital finance platform would be easy for me.	5.320	1.344
EE2	My interaction with the digital finance platform would be clear and understandable.	5.164	1.304
EE3	It would be easy for me to become skilful at using the digital finance platform.	5.156	1.352
EE4	I would find the digital finance platform to be flexible to interact with.	5.213	1.289
EE5	Overall, I believe that the digital finance platform is easy to use.	5.104	1.414
Facilitating Conditions		**4.730**	**0.966**
FC1	I have necessary resources to use the digital finance platform.	5.593	1.177
FC2	I have necessary knowledge to use the digital finance platform.	4.623	1.597
FC3	I have control over using the digital finance platform.	5.025	1.479
FC4	Specialized instruction concerning the digital finance platform was available to me.	3.660	1.751

Table 4. 5: Descriptive Statistics (continued)

FC5	Using the digital finance platform is compatible with all aspects of my life.	4.747	1.569
Social Influence		**4.666**	**1.321**
SI1	People who influence my behaviour would think that I should use the digital finance platform to manage personal finance.	4.906	1.641
SI2	I use the digital finance platform because of the proportion of co-workers who use it to manage personal finance.	4.754	1.612
SI3	People who are important to me would think that I should use the digital finance platform to manage personal finance.	4.710	1.664
SI4	People who use the digital finance platform to manage personal finance have more prestige than those who do not.	4.293	1.711
Perceived Risk		**4.623**	**1.290**
PR1	I would not feel secure conducting personal financial transaction via the digital finance platform.	4.566	1.667
PR2	I am worried that others might be able to access my personal finance account on the digital finance platform.	4.752	1.510
PR3	I may lose money due to my careless mistakes on the digital finance platform.	4.653	1.603
PR4	I am concerned that the digital finance platform cannot meet my needs of personal financial management due to poor functionality or system malfunctions.	4.524	1.703
User Satisfaction		**5.361**	**0.888**
US1	I am satisfied that the digital finance platform meets my personal financial management needs.	5.444	1.223
US2	I am satisfied with the efficiency of the digital finance platform in managing my personal finance.	5.459	1.118

Table 4. 5: Descriptive Statistics (continued)

US3	I am satisfied with the effectiveness of the digital finance platform in managing my personal finance.	5.077	1.422
US4	Overall, I am satisfied with the digital finance platform in performing personal financial transactions.	5.464	1.153
Net Benefits		**4.997**	**1.098**
NB1	The digital finance platform helps me effectively manage my personal finance.	5.290	1.326
NB2	The digital finance platform enables me to accomplish my personal finance goals more efficiently.	5.325	1.164
NB3	My performance of personal financial management is enhanced by the use of the digital finance platform.	4.772	1.586
NB4	The digital finance platform improves the quality of my personal financial management.	4.600	1.751
Use of Digital Finance Platform		**4.452**	**0.782**
USE1	I use the digital finance platform to perform personal financial management transactions.	5.658	1.166
USE2	I use the digital finance platform to manage my cash.	5.159	1.459
USE3	I use the digital finance platform to purchase securities (e.g. stocks, bonds et al.).	4.082	1.823
USE4	I use the digital finance platform to purchase fund (e.g. Yu'ebao).	5.928	.888
USE5	I use the digital finance platform to perform P2P lending transactions.	2.799	1.453
USE6	I use the digital finance platform to purchase insurance	3.087	1.642

4.4.3 Correlation Matrix

The correlation matrix is constructed to examine the correlation coefficients between two variables by revealing the strength and direction of the variables. The range of correlation coefficient is from -1 (perfect negative correlation), 0 (no correlation) to

+1 (perfect positive correlation). In this research, correlation of latent variables is calculated using SmartPLS 3.0 software. The result of the correlations is exhibited in Table 4.6. As shown in the table, all of the correlation are in positive direction. Specifically, the correlation between the assumed determinants of use of the digital finance platform (USE) range from 0.451 to 0.573. Performance expectancy has the strongest correlation with USE compared with other determinants. In addition, correlations between USE and its consequences (US and NB) are 0.443 and 0.482 indicating that net benefits have a stronger correlation with USE.

Table 4. 6 Correlation Matrix of Latent Variables

Variables	**PE**	**EE**	**FC**	**SI**	**PR**	**US**	**NB**	**USE**
Performance Expectancy	1.000							
Effort Expectancy	0.503	1.000						
Facilitating Conditions	0.606	0.551	1.000					
Social Influence	0.583	0.406	0.558	1.000				
Perceived Risk	0.223	0.169	0.259	0.369	1.000			
User Satisfaction	0.540	0.493	0.526	0.507	0.276	1.000		
Net Benefits	0.577	0.481	0.612	0.665	0.362	0.579	1.000	
Use of Digital Finance Platform	0.573	0.451	0.490	0.466	0.326	0.443	0.482	1.000

4.5 Measurement Model Assessment

In this research, Partial Least Squares Structural Equation Modeling (PLS-SEM) is used to evaluate the research model. SmartPLS 3.0 is the data analysis software adopted to test the measurement and structural model. Firstly, the internal consistency reliability, indicator reliability, convergent validity and discriminant validity are used to assess the validity and reliability of reflective measurement model. Secondly, the validity of the formative measurement model is checked using the collinearity and significance and relevance of outer weights. The analyses and findings of evaluating each measurement model are presented in following sub-sections.

4.5.1 Reflective Measurement Model Assessment

In reflective measurement model, three assessments criteria need to be examined at the beginning. The three assessments are internal consistency reliability, convergent

validity (indicator reliability/ outer loadings and AVE) and discriminant validity. The summary of the results of these three assessments regarding this research are shown in the Table 4.7 below.

4.5.1.1 Indicator Reliability

The purpose of evaluating indicator reliability (factor loadings) is to examine the degree to which the indicators are consistent with what these indicators attempt to measure (Urbach and Ahlemann 2010). The recommended loading for each indictor is above 0.708, however, if the loading of the indicator exceeds 0.7, 0,6, 0.5 or 0.4 is satisfactory if other indicators have high loadings value to complement the CR and AVE (Hair, Babin, and Krey 2017). According to the above analysis, the indictor PE5 and SI2 are removed with low factor loadings value which below 0.4, while NB2 and US3 are not acceptable as the AVE values of their construct are not meet the requirements based on Byrne (2016). On the contrary, the loading of EE5 is 0.515 being retained since the summation of all of the loadings lead to high loading scores, contributing to the AVE score of effort expectancy construct above 0.5 (Byrne 2016).

4.5.1.2 Internal Consistency Reliability

On reflective measurement model, the internal consistency reliability can be achieved when the composite reliability (CR) value of each construct surpasses the satisfactory threshold value of 0.7 (Hair et al. 2017). Table 4.7 shows that each construct from 0.803 to 0.875 which exceeds the recommended threshold value of 0.7. Therefore, the results indicate that the internal consistency reliability of the constructs represented by the indicators of this research are satisfactory.

4.5.1.3 Convergent Validity

According to Urbach and Ahlemann (2010), convergent validity is demonstrated as the extent to which individual items reflect the converging of a construct compare to measuring other constructs. The convergent validity of the measurement model can be exanimated by the average variance extracted (AVE) value of 0.5 and above (Hair, Gabriel, and Patel 2014). Thus, the indicators, namely FC4 and FC5 are eliminated from the model since the loadings are below 0.7 and not able to complement the adequate AVE their construct unless these indicators are removed. As shown on Table 4.7, all of the AVE values of constructs are ranging from 0.565 to 0.639 after model

modification, which achieve the minimum requirement value of 0.5. This indicates that the reflective measurement model of this research has a satisfactory and adequate convergent validity.

Table 4. 7: Reflective Measurement Model Summary

Construct	Items	Loadings	AVE	CR
Effort Expectancy	EE1	0.830	0.572	0.867
	EE2	0.807		
	EE3	0.821		
	EE4	0.761		
	EE5	0.515		
Facilitating Conditions	FC1	0.697	0.577	0.803
	FC2	0.791		
	FC3	0.787		
Net Benefits	NB1	0.741	0.639	0.841
	NB3	0.818		
	NB4	0.836		
Performance Expectancy	PE1	0.764	0.565	0.838
	PE2	0.790		
	PE3	0.736		
	PE4	0.713		
Social Influence	SI1	0.815	0.636	0.875
	SI2	0.777		
	SI3	0.827		
	SI4	0.770		
User Satisfaction	US1	0.788	0.576	0.803
	US2	0.748		
	US4	0.740		

4.5.1.4 Discriminant Validity

As mentioned in section 3.9.5 of this thesis, the discriminant validity of reflective measurement model is asses by three methods: 1) Cross loading criterion, 2) Fornell and Larcker's (1981) criterion, and 3) Heterotrait-Monotrait ratio of correlations (HTMT). Regarding to cross loading criterion, the indicators of distinctive constructs are identified as not inter-changeable when the loadings of each indicators of their respective construct are higher than other constructs. Besides, Fornell and Larcker's criterion illustrate the square root of AVE should be higher than the correlation between the latent variable and all other latent variables. Further, HTMT is the ratio of average value of heterotrait-heteromethod (within the constructs) correlations to the

average value of monotrait-heteromethod (between the constructs) correlations (Ramayah et al. 2016). Henseler, Ringle and Sastedt (2015) depict that HTMT has better performance than cross-loadings criterion and Fornell-Larcker criterion due to its higher specificity and sensitivity rates. If the HTMT value does not exceed HTMT.90 value of 0.90, it indicates there is no problem of discriminant validity of the research (Gold, Malhotra, and Segars 2001).

(a) Cross-loadings Result

The first method to assess the discriminant validity of reflective measurement model is exanimating the loadings of indicators. Table 4.8 shows the cross-loadings result produced by the algorithm function of SmartPLS. The table indicates that all the loadings of indicators with respect to their own construct are higher than other constructs. It also shows that the loadings of each indictor are higher than the indicators in any other constructs in the same columns and row. Therefore, the results confirm that the discriminant validity of reflective measurement model assessed by cross loading criterion is satisfied.

Table 4. 8: Cross-Loadings Results

	Effort Expectancy	**Facilitating Conditions**	**Net Benefits**	**Performance Expectancy**	**Social Influence**	**User Satisfaction**
EE1	**0.830**	0.499	0.439	0.440	0.355	0.451
EE2	**0.807**	0.466	0.418	0.403	0.328	0.361
EE3	**0.821**	0.424	0.368	0.393	0.326	0.423
EE4	**0.761**	0.416	0.346	0.378	0.328	0.338
EE5	**0.515**	0.215	0.196	0.263	0.153	0.268
FC1	0.447	**0.697**	0.263	0.405	0.275	0.397
FC2	0.442	**0.791**	0.616	0.532	0.515	0.405
FC3	0.372	**0.787**	0.460	0.427	0.448	0.402
NB1	0.416	0.546	**0.741**	0.476	0.502	0.540
NB3	0.346	0.432	**0.818**	0.476	0.528	0.412

Table 4. 8: Cross-Loadings Results (continued)

NB4	0.398	0.500	**0.836**	0.439	0.563	0.450
PE1	0.428	0.498	0.437	**0.764**	0.467	0.461
PE2	0.330	0.476	0.448	**0.790**	0.442	0.390
PE3	0.373	0.444	0.396	**0.736**	0.433	0.406
PE4	0.379	0.392	0.464	**0.713**	0.404	0.355
SI1	0.305	0.436	0.523	0.478	**0.815**	0.412
SI2	0.340	0.504	0.472	0.463	**0.777**	0.431
SI3	0.313	0.405	0.566	0.450	**0.827**	0.404
SI4	0.339	0.435	0.561	0.469	**0.770**	0.369
US1	0.470	0.461	0.495	0.437	0.432	**0.788**
US2	0.336	0.363	0.387	0.377	0.333	**0.748**
US4	0.296	0.362	0.424	0.410	0.377	**0.740**

(b) Fornell and Larcker's Criterion

Fornell-Larcker criterion is the second method adopted to assess the discriminant validity of reflective measurement model. The square roots of AVE values are calculated using SmartPLS algorithm function as well. Based on the results of Table 4.9, the bolded values represent the square root of the AVE while non-bolded values are the intercorrelations between constructs. Thus, all the square root of AVE on the diagonal are higher than the off-diagonal correlations in their corresponding columns and rows. It concludes that the reflective measurement model of this research has satisfactory discriminant validity upon the Fornell and Larcker's criterion.

Table 4. 9: Fornell-Larcker Criterion Results

	EE	**FC**	**NB**	**PE**	**SI**	**US**
Effort Expectancy	**0.756**					
Facilitating Conditions	0.551	**0.760**				
Net Benefits	0.481	0.612	**0.799**			
Performance Expectancy	0.503	0.606	0.577	**0.752**		
Social Influence	0.406	0.558	0.665	0.583	**0.798**	
User Satisfaction	0.493	0.526	0.579	0.540	0.507	**0.759**

(c) HTMT Criterion

The third method to examine the discriminant validity of this research is Heterotrait-Monotrait ratio of correlations (HTMT). It is the percentage of average value of within the constructs' correlations to the average value of between the constructs' correlations. (Ramayah et al. 2016). Gold, Malhotra and Segars (2001) suggest that if HTMT value is not above 0.90, there will be no problem of discriminant validity. Based on the above analysis, the value of HTMT is examined and bolded in the Table 4.10. The values in the table illustrate that there is appropriate discriminant validity of the research. Further, HTMT inference is assessed as it is used as statistical test (Henseler, Ringle, and Sarstedt 2015). It is calculated using bootstrapping technique with two tailed, 0.1 significant level and 90% confidence interval by SmartPLS. The results of HTMT inference are presented below the value of HTMT. When HTMT value's confidence interval for the path of structure include the value of 1, it means the data has the problem of discriminant validity. Therefore, there is satisfactory discriminant validity since the value of 1 is not contained in any of the column as the results shown in Table 4.10. Taken together, the results of HTMT value and HTMT inference indicate that the discriminant validity is established for the reflective measurement model of this research

Table 4. 10: HTMT Criterion Results

	Performance Expectancy	Effort Expectancy	Social Influence	Facilitating Conditions	User Satisfaction	Net Benefits
Performance Expectancy						
Effort Expectancy	**0.643** CI.90 (0.562, 0.737)					
Social Influence	**0.748** CI.90 (0.672, 0.824)	**0.491** CI.90 (0.397, 0.574)				
Facilitating Conditions	**0.858** CI.90 (0.779, 0.951)	**0.750** CI.90 (0.643, 0.834)	**0.753** CI.90 (0.639, 0.863)			
User Satisfaction	**0.773** CI.90 (0.668, 0.861)	**0.671** CI.90 (0.566, 0.765)	**0.698** CI.90 (0.615, 0.780)	**0.817** CI.90 (0.693, 0.931)		
Net Benefits	**0.797** CI.90 (0.694, 0.886)	**0.621** CI.90 (0.531, 0.697)	**0.874** CI.90 (0.807, 0.940)	**0.873** CI.90 (0.784, 0.967)	**0.857** CI.90 (0.760, 0.925)	

Note: Discriminant validity established at $HTMT_{0.90}$ (HTMT value is not above 0.90)

4.5.2 Formative Measurement Model Assessment

Perceived risk and use of digital finance platform to manage personal finance are the formative constructs tested in this research. There are two major procedures for assessing the formative measurement model. The first procedure is to check collinearity among indicators using Variance Inflation Factor (VIF). The second step is to ensure the significance and relevance of outer weights of the formative indicators which are examined by looking at significant level and the result of outer loadings, and then decide whether eliminate or retain the formative indicators.

4.5.2.1 Collinearity among Indicators

In formative measurement model, the indicators are not inter-changeable. Therefore, high correlations should not be existed between the indicators. If two formatives are highly correlated, it is known as collinearity (Hair, Gabriel, and Patel 2014). The high collinearity among formative indicators may have negative impact on the evaluation of weights and their significance by increasing standard error and reduce the accuracy of result demonstration (Ramayah et al. 2016). The level of collinearity of formative indicators in SEM-PLS is examined by Variance Inflation Factor (VIF). The rules of thumbs depict that a potential issue with collinearity problem exists when VIF value is 3.3 and above (Diamantopoulos and Siguaw 2006) or 5.0 (Hair, Ringle, and Sarstedt 2011). Table 4.11 demonstrates the range of VIF value is from 1.095 to 1.736. Applying stricter threshold, the VIF values of both constructs are lower than 3.3. Thus, collinearity of the formative constructs is not a concern for the evaluation of PLS path model.

Table 4. 11: Assessment of Outer VIF Values

Formative Constructs	Items	VIF
Perceived risk	PR1	1.736
	PR2	1.581
	PR3	1.580
	PR4	1.697
Use of digital finance platform to manage personal finance	USE1	1.095
	USE2	1.175
	USE3	1.166
	USE4	1.110
	USE5	1.644
	USE6	1.594

4.5.2.2 Significance and Relevance of Formative Indicators

The assessment of significance and relevance of the formative indicators is the last step for assessing the measurement model. Out weight is an essential measure for evaluating the formative indicator's contribution. Petter, Straub, and Rai (2007) indicate that the indicators with insignificant item weights may be removed from the model. However, the insignificant indicator can be retained since the content validity may be undermined (Nunnally and Bernstein 1994). Therefore, any decision on eliminating the indicators for formative constructs should be made with caution (Diamantopoulos and Winklhofer 2001).

In this section, significant level of the outer weight of each formative indicator is assessed. Notably, Hair et al. (2016) state that the insignificant indicator of the formative variable still can be retained for preserving content validity, which is also known as relative contribution. Table 4.12 exhibits the results of outer weights of each indicator of the formative construct are calculated by bootstrapping. The p-value shows that PR1, PR3, USE2, USE5 and USE6 are not significant (more than 0.05) but still kept for the research according to the statement of Hair et al. (2016). The retained indicators are considered as absolutely important but not as relatively important (Ramayah et al. 2016). To sum up, none of the indicator of formative variables has been removed. the remaining formative indicators for perceived risk are: PR1, PR2, PR3, PR4; for the use of digital finance platform are: USE1, USE2, USE3, USE4, USE5, USE6. The detailed values of each measurement item for formative constructs are presented in Table 4.12.

Table 4. 12: Results on the Outer Weights of Formative Constructs

	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	***t* values**	***p* Values**
PR1 -> Perceived Risk	-0.024	-0.012	0.195	0.122	**0.903**
PR2 -> Perceived Risk	0.500	0.476	0.163	3.066	0.002
PR3 -> Perceived Risk	0.145	0.143	0.189	0.768	**0.443**
PR4 -> Perceived Risk	0.566	0.546	0.180	3.153	0.002
USE1 -> Use of Digital Finance Platform	0.702	0.702	0.063	11.181	0.000
USE2 -> Use of Digital Finance Platform	0.116	0.109	0.082	1.410	**0.159**

Table 4. 12: Results on the Outer Weights of Formative Constructs (continued)

USE3 -> Use of Digital Finance Platform	0.403	0.396	0.084	4.830	0.000
USE4 -> Use of Digital Finance Platform	0.242	0.235	0.066	3.690	0.000
USE5 -> Use of Digital Finance Platform	0.048	0.049	0.081	0.592	**0.554**
USE6 -> Use of Digital Finance Platform	0.042	0.043	0.085	0.490	**0.624**

Table 4. 13: Measurement Properties for Formative Constructs

Constructs	**Items**	**Weights**	**VIF**	***t* values**	***p* Values**
Perceived Risk	PR1	-0.024	1.736	0.122	0.903
	PR2	0.500	1.581	3.066	0.002
	PR3	0.145	1.580	0.768	0.443
	PR4	0.566	1.697	3.153	0.002
Use of Digital Finance Platform	USE1	0.702	1.095	11.181	0.000
	USE2	0.116	1.175	1.410	0.156
	USE3	0.403	1.166	4.830	0.000
	USE4	0.242	1.110	3.690	0.000
	USE5	0.048	1.644	0.592	0.579
	USE6	0.042	1.594	0.490	0.619

4.6 Structural Model Assessment

This subsection is to discuss the validity assessment of the structural model for this research. As discussed in Chapter Three of this thesis, the validity of the structural model is examined by five steps: lateral collinearity, path coefficient, R square, f square and Q square. To test for the significance of path coefficient, all of the data are run using bootstrapping by 500 subsamples, one-tailed type of test with 0.05 significance level. The details and importance of these findings are discussed in the sub-sections below.

4.6.1 Lateral Collinearity

It is essential to examine lateral collinearity in the first step of analyzing structural model. Even though the discriminant validity (which is known as vertical collinearity) of the data met the criterion, the issue of lateral collinearity may still exist and mislead the result of findings (Kock and Lynn 2012). That is to say, every set of predictor construct should be measured separately for every subset of the structural model. The same criterion is applied to assess the collinearity issue as in the formative

measurement model assessment, where the inner VIF value should below 3.3 (Diamantopoulos and Siguaw 2006) or 5.0 (Hair, Ringle, and Sarstedt 2011). If the value of inner VIF exceeds the threshold, it indicates an underlying issue of collinearity within the data. In this research, SmartPLS algorithm function is utilized to generate the inner VIF values. The result of values is presented in Table 4.14. As the table illustrates that all the values of inner VIF for the independent variables (EE, FC, PR, PE and SI) are lower than 3.3 and 5.0. It demonstrates that the potential collinearity problem is not a concern for this research (Hair et al. 2016).

Table 4. 14: Results of Inner VIF Values

Construct	Net Benefits	Use of Digital Finance Platform	User Satisfaction
Performance Expectancy		1.925	
Effort Expectancy		1.540	
Social Influence		1.818	
Facilitating Conditions		1.979	
Perceived Risk		1.164	
Use of Digital Finance Platform	1.000		1.000

4.6.2 Path Coefficients

Each path of the structural model connects two latent variables represents one hypothesis. The analysis of structural model is able to confirm or reject each hypothesis and have knowledge on the relationship between variables. Partial Least Square is a non-parametric analysis which is not making assumption regarding the data distribution (Ramayah et al. 2016). Therefore, when the research data is not normal, bootstrapping function (one-Tailed with 0.05 significance level) should be adopted for testing the significance level and t-statistic of the data to avoid Type I error.

The significance level of each relationship is examined upon on the output of t-statistics. As mentioned above, the t-statistics are calculated using bootstrapping function in SmartPLS. Table 4.14 and Figure 4.1 are constructed to interpret the results of path coefficient (β), t-value and p-value. After that, the results are used to determine acceptance or rejection of the proposed hypotheses. Further details of hypotheses testing are discussed in section 4.7.

4.6.3 Coefficient of Determination (R Square)

The next step of structural model assessment is evaluating the predictive accuracy of the model by the coefficient of determination score which is also known as R square (R^2). R square is considered as the combined effect of the exogenous variables for the endogenous variable(s) within the model (Ramayah et al. 2016). It is viewed as the extent to which the exogenous constructs could explain the variance in related endogenous construct. The higher value of R square means more predictive accuracy of the model (Jin, Chen, and Simpson 2001). According to the rule of thumbs for R square acceptance from Cohen (1988), 0.26 (26%), 0.13 (13%) and 0.02 (2%) respectively represent three levels of predictive accuracy: substantial, moderate and weak. As the Table 4.15 indicates, the result of the combined effect of exogenous constructs (Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions and Perceived Risk) on the endogenous construct (Use of Digital Finance Platform) indicates that the exogenous constructs explain 41.2% of the variance in the Use of Digital Finance Platform (USE). Furthermore, the Use of Digital Finance Platform is explaining 19.6% of the variance in User Satisfaction, and 23.3% in Net Benefits.

4.6.4 Effect Size (f Square)

Moreover, the effect size is assessed to determine the relative impact of predictor construct on endogenous construct using Cohen's f square (f^2) (Cohen 1988). It indicates the strength of an exogenous construct explains a specific endogenous construct based on the R square. According to Cohen (1988), the effect size is viewed as the difference of the R square values for the model assessment include or exclude the predecessor construct. Where 0.35, 0.15, 0.02 are respectively describing large, medium and small effect size of f^2. As the outputs shown in Table 4.15, Performance Expectancy (0.105), Effort Expectancy (0.028), Social Influence (0.006), Facilitating Conditions (0.010) and Perceived Risk (0.040) have small effect in producing the R square for the Use of Digital Finance Platform. Furthermore, the Use of Digital Finance Platform has a medium effect in producing the R square for User Satisfaction (0.244) and Net Benefits (0.303).

4.6.5 Predictive Relevance (Q Square)

In addition, the predictive relevance (Q square or Q^2) of the path model, is assessed using blindfolding procedure in SmartPLS. It is frequently determined by Stone and Geisser's Q^2 (Geisser 1974; Stone 1974). Fornell and Cha (1994) indicate that if the value of Q square is greater than 0, it means that exogenous constructs have predictive relevance on their linked endogenous construct. Thus, Table 4.15 demonstrates that all the values of Q square (0.139, 0.092 and 0.103) are larger than 0, which designates the exogenous constructs have predictive relevance for their endogenous constructs.

4.7 Hypotheses Testing

In order to assess the validation of proposed hypotheses and the structural model of this research, the path coefficient between latent variables and confident intervals bias are examined. According to Hair et al. (2016), there are three rules for the indicator of significance of the structural model relationship for one-tailed test. The levels of acceptance are: p value < 0.001, t value > 3.090 p value < 0.01, t value > 2.326; p value < 0.05, t value > 1.645 (Hair et al. 2016). Besides, the confidence intervals bias results are also provided to further validate the significance and relevance of the structural model when using bootstrapping test. If 0 does not exist within the 95% confidence intervals bias result, it indicates a significant result of the relationship. Therefore, the outcomes of the hypotheses tests for this research on the ground of the rules mentioned above illustrate that all proposed hypotheses are supported, except for hypothesis 3 (H3) and Hypothesis 5 (H5). Table 4.15 and Figure 4.1 present the results of the hypotheses testing as follows:

H1: Performance expectancy positively relates to the use of digital finance platforms to manage personal finance among rural residents in China . H1 is supported because $\beta = 0.345$, $t = 5.123$, $p < 0.001$, and 95% confidence interval bias = [0.235; 0.445].

H2: Effort expectancy positively relates to the use of digital finance platforms to manage personal finance among rural residents in China. H2 is supported because $\beta = 0.158$, $t = 2.972$, $p = 0.001$, and 95% confidence interval bias = [0.066; 0.241].

H3: Social influence positively relates to the use of digital finance platforms to manage personal finance among rural residents in China. H3 is not supported because $\beta = 0.080$, $t = 1.239$, $p = 0.108$, and 95% confidence interval bias = [-0.026; 0.189].

H4: Facilitating conditions positively relates to the use of digital finance platforms to manage personal finance among rural residents in China. H4 is supported because $\beta = 0.106$, $t = 1.853$, $p = 0.032$, and 95% confidence interval bias = [0.013; 0.203]

H5: Perceived risk negatively relates to the use of digital finance platforms to manage personal finance among rural residents in China. H5 is not supported because $\beta = 0.165$, $t = 3.312$, $p < 0.001$, and 95% confidence interval bias = [0.076; 0.238]. The hypothesis is rejected as the direction of the relationship is reversed.

H6: The use of digital finance platforms positively relates to user satisfaction in personal financial management among rural residents in China, H6 is supported because $\beta = 0.443$, $t = 9.340$, $p < 0.001$, and 95% confidence interval bias = [0.352; 0.510].

H7: The use of digital finance platforms positively relates to net benefits of personal financial management among rural residents in China. H7 is supported because $\beta = 0.482$, $t = 13.197$, $p < 0.001$, and 95% confidence interval bias = [0.409; 0.531].

Table 4. 15: Results of Hypotheses Testing

Hypothesis	Relationship	Path Coefficient (β)	Std. Error	t-value	p-value	95% Confidence Interval	Decision	R^2	f^2	Q^2
H1	PE->USE (+)	0.345	0.067	5.123***	0.000	[0.235; 0.455]	Supported	0.412	0.105	0.092
H2	EE->USE (+)	0.158	0.053	2.972**	0.001	[0.066; 0.241]	Supported		0.028	
H3	SI->USE (+)	0.080	0.064	1.239 (NS)	0.079	[-0.026; 0.185]	Not Supported		0.006	
H4	FC->USE (+)	0.106	0.057	1.853*	0.036	[0.013; 0.203]	Supported		0.010	
H5	PR->USE (-)	0.165	0.050	3.312***	0.000	[0.076; 0.238]	Not Supported		0.040	
H6	USE->US (+)	0.443	0.047	9.340***	0.000	[0.352; 0.510]	Supported	0.196	0.244	0.103
H7	USE->NB (+)	0.482	0.037	13.197***	0.000	[0.409; 0.531]	Supported	0.233	0.303	0.139

Note: * p<0.05 ** p<0.01 *** p<0.001 NS - Not Significant

(+): Positive Relationship (-): Negative Relationship

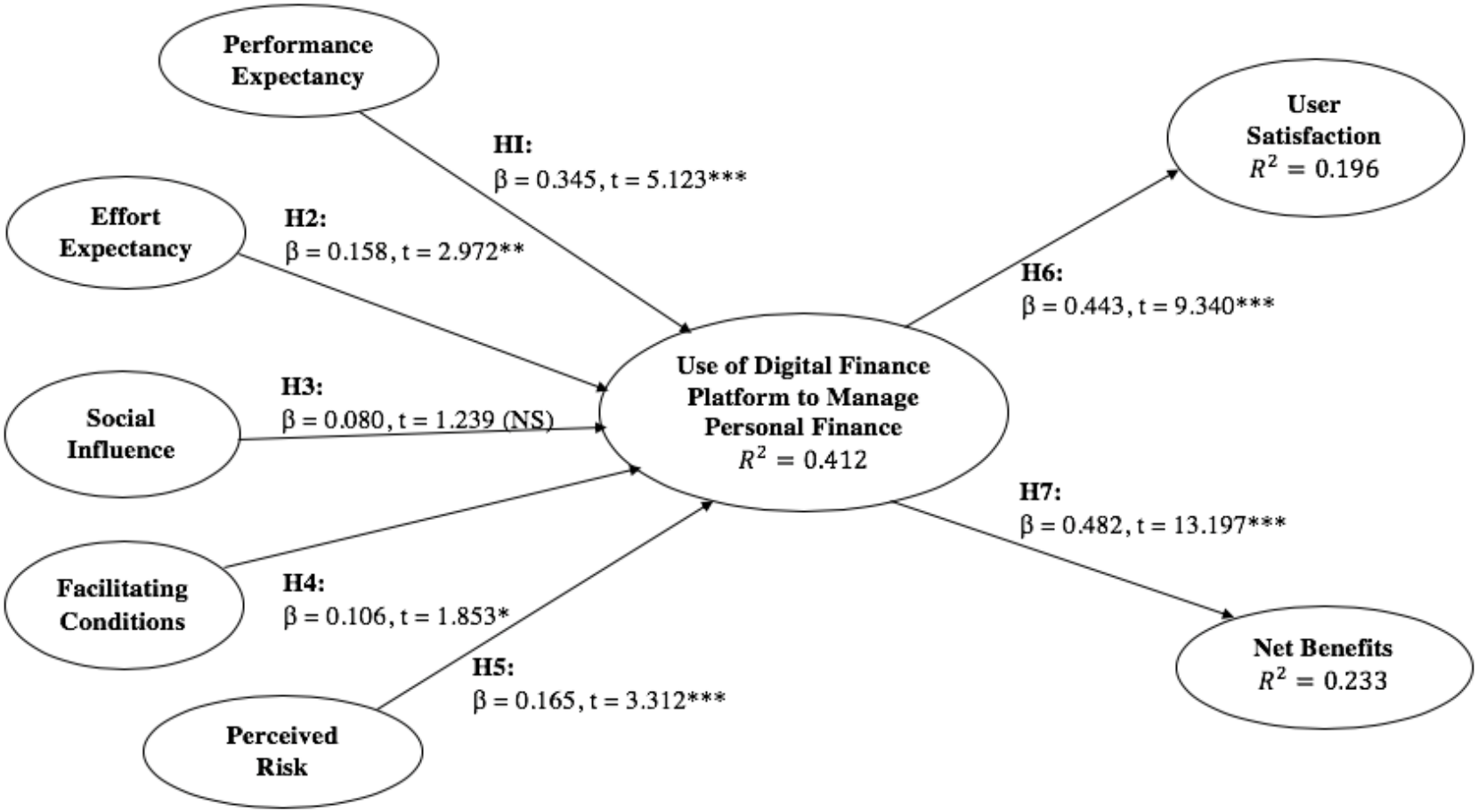

Figure 4. 1: Figure of Hypotheses Testing Results

4.8 Discussion of Results

This section discusses the main findings that are presented in the preceding paragraphs. The discussion of the hypotheses is exhibited according to the two research questions outlined in Chapter One of this thesis.

4.8.1 Summary of Main Findings

In Table 4.16 shows a summary of the proposed hypotheses is presented under each of the research question. Five hypotheses (H1, H2, H4, H6 and H7) are supported and two hypotheses (H3 and H5) are not supported empirically. According to the research findings, the use of digital finance platform to manage personal finance by rural Chinese is found to be influenced positively by performance expectancy, effort expectancy and facilitating conditions. Further, the results also demonstrate that the use of digital finance platform to manage personal finance by rural Chinese can contribute to user satisfaction and net benefits of them.

Table 4. 16: Summary of the Results of Research Questions and Hypotheses

Research Question and Hypotheses Statements		**Results**
Research Question 1: What are the determinants of the use of DFP to manage personal finance?		
H1	Performance expectancy positively relates to the use of digital finance platforms to manage personal finance among rural residents in China	Supported
H2	Effort expectancy positively relates to the use of digital finance platforms to manage personal finance among rural residents in China	Supported
H3	Social influence positively relates to the use of digital finance platforms to manage personal finance among rural residents in China	Not Supported
H4	Facilitating conditions positively relates to the use of digital finance platforms to manage personal finance among rural residents in China	Supported

Table 4. 16: Summary of the Results of Research Questions and Hypotheses (continued)

H5	Perceived risk negatively relates to the use of digital finance platforms to manage personal finance among rural residents in China	Not Supported
Research Question 2: What are the consequences of using DFP to manage personal finance?		
H6	The use of digital finance platforms positively relates to user satisfaction in personal financial management among rural residents in China.	Supported
H7	The use of digital finance platforms positively relates to net benefits of personal financial management among rural residents in China.	Supported

4.8.2 Discussion of Survey Findings

This section mainly discusses the research findings, in relation to previous literatures, and then provide explanations for the findings.

Research Question 1: What are the determinants of the use of DFP to manage personal finance?

4.8.2.1 Performance Expectancy

Following UTAUT, the study theorizes the use of innovative technology or system is determined by the performance expectancy of the user on the technology or system. Specifically, users' performance expectancy on the system is a significant predictor for the use intention, it then positively influences the actual use of the system. In this research, performance expectancy is identified to have positive influence in the use of digital finance platform to manage personal finance in rural China ($\beta = 0.345$, $t = 5.123$, $p < 0.001$, and 95% confidence interval bias = [0.235; 0.445]). This finding is consistent with previous studies that examined the performance expectancy on the intention and actual use of digital finance (Park, Yang, and Lehto 2007; Eriksson, Kerem, and Nilsson 2005; Martins, Oliveira, and Popovič 2014; Yu 2012), which demonstrate empirically that performance expectancy could positively influence the intention and use of the digital finance. Performance expectancy measures rural

Chinese users' level of expectancy of performance towards digital finance platform on supporting the personal financial management in this research. For instance, rural Chinese perceive that the use of digital finance platform would make the personal finance become easier and more effective. From the analysis, it indicates that performance expectancy of a digital finance platform to manage personal finance could influence the actual use behavior of the platform by rural Chinese. Besides, it is the strongest predictor towards the USE with 0.341 path coefficient. In other words, if the advantages and benefits of digital finance platform were promoted to the rural Chinese in an interactive manner, the use of digital finance platform would most likely be increase.

4.8.2.2 Effort Expectancy

UTAUT also illustrates that effort expectancy is one of the factors determining the intention and use of the system (Venkatesh et al. 2003). Rural Chinese' use of digital finance platform to manage personal finance is also identified to be influenced by their belief of effort expectancy of the platform ($\beta = 0.158$, $t = 2.972$, $p = 0.001$, and 95% confidence interval bias = [0.066; 0.241]). This finding is similar to the empirical findings of previous studies (Deng et al. 2010; Wang and Yi 2012; Yu 2012; Tsai, Zhu, and Jang 2013) which reveal that effort expectancy positively influence the intention and actual use of the digital finance platform. Besides, effort expectancy is considered as the extent to which rural Chinese perceive the ease of use and complexity of the digital finance platform. Based on the result, it illustrates that effort expectancy is a determinant that can influence rural Chinese to use digital finance platform for personal financial management. Thus, if rural Chinese believe that using the digital finance platform to manage personal finance is easy, clear, understandable and flexible for them, the users will be more willing to use digital finance platform.

4.8.2.3 Social Influence

According to UTAUT, social influence can positively affect users' intention to use the system, which then influence the use behavior of the users (Venkatesh et al. 2003). Social influence refers to the influence of the expectation of other important people (e.g., family members, colleagues and friends) around the user in rural China towards using digital finance platform. For instance, a user may choose to use the digital finance platform because users' friend suggests using it. However, this statement is

not supported in this research (β = 0.080, t = 1.239, p = 0.108, and 95% confidence interval bias = [-0.026; 0.189]). Specifically, the relationship between social influence and the use of digital finance platform is found to be not a significant predictor in influencing the rural Chinese in using DFP to manage personal finance. This result does not align with previous studies (Kleijnen, Wetzels, and De Ruyter 2004; Schepers and Wetzels 2007; Wu, Tao, and Yang 2007). On the other hand, this finding, on the other hand, aligns with Oliveira et al. (2014), Kishore and Sequeira (2016), Sarfaraz (2017) and Mu (2017) regarding digital finance platform. One possible explanation is that, users' self-confidence, personal ability and self-esteem instead of other people's beliefs and suggestions are the elements influencing the use of information system (Alshehri 2012). Besides, Oliveira et al. (2014) state that conducting digital financial service such as using mobile banking is a sensitive and personal activity, where confidentiality and security are more critical than impressing others. Furthermore, personal financial management is an activity that needs certain necessary resources such as financial support and knowledge to commence. Therefore, rural Chinese may not be easily influenced by surrounding people due to the limitation of the resources (Wang 2018). This finding implies that the use of digital finance platform is a personal and individual matter in rural China, which is not significantly affected by social influence.

4.8.2.4 Facilitating Conditions

Based on UTAUT, facilitating conditions could directly and positively influence the use of system (Venkatesh et al. 2003). In this research, facilitating conditions is considered as the availability of technology and organizational resources that able to support the use of the digital finance platform for personal finance. It is measured by the extent of perception on accessing the necessary resources, knowledge and technical supports to use digital finance platform. The result of this research confirms that facilitating conditions have a direct and significant effect on the use of the digital finance platform for personal finance by rural Chinese (β = 0.106, t = 1.853, p = 0.032, and 95% confidence interval bias = [0.013; 0.203]). This result supports the hypothesized direct relationship between facilitating conditions and the use behavior. The finding is consistent with the results of previous studies (Nel and Boshoff 2014; Yu 2012; Zhou, Lu, and Wang 2010; Zhou 2012; Helaiel 2009). Even though the result is statistically significant, it may not be practically significant as the beta is merely 0.1,

relatively weak. The possible explanation is that rural Chinese can access facilitating conditions more easily with less internet cost and greater availability of the devices (such as mobile phone and laptop), thus facilitating conditions may not cause too much concern towards using the digital finance platform (Behl and Pal 2016). With respect to managing personal finance on digital finance platform, facilitating conditions include digital devices (i.e. smart phone, tablet and laptop), internet accessibility, necessary knowledge and specialized induction to assist rural Chinese to use DFP to manage personal finance. Therefore, it is essential to develop facilitating conditions in terms of both human, educational and technological resources towards Chinese rural residents to promote the use of DFP.

4.8.2.5 Perceived Risk

Perceived risk is defined as the extent to which an individual believes to encounter risk on accessing the system (Featherman and Pavlou 2003). In this research, perceived risk is measured by the extent of concerning the risks from personal financial management on DFP by rural Chinese. Such risks include security issue, privacy invasion, performance error and financial losses. The finding indicates a significant but positive relationship between the perceived risk and the use of digital finance platform for personal financial management ($\beta = 0.165$, $t = 3.312$, $p < 0.001$, and 95% confidence interval bias = [0.076; 0.238]). The result is not consistent with previous studies (Ostlund 1974 and Martins, Oliveira, and Popovič et al. 2014).

There are few explanations for the results. Firstly, this could be due to the gain-oriented focus among rural Chinese (Duan and Yang 2015). Even though the rural Chinese may be aware of the possible risks towards using digital finance platform, they may choose to ignore the risks and pay more attention on the higher gains that could be earned from using the DFP. Martins and Oliveira (2014) depict that users can obtain higher profits on internet-based platform than on conventional channels of financial institutions from purchasing the financial products merely sold online with less cost and higher efficiency. Duan and Yang (2015) point out that some personal financial product sellers may exaggerate the revenue and conceal the risk of the products to a certain extent to promote the sales among rural Chinese.

Secondly, Funk (2016) demonstrates that China shows a relative low uncertainty avoidance level compared with other countries. Hofstede (1994) defines uncertainty avoidance as the extent to which individual of a society are comfortable with unknown and ambiguity. In the research of Hofstede Insights (2019), the uncertainty avoidance score of China is relatively low, this indicates Chinese are comfortable with uncertainty due to the adaptability and entrepreneurial spirit of them. People with low uncertainty avoidance are the risk takers and may not put too much concerns towards the absence of future predictivity (Hofstede 1994). Therefore, Chinese digital finance platform user with low uncertainty avoidance may be risk takers and in favor of perceived risk and choose to use the platform even having the awareness of risk. Thus, perceived risk is not a concern that may inhibit rural Chinese to use the DFP to manage personal finance in this research. Besides, rural Chinese may be not well informed and educated of the risks towards using digital finance platform (Ding 2016). It implies that rural Chinese may use the DFP to manage personal finance without the actual knowledge on potential risks. Even though the users may consider the risk before using the platform, they lack the necessary knowledge on severity of the risk consequences.

Research Question 2: What are the consequences of using DFP to manage personal finance?

4.8.2.6 User Satisfaction

One of the consequences of using DFP to manage personal finance is obtaining user satisfaction. User satisfaction refers to the extent of satisfaction from the user who use the information system, and obtain output from the system (Petter, DeLone, and McLean 2008). With respect to this research, user satisfaction is illustrated as the level of satisfaction from the rural Chinese who use digital finance platform to manage personal finance. It is measured by the need's satisfaction, efficiency, effectiveness and overall feeling of the DFP. The result shows that path coefficient (β) of the user satisfaction is 0.443, $t = 9.340$, $p < 0.001$, and 95% confidence interval bias = [0.352; 0.510], which reveals the significant influence of the use of digital finance platform (USE) on user satisfaction (US). The finding is consistent with the studies of DeLone and McLean (2016), Choi and Sun (2016); and Tam and Oliveira (2016). This result indicates that using digital finance platform can improve the satisfaction among rural Chinese from transacting online personal financial management. This could be

attributed to the enhancement of efficiency and effectiveness in using DFP to perform personal financial transfections instead of using traditional channels. Thus, it suggests that the extent of user satisfaction can be obtained and even improved if rural Chinese choose to use digital finance platform for personal financial management.

4.8.2.7 Net Benefits

Further, another consequence on using DFP to manage personal finance is the net benefits of the user. Net benefits is defined as the extent of user perceive the benefits that could obtain from using the system (Wu and Wang 2006). In this research, the net benefits refer to the benefits of rural Chinese receive from using digital finance platform for personal financial management. The net benefits include actual performance enhancement and quality improvement on PFM on the platform. Based on the result of the data analysis for this research ($\beta = 0.482$, $t = 13.197$, $p < 0.001$, and 95% confidence interval bias = [0.409; 0.531]), it indicates that the use of DFP to manage personal finance has a positive impact on users' net benefits. This finding aligns with previous studies (Chen and Jin 2017; Ding, Huang, and Verma 2011; DeLone and McLean 2003; Hans 2002) and reveals that the use of DFP to manage personal finance can positively influence the net benefits of rural Chinese users in terms of quality, efficiency and performance improvement on PFM. The finding implies that if the extent of using digital finance platform to manage personal finance by rural Chinese increases, the net benefits derived is likely to be enhanced.

4.9 Summary

This chapter mainly reveals the procedures and results of data analysis of the collected data. Firstly, preliminarily data analysis is conducted to confirm the quality of data for this research by detecting and eliminating the invalid data. Secondly, this chapter presents the descriptive statistics to describe the profile information of the respondents. Thirdly, the measurement model assessment is carried out to ensure the validity of both formative and reflective measurement items by examining the indicator reliability, internal consistency reliability, convergent validity and discriminant validity. Subsequently, this chapter demonstrates the structural model measurement to study the significances of the relationship between constructs. The values of lateral collinearity, path coefficients, effect size and predictive relevance are tested in this phase. The results of above data analyses suggest that performance expectancy (PE),

effort expectancy (EE), facilitating conditions (FC) are the factors influence the use of digital finance platform to manage personal finance (USE) among rural Chinese, where performance expectancy is the strongest predictor for the USE. In contrary, social influence is found to be non-significant, and perceived risk is found to be significant but reverse direction of the proposed relationship with the USE. Moreover, the extent of using DFP to manage personal finance has a positive influence on both user satisfaction and net benefits.

CHAPTER FIVE: CONCLUSIONS

5.1 Introduction

This chapter commences with a section and summarizes the main findings of each chapters. Within this section, it presents the conclusion of how the seven hypotheses are tested, and how the two research questions are answered by this research. It is followed by the sections which discuss the theoretical and managerial implications achieved by this research. Then, the following sections highlight the research limitations, and provide recommendations and guidelines for future research. Finally, this thesis ends with concluding remarks.

5.2 Recapitulation of Major Findings

The aims of this research are to study the determinants of rural Chinese's use behavior on digital finance platform for personal financial management; and the consequences of the use behavior using two theories - Unified Theory of Acceptance and Use of Technology (UTAUT), and DeLone and McLean Information System Success Model (D&M). Besides, Partial Least Squares Structural Equation Modeling (PLS-SEM) is used to assess the validity and reliability of the measurement and structural models of the research. Firstly, preliminary data analyses are conducted by data screening and management, which shows that the collected data are qualified for further data analysis. Further, assessments of measurement model is to ensure the reliabilities and validities of each measurement item of the research model using PLS-SEM technique. Thirdly, research hypotheses are tested to confirm the proposed relationship between the constructs by assessing the structural model. Overall, five out of seven research hypotheses are supported (H1, H2, H4, H6, H7) and two hypotheses are not supported (H3 and H5) in this research. A summary of those proposed hypotheses and findings are discussed upon on the research questions. The summary is indicated below.

Research Question 1: What are the determinants of the use of DFP to manage personal finance?

The findings of research depict that performance expectancy, performance expectancy (PE), effort expectancy (EE) and facilitating conditions (FC) are the factors influencing the use of digital finance platform to manage personal finance (USE) among rural residents in China. Performance expectancy is the strongest predictor

compared with the other constructs. However, the proposed relationship between perceived risk (PR) and the use of digital finance platform is not supported; and social influence (SI) is not significantly influencing Chinese rural residents to use the platform for personal financial management.

Research Question 2: What are the consequences of using DFP to manage personal finance?

According to the research findings, the use of digital finance platform (USE) positively influences both user satisfaction (US) and net benefits (NB). In this research, net benefits are found to be a stronger factor predicted by the USE than user satisfaction.

5.3 Research Implications

This section is to discuss the implications of this research. The main implications in this research can be divided into two aspects: theoretical and managerial implications. The summary of the implications is presented below.

5.3.1 Theoretical Implications

In general, this research makes contribution to further explaining the determinants of the use of digital finance platform to manage personal finance and the consequences of its use. The main theoretical implications are integrating two theories into a research model and demonstrating opposite direction of perceived risk. The details of theoretical implications are as below.

First of all, the significant but positive relationship is found in this research. This result contrary to the previous studies which indicate that the higher extent of risk a user perceived on using a certain system, the lower willingness for the use of the system (Behl and Pal 2016; An et al. 2015; Oliveira, and Popovič et al. 2014). However, the research find that as the perceived risk increases, rural Chinese is still willing to use DFP to manage personal finance. This finding is meaningful as which reveals a distinct phenomenen in rural China regarding the use difital finance platform, which has not been investigated in previous studies. Secondly, this research is one of the first to integrate the Unified Theory of Acceptance and Use of Technology (UTAUT) and DeLone and McLean Information System Success Model (D&M model) into one research model focusing on users' use behavior towards DFP. Firstly, as the research

objective is not only to study the antecedents render rural Chinese using the platform but also the consequences of using the platform to perform personal financial management. Specifically, UTAUT is merely able to explain the factors influencing user to use of DFP this research (Venkatesh et al. 2003). D&M model is adopted in order to investigate the consequences resulting from the use of DFP. Besides, even though D&M model is able to explain the reason why the information system is adopted, the reasons are in the context of the system itself (e.g. information quality, system quality and service quality) but not users' perspective like UTAUT. Therefore, integrating UTAUT and D&M models provides a more comprehensive review on the use of digital finance platform for personal financial management.

5.3.2 Managerial Implications

The findings of this research provide important implications for the organizations that utilize digital finance platform for its customers to manage personal finance. The developers of digital finance platforms, financial product providers even Chinese government will be interested in the findings of this research as it provides better knowledge on how to encourage rural Chinese to use the platform for personal financial management, and to promote the user satisfaction and net benefits of it. With this knowledge, digital finance platform developers, financial products providers and Chinese government can understand: 1) how to promote the use of digital finance platform, and 2) how to improve the user satisfaction and net benefits of the user from managing personal finance in rural China. The managerial implications are discussed as following.

The results of this research conclude that: 1) performance expectancy, effort expectancy and facilitating conditions can directly influence the use of DFP for PFM by rural Chinese; 2) the level of user satisfaction on personal financial management can be improved by using DFP for PFM in rural China; 3) use of DFP for PFM can positively influence the net benefits of the rural residents in China. Based on the above findings, the managerial implications can be made in terms of digital finance platform developers, financial products providers and Chinese government are presented as follow:

Firstly, with respect to digital finance platform developers, the increase of digital finance platform use could enhance the profitability for platform developers. Therefore, the developers can focus on boosting the platform users according to the research results on following aspects: (1) Performance expectancy. It is the strongest influencing factor on the use of DFP in this research. Therefore, it is critical for the digital finance platform developer to design a platform that can enhance the usefulness, effectiveness, and convenience of personal financial management on the platform. For instance, Yu'ebao is designed to earning yield from saving even small amount of cash (e.g. RMB1) online. Therefore, it can attract the users with any amount of capital for initiating an investment even the poor who never made investment before (An et al. 2015). (2) Effort expectancy. The result shows that, if the users believe the digital finance platform is easy for use, and for being skillful, and clear and understandable, more users will choose to use the platform for personal financial management. Thus, the platform developer should try to simplify the function and avoid the complexity on developing the platform. Alipay is a platform contains numerous financial functions such as online investments and online payment, however, users are able to access each of the function easily, which creates friendly experience to the user and positively impacts the use of the platform (Feng 2017). (3) Facilitating conditions. Platform developers also can provide necessary financial knowledge or induction of using the platform to the user. As the educational level and financial literacy are relatively low in rural China (Yao 2013), the more financial literacy rural people have, the further willingness they may have to use the digital finance platform (Servon and Kaestner 2008).

Besides, the platform developers can pay attention in the following areas contributing to the enhancement of user satisfaction: (1) Needs satisfaction. The platform should be created to satisfy the various needs from rural Chinese on personal financial management. For instance, Renrendai is a platform created for online lending purpose, which satisfies the demands of the users who intend to lend or borrow money online (Chen, Huang, and Ye 2018). (2) Efficiency satisfaction. It is important to ensure the platform enabling user to perform the personal financial transaction in an efficient manner by reducing the time and cost on it. For instance, Lufax allows borrower and lender to conduct lending transaction with lower costs and less time-consuming compared with offline channel (Yu and Shen 2019). (3) Effectiveness satisfaction. The

developer of the platform needs to ensure the user can perform an effective personal financial management on the platform. For instance, if a user intends to purchase funds and earn stable interest, Yu'ebao is the platform that can ensures this intention being possible (Zhang 2014).

In addition, the digital finance platform developers can enhance users' net benefits by improving the performance and quality of personal financial management on the platform. Hence, the platform developers should pay attention on the following aspects: (1) Performance improvement. According to the research results, the performance of the platform should be improved by allowing user to save time and get intended benefits from using it. Again, Lufax also provides numerous personal financial management plan on the platform. Users can choose the most appropriate plan to earn profits without spending time and money on consulting the professional financial advisors (Lufax n.d). (2) Quality improvement. It is also critical to ensure the quality of personal financial management thereby enhanced the use of platform. For instance, the platform provides professional information and assistance on making a high quality of investment decision-making for the user in rural China. One of the new functions of Alipay mobile platform is to test users' financial literacy, and then provide professional suggestions on making the appropriate investment accordingly and improve the investment quality (Alipay n.d). For instance, users like rural China with less financial literacy (Li 2016) will be advised to invest less-risk and low-return funds.

Secondly, regarding financial product providers, it is also critical to boost sales by providing personal financial products that could enhance the level of satisfaction and net benefits for rural residents in China. The providers can focus on following aspects: (1) User satisfaction. In order to improve rural users' satisfaction, the financial product providers should have a good knowledge on the main characters and demands of rural residents. The characters include low income level and low educational level (CNNIC 2016). Therefore, the providers can offer the financial products that are affordable and easy to purchase for the rural residents. In this research, Yu'ebao, is found to be the most popular platform used by rural residents. It caters to rural Chinese by proving low-price funds and easy-to-use application (Xia and Hou 2016). Thus, the satisfaction of rural residents in China from using the platform is enhanced. (2) Net benefits. The financial product providers should offer the product that enables rural Chines to obtain

net benefits by means of reducing time, saving money and improving investment quality. For example, Jingdong Finance provides a specific online lending service called “Jingnongdai”, which is only offered to rural Chinese with the features of non-mortgage, low interest and fast-speed (Jingdong n,d). This facilitates rural Chinese to obtain loan in a lower barrier, less cost and faster basis than traditional banks.

Thirdly, in the perspective of Chinese government, increasing use of DFP can benefit the government by boosting financial inclusion in China (Ozili 2018; Zhou, Arner, and Buckley 2015). Thus, Chinese government can enhance rural Chinese satisfaction and net benefits by focusing on the following aspects: (1) Increasing the accessibilities of the internet in rural areas and make preferential policy on boosting the use of digital devices and digital finance platform (i.e. smart phone and laptop) for rural residents. Based on the report of CNNIC (2016), as the internet and mobile device accessibility increases in rural area, the rural users of digital finance platform boosts as well. (2) Conducting financial literacy and risk education for rural residents in China. Huang (2017) finds that rural users usually have less financial knowledge, and low awareness of financial risk when they make personal investment online; thereby rural users are easily being the victims to online financial fraud. Therefore, conducting relative financial education can improve rural residents’ awareness towards financial risks and abilities to identify the financial frauds (Ding 2016). (3) Reinforcing the regulation policy on digital financial criminal. A strong regulation on supervising and punishment of digital finance fraud can play a critical role on intimidating the potential criminal and prevent rural residents from violating their benefits (Zhe and Gan 2011; Li 2016).

5.4 Research Limitations and Future Research

This section is to discuss the limitation of the research. Then, several directions of future research are proposed based on the discussions. Firstly, understanding the effects on how the perceived factors (i.e. performance expectancy, effort expectancy and facilitating conditions) change over time is critical as these constructs tend to vary with time and have effect on the use behaviors (Bhattacherjee and Premkumar 2004). The cross-sectional study has limitation on the ability to establish a causality between the predictor and outcomes (Carlson and Morrison 2009). It measures only one point of time of the research (Chiu, Huang, and Yen 2010). Therefore, it can be suggested that longitudinal studies are considered for future research. Solem (2015) states that

the true causal relationship can be drawn with longitudinal data as the vertical distance of data is increased.

Secondly, the results of this research are obtained by self-report measures. Self-reported scales of system use is criticized due to its weak and low accuracy for misunderstanding the questions and the actual meaning of scale rating (Trice and Treacy 1988). Besides, respondents may overstate or understate the actual attitudes or usage when participating in the questionnaires (Hung, Chang, and Kuo 2013) with self-reported measurement. It can be solved by asking two different group of respondents to answer the questions of exogenous and endogenous separately. Besides, future research can put more efforts on reducing the self-report bias by conducting structured interviews and reduce the misunderstanding of questions by the respondents; conducting the pre-testing on more respondents; or providing additional section on the questionnaire for the respondent to express their understanding towards the questions, and then researcher check if there is any difference between respondent's understanding and the actual meaning of the questions. Even though these extra research activities are time consuming, the accuracy of the questionnaire and research results will be increased.

Thirdly, there is a possibility that the items measuring perceived risk may not able to fully capture the risk behaviour of rural Chinese. This could be a reason for the inconsistent (positive) relationship between perceived risk and the use of the DFP of this research. There may be other supporting measurement items for perceived risk on using digital finance platform for personal finance but not yet widely being explored by existing literatures. Therefore, future studies can be conducted to develop some new measuring items to improve the measurement accuracy instead only focusing on the aspects of security, potential financial losses, perceived privacy invasion and system error to measure perceived risk in context of rural China.

5.5 Conclusion

This research identifies and examines the factors that influence the use of digital finance platform to manage personal finance by rural Chinese; and its consequences. In order to achieve the research objectives, both online and offline survey are carried out to gather data from the adults who are the current users of digital finance platform

to manage personal finance in rural China. The research conducts a comprehensive literature review on digital finance platform and personal financial management, and a thorough examination on the theories used in the research topic. Two research questions are established according to the reviews and seven research hypotheses are generated.

The research model (refers to Figure 4.1) explains 41.1% of variance in the use of digital finance platform to manage personal finance, 18.8% of variance in the user satisfaction and 22.8% of variance of the net benefits. Furthermore, five out of seven paths in the research model are discovered as significant and in the proposed direction of the research. According to the research findings, the use of digital finance platform is influenced by performance expectancy, effort expectancy and facilitating conditions. While, the use of digital finance platform positively influences the user satisfaction and net benefits of the users.

Given the model explanatory power, this research contributes to significant implications in theoretical and practical manners. From the perspective of theoretical view, it further explains the factor influencing the use of digital finance platform to manage personal finance and the consequences of this use. With regard to the main theoretical implications, this research extends the existing theory for data analysis by integrating two theories (UTAUT and D&M model) into a research model. From the managerial viewpoint, this research provides important knowledge and guidance to the developers of digital finance platform, financial products providers and Chinese government. The research findings help them to understand: (1) how to encourage rural Chinese to use digital finance platform for personal finance; (2) what are the consequences obtained from using the digital finance platform by rural Chinese, and (3) the suggested activities that can be adopted by them to improve the digital finance platform, then increase the profitability of digital finance developer and digital financial products providers; and boost the financial inclusion in China. Therefore, the developers of digital finance platform, financial products providers and Chinese government can encourage and support personal financial management on digital finance platform in rural China by focusing on the performance expectancy, effort expectancy and facilitating conditions of the platform, thereby the user satisfaction and net benefits of rural Chinese can be boosted as well.

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APPENDIX

Appendix 1.0: Survey Questionnaire (English Version)

Dear Participant,

I would like to invite you to participate in a survey. The purpose of this study is to examine the factors and consequences of using digital finance platform to manage personal finance. Please note that your participation of this study is entirely voluntary. You have the right to refuse participating the survey.

The survey contains 5 sections, which may take about 10-15 minutes to complete. This survey is completely anonymous and does not contain any personal information that could identify you. The information collected will be kept for 7 years after the completion of the research according to the research and development policies of Curtin University.

Please answer all the questions in this questionnaire and give the most accurate views based on your experience. There is no right or wrong answer. Please note that your answer will be treated with strict confidentiality.

Curtin University Human Research Ethics Committee (HREC) has approved this study (Approval number: HRE2017-0871). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

Thank you for your cooperation and valuable time.

Wu Xiao Qian
E-mail: xiaoqian.wu@postgrad.curtin.edu.my/ QQ: 465177978

Participant's Consent: I have received all the relevant information of this research and I am voluntarily participating in this research.
☐Yes

Digital finance is an innovative financial service with the fusion of internet technologies and traditional financial services. Digital finance platform refers to the platform which provides financial services and products to the public over the internet and IP network. The platforms that could be used to perform personal finance transaction are online banking platforms, wealth management platforms, online securities (e.g. stocks, bonds et al.) platforms, online insurance platforms and P2P lending investment platforms. The examples of these platforms include ICBC e-Banking, Yu'ebao, Tencent Wealth, Lufax, Everbright Securities, Eastmoney Fortune, Renrendai WE, Zhong An online insurance, Ping'an online insurance and so forth.

Filter Question

1. Are you **currently** a user of Digital Finance Platform for personal financial management?

☐ Yes. Please continue with the following sections.

☐ No. You may leave the site now and thank you for your time.

2. Age

☐ Below 18 years old. You may leave the site now and thank you for your time.

☐ 18 years old and above. Please continue with the following sections.

3. What is the name of the village you currently live in?

Section 1

1. Write down the name of the digital finance platform that you use **MOST** frequently for personal financial management. Please write only a name. (e.g. Yu'ebao)

2. In the last 6 months, how many times have you used the digital finance platform stated in Question 1 to perform personal finance transactions?

☐None ☐1-10 times ☐11-20 times ☐21-30 times ☐ Above 30 times

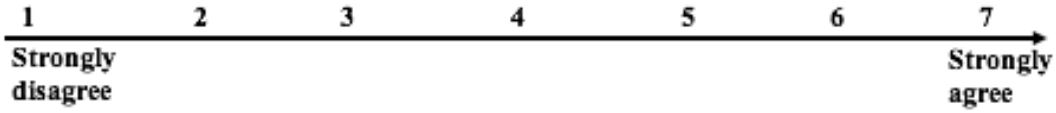
3. What is the device that you frequently used to access the digital finance platform?

☐ Desktop ☐ Laptop ☐ Smart Phone ☐ Tablet ☐ TV

4. How long have you been using this device (that you ticked in Question 3 above) in accessing the digital finance platform?

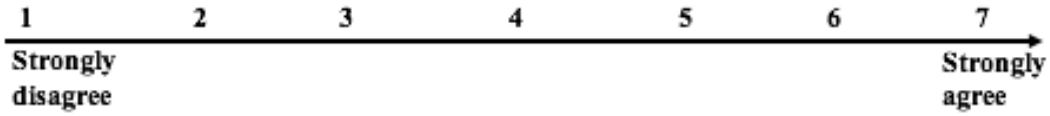
☐ <1 year ☐ 1-3 years ☐ 4-6 years ☐ >6 years

Section 2 – Based on the digital finance platform that you stated in Section 1, please state the level of your agreement on the following statements on the scale from 1 – 'strongly disagree' to 7 – 'strongly agree'



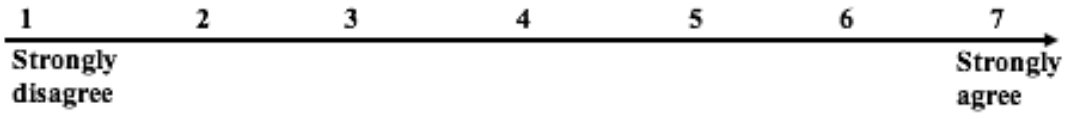
	Use of digital finance platform	1	2	3	4	5	6	7
1	I use the digital finance platform to perform personal financial management transactions.	☐	☐	☐	☐	☐	☐	☐
2	I use the digital finance platform to manage my cash.	☐	☐	☐	☐	☐	☐	☐
3	I use the digital finance platform to purchase securities (e.g. stocks, bonds et al.).	☐	☐	☐	☐	☐	☐	☐
4	I use the digital finance platform to purchase fund (e.g. Yu'ebao).	☐	☐	☐	☐	☐	☐	☐
5	I use the digital finance platform to perform P2P lending transactions.	☐	☐	☐	☐	☐	☐	☐
6	I use the digital finance platform to purchase insurance	☐	☐	☐	☐	☐	☐	☐

	Performance Expectancy	1	2	3	4	5	6	7
1	Using the digital finance platform would make it easier to perform my personal financial management.	☐	☐	☐	☐	☐	☐	☐
2	I would find the digital finance platform useful in personal financial management.	☐	☐	☐	☐	☐	☐	☐
3	I believe that the digital finance platform would improve the effectiveness on personal financial management.	☐	☐	☐	☐	☐	☐	☐
4	Using the digital finance platform would improve the quality of personal financial management.	☐	☐	☐	☐	☐	☐	☐
5	I would use digital finance platform to manage personal finance anyplace.	☐	☐	☐	☐	☐	☐	☐



	Effort Expectancy	1	2	3	4	5	6	7
1	Learning to use the digital finance platform would be easy for me.	☐	☐	☐	☐	☐	☐	☐
2	My interaction with the digital finance platform would be clear and understandable.	☐	☐	☐	☐	☐	☐	☐
3	It would be easy for me to become skilful at using the digital finance platform.	☐	☐	☐	☐	☐	☐	☐
4	I would find the digital finance platform to be flexible to interact with.	☐	☐	☐	☐	☐	☐	☐
5	Overall, I believe that the digital finance platform is easy to use.	☐	☐	☐	☐	☐	☐	☐

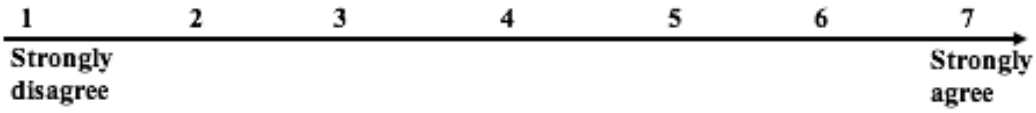
	Facilitating Condition	1	2	3	4	5	6	7
1	I have necessary resources to use the digital finance platform.	☐	☐	☐	☐	☐	☐	☐
2	I have necessary knowledge to use the digital finance platform.	☐	☐	☐	☐	☐	☐	☐
3	I have control over using the digital finance platform.	☐	☐	☐	☐	☐	☐	☐
4	Specialized instruction concerning the digital finance platform was available to me.	☐	☐	☐	☐	☐	☐	☐
5	Using the digital finance platform is compatible with all aspects of my life.	☐	☐	☐	☐	☐	☐	☐



	Social Influence	1	2	3	4	5	6	7
1	People who influence my behaviour would think that I should use the digital finance platform to manage personal finance.	☐	☐	☐	☐	☐	☐	☐
2	I use the digital finance platform because of the proportion of co-workers who use it to manage personal finance.	☐	☐	☐	☐	☐	☐	☐
3	People who are important to me would think that I should use the digital finance platform to manage personal finance.	☐	☐	☐	☐	☐	☐	☐
4	People who use the digital finance platform to manage personal finance have more prestige than those who do not.	☐	☐	☐	☐	☐	☐	☐

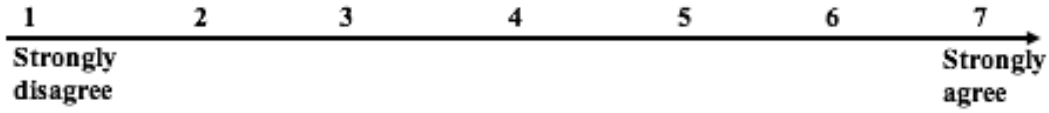
	Perceived Risk	1	2	3	4	5	6	7
1	I would not feel secure conducting personal financial transaction via the digital finance platform.	☐	☐	☐	☐	☐	☐	☐
2	I am worried that others might be able to access my personal finance account on the digital finance platform.	☐	☐	☐	☐	☐	☐	☐
3	I may lose money due to my careless mistakes on the digital finance platform.	☐	☐	☐	☐	☐	☐	☐
4	I may lose money due to system processing errors on the digital finance platform.	☐	☐	☐	☐	☐	☐	☐

Section 3 - Are you satisfied with the use of Digital Finance Platform to manage your personal finance? Please state to what extent do you agree with the following statements.



	User Satisfaction	1	2	3	4	5	6	7
1	I am satisfied that the digital finance platform meets my personal financial management needs.	☐	☐	☐	☐	☐	☐	☐
2	I am satisfied with the efficiency of the digital finance platform in managing my personal finance.	☐	☐	☐	☐	☐	☐	☐
3	I am satisfied with the effectiveness of the digital finance platform in managing my personal finance.	☐	☐	☐	☐	☐	☐	☐
4	Overall, I am satisfied with the digital finance platform in performing personal financial transactions.	☐	☐	☐	☐	☐	☐	☐

Section 4 - What benefits does DFP bring to your personal finance management? Please state to what extent do you agree with the following statements.



	Net Benefits	1	2	3	4	5	6	7
1	The digital finance platform helps me effectively manage my personal finance.	☐	☐	☐	☐	☐	☐	☐
2	The digital finance platform enables me to accomplish my personal finance goals more efficiently.	☐	☐	☐	☐	☐	☐	☐
3	My performance of personal financial management is enhanced by the use of the digital finance platform.	☐	☐	☐	☐	☐	☐	☐
4	The digital finance platform improves the quality of my personal financial management.	☐	☐	☐	☐	☐	☐	☐

Section 5 – Personal Information

1. What is your gender?

☐Male ☐Female

2. What is your age?

3. What is your highest educational level?

☐Primary school and below ☐Junior high school

☐Senior high school/ Technical school/ Secondary vocational school

☐College ☐University degree and above

4. What is your occupation?

☐Student ☐Freelancer

☐Agriculture and farming laborer ☐Unemployed/ laid-off

☐ Enterprise/ Corporation employee ☐Rural migrant

☐Technology professional ☐Retired

☐Manufacturing/ production enterprise employee

☐Commercial/ service industry employee

☐Party and government organ and institution employee

☐Enterprise/ Corporation mid-level manager

☐Party and government organ and institution leading cadres

☐ Enterprise/ Corporation top-level manager

☐Others

5. Monthly income level

☐No income ☐Below 500 yuan ☐501-1000 yuan☐1001-1500 yuan

☐1501-2000 yuan ☐2001-3000 yuan ☐ 3001-5000 yuan ☐ 5001-8000 yuan

☐Above 8000 yuan

END

Thank you for completing the questionnaire!

Appendix 2.0: Survey Questionnaire (Chinese Version)

亲爱的参与者，

你好！在此希望能邀请您参与这份问卷调查，本次研究的目的是调查用户使用数字金融平台进行个人理财的原因及影响。请注意，您的参与完全是基于自愿原则，所以您有权拒绝参与本次问卷调查。

本问卷包含 5 个部分，可能需要占用您 10 到 15 分钟的时间来完成。本问卷是完全匿名的，不会牵涉到可以辨别出您本人身份的个人信息。根据科廷大学所制定的研究与发展政策，通过本次问卷搜集到的信息将会在研究结束后被保存 7 年。

请根据您的经验给予最准确的观点，并完整回答完问卷里的所有问题。答案没有对错之分，您的回答将会被严格保密。

此次研究已经得到科廷大学人类研究伦理委员会（HREC）的批准（批准号：HRE2017-0871）。如果您希望与没有直接参与研究的的人讨论该研究，特别是关于研究的进行或者您作为参与者的权利的任何事项，或是希望做出保密的投诉，您可以联系伦理办公室人员：(08) 9266 9223 或经理，电话：(08) 9266 7093，电子邮件：hrec@curtin.edu.au。

感谢您的合作和宝贵的时间！

伍晓倩
E-mail: xiaoqian.wu@postgrad.curtin.edu.my
QQ: 465177978

参与者的同意：我已经收到了这项研究的所有相关信息， 且自愿参与这项研究。
☐是

数字金融是互联网技术与传统金融服务相融合的新型金融服务，而数字金融平台是指通过互联网或 IP 网络向大众提供金融产品与服务的平台。当前，能被用于进行个人理财的平台主要有网络银行平台，财富管理类平台，证券（如股票，债券等）平台，保险平台，以及 P2P 借贷投资平台。具体平台例子有：工商银行网络银行，余额宝，腾讯理财通，陆金所，光大金阳光证券，东方财富，人人贷 WE 理财，众安保险和平安保险等。

筛选问题

1. 您目前是一位正在使用数字金融平台进行个人理财的用户吗？

□是。请继续回答以下问题。

□否。您可以结束本次问卷，感谢您的宝贵时间。

2. 您的年龄

□小于 18 岁。您可以结束本次问卷，感谢您的宝贵时间。

□大于或等于 18 岁。请继续回答以下问题。

3. 您目前居住的村子的名字是什么？

第 1 部分

1. 请写下一个您**最常**用于个人理财的数字金融平台的名字，请只写一个名字（如：余额宝）。

2. 在过去的 6 个月里，您有多少次使用在问题 1 中提到的数字金融平台进行个人理财交易？

☐无 ☐1-10 次 ☐11-20 次 ☐21-30 次 ☐大于 30 次

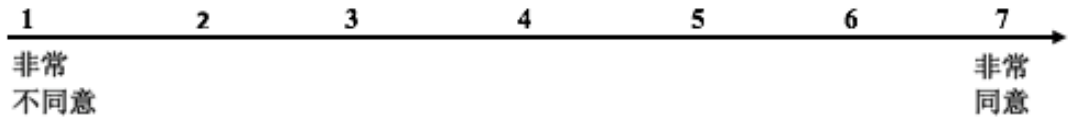
3. 您最常使用什么设备访问数字金融平台？

☐台式电脑 ☐笔记电脑 ☐智能手机 ☐平板电脑 ☐电视

4. 您用在问题 3 中选中的设备访问数字金融平台多久了？

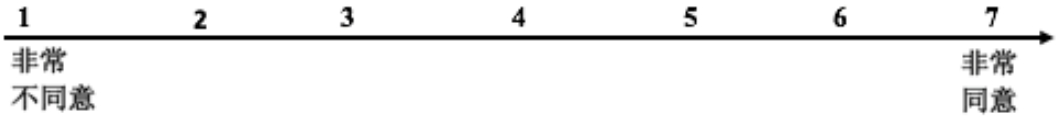
☐小于 1 年 ☐1-3 年 ☐4-6 年 ☐大于 6 年

第 2 部分 – 根据您在第 1 部分中提到的数字金融平台，请对下列各项陈述表明您的同意程度，选择范围从 1 表示非常不同意，到 7 表示非常同意。



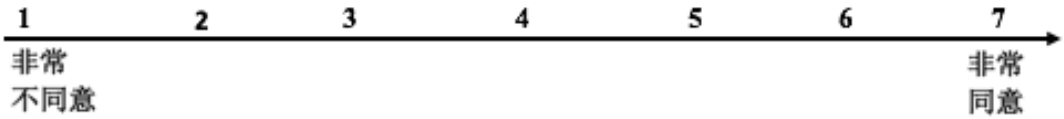
	数字金融平台使用行为	1	2	3	4	5	6	7
1	我使用数字金融平台进行个人理财交易。	☐	☐	☐	☐	☐	☐	☐
2	我使用数字金融平台管理我的现金。	☐	☐	☐	☐	☐	☐	☐
3	我使用数字金融平台购买证券（如股票，债券等）。	☐	☐	☐	☐	☐	☐	☐
4	我使用数字金融平台购买基金（如余额宝）。	☐	☐	☐	☐	☐	☐	☐
5	我使用数字金融平台进行 P2P 借贷交易。	☐	☐	☐	☐	☐	☐	☐
6	我使用数字金融平台购买保险。	☐	☐	☐	☐	☐	☐	☐

	效绩期望	1	2	3	4	5	6	7
1	使用数字金融平台会让我更容易地进行个人理财交易。	☐	☐	☐	☐	☐	☐	☐
2	我会发现使用数字金融平台在个人理财方面很有用。	☐	☐	☐	☐	☐	☐	☐
3	我相信数字金融平台会提高个人理财的效率。	☐	☐	☐	☐	☐	☐	☐
4	使用数字金融平台可以提高个人理财的质量。	☐	☐	☐	☐	☐	☐	☐
5	我会在任何地方使用数字金融平台来进行个人理财。	☐	☐	☐	☐	☐	☐	☐



	努力期望	1	2	3	4	5	6	7
1	学习使用数字金融对于我来说很容易。	☐	☐	☐	☐	☐	☐	☐
2	我与数字金融平台的互动会是清晰易懂的。	☐	☐	☐	☐	☐	☐	☐
3	对于我来说，熟练使用数字金融平台很容易。	☐	☐	☐	☐	☐	☐	☐
4	我会发现我能够与数字金融平台灵活地互动。	☐	☐	☐	☐	☐	☐	☐
5	总的来说，我相信数字金融平台易于使用。	☐	☐	☐	☐	☐	☐	☐

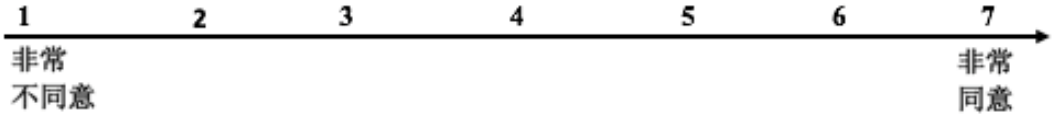
	促成因素	1	2	3	4	5	6	7
1	我拥有必要的资源来使用数字金融平台。	☐	☐	☐	☐	☐	☐	☐
2	我拥有必要的知识来使用数字金融平台。	☐	☐	☐	☐	☐	☐	☐
3	我拥有使用数字金融平台的控制权。	☐	☐	☐	☐	☐	☐	☐
4	我能得到关于数字金融平台的专业指导。	☐	☐	☐	☐	☐	☐	☐
5	使用数字金融平台能与我生活各方面都兼容。	☐	☐	☐	☐	☐	☐	☐



	社会影响	1	2	3	4	5	6	7
1	对我行为有影响的人认为我应该使用数字金融平台来进行个人理财。	□	□	□	□	□	□	□
2	因为有一定比例的同事使用数字金融平台来进行个人理财，所以我也使用它 。	□	□	□	□	□	□	□
3	对我很重要的人认为我应该使用数字金融平台来进行个人理财。	□	□	□	□	□	□	□
4	使用数字金融平台管理个人财务的人，比没有使用的人有更高的威望。	□	□	□	□	□	□	□

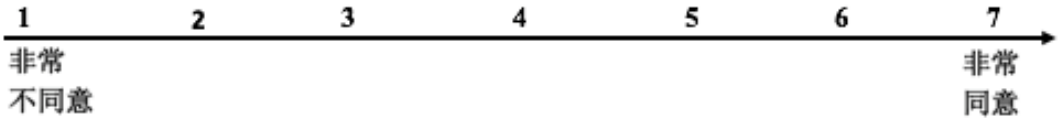
	感知风险	1	2	3	4	5	6	7
1	在数字金融平台上进行个人理财交易会让我感到不安全。	□	□	□	□	□	□	□
2	我担心其他人可能会在数字金融平台上获取我的个人理财账户。	□	□	□	□	□	□	□
3	我可能会因为在数字金融平台上不小心犯的错误而赔钱。	□	□	□	□	□	□	□
4	我担心数字金融平台由于功能不佳或系统故障，从而无法满足我的个人理财需求。	□	□	□	□	□	□	□

第 3 部分 – 您是否满意使用数字金融平台来进行个人理财？请表明您对一下陈述的同意程度。



	用户满意度	1	2	3	4	5	6	7
1	我满意数字金融平台因为它满足了我的个人理财需求。	☐	☐	☐	☐	☐	☐	☐
2	我对数字金融平台在个人理财方面的效率感到满意。	☐	☐	☐	☐	☐	☐	☐
3	我对数字金融平台在个人理财方面的成效感到满意。	☐	☐	☐	☐	☐	☐	☐
4	总体来说，我对在数字金融平台上进行个人理财感到满意。	☐	☐	☐	☐	☐	☐	☐

第 4 部分 – 数字金融平台为您的个人理财带来了哪些好处？请表明您对一下陈述的同意程度。



	净利益	1	2	3	4	5	6	7
1	数字金融平台帮助我更有成效地进行个人理财。	☐	☐	☐	☐	☐	☐	☐
2	数字金融平台能使我更有效率地完成个人理财目标	☐	☐	☐	☐	☐	☐	☐
3	我的个人理财表现因为使用数字金融平台而加强。	☐	☐	☐	☐	☐	☐	☐
4	数字金融平台提高了我个人理财的质量。	☐	☐	☐	☐	☐	☐	☐

第 5 部分 - 个人信息

1. 您的性别？

□男　　□女

2. 您的年龄？

3. 您的最高学历？

□小学及以下　　□初中　　□高中/中专/技校

□大专　　□大学本科及以上

4. 您的职业？

□学生　　□自由职业者　　□农林牧渔劳动者　　□无业/下岗/失业

□企业/公司一般员工　　□农村外出务工人员　　□专业技术人员

□制造业/生产性企业一般职员　　□商业/服务业一般职工　　□退休

□企业/公司中层管理人员　　□企业/公司高层管理人员

□党政机关事业单位一般职员　　□党政机关事业单位领导干部

□其他

5. 您的月收入？

□无收入　　□500 元以下　　□501-1000 元　　□1001-1500 元

□1501-2000 元　　□2001-3000 元　　□3001-5000 元　　□5001-8000 元

□8000 元以上

----------问卷结束----------

感谢您完成本次问卷调查！

Appendix 3.0: Consent Form (English Version)

CONSENT FORM

HREC Project Number:	HRE2017-0871
Project Title:	How Does Digital Finance Support Personal Financial Management in Rural China?
Principal Investigator:	A/P Dr. Yap Ching Seng
Student researcher:	Ms. Wu Xiao Qian
Version Number:	1
Version Date:	25/11/2017

For the Participant to Tick

- I have read the information statement version listed above and I understand its contents.
- I believe I understand the purpose, extent and possible risks of my involvement in this project.
- I voluntarily consent to take part in this research project.
- I have had an opportunity to ask questions and I am satisfied with the answers I have received.
- I understand that this project has been approved by Curtin University Human Research Ethics Committee and will be carried out in line with the National Statement on Ethical Conduct in Human Research (2007).
- I understand I will receive a copy of this Information Statement and Consent Form.

☐ I do consent to the storage and use of my information in future ethically-approved research projects related to this (project/disease)

Participant Name	
Participant Signature	
Date	

For the Researchers to Complete

Declaration by researcher: I have supplied an Information Letter and Consent Form to the participant who has signed above, and believe that they understand the purpose, extent and possible risks of their involvement in this project.

Researcher Name	
Researcher Signature	
Date	

Appendix 4.0: Consent Form (Chinese Version)

同意书

HREC 项目编码:	HRE2017-0871
项目标题：	数字金融如何支持中国农村的个人理财？
主要研究者：	叶勤生副教授
学生研究员：	伍晓倩
版本编号：	1
版本日期：	25/11/2017

参与者勾选

- 我已阅读，上面列出的信息说明版本，且能理解它的内容。
- 我相信我能理解参与这个项目的目的，范围以及可能的风险。
- 我自愿同意参加这个研究项目。
- 我有机会提出问题，且对收到的答复感到满意。
- 我了解到，这个项目已经得到了科廷大学人类研究伦理委员会的批准，并将按照关于人类研究伦理行为的国家声明（2007）进行。
- 我知道我会收到这份信息声明和同意书的副本。

☐ 我同意在未来经过伦理批准的与本项目相关的项目中保存和使用我的信息。

参与者姓名	
参与者签名	
日期	

以下由研究人员完成

研究人员声明：我已经向上面签名的参与者提供一份信息函和同意书，并且相信他们了解他们参与此项目的目的，范围和可能的风险。

研究员姓名	
研究员签名	
日期	

Appendix 5.0: Participate Information Statement (English Version)

PARTICIPANT INFORMATION STATEMENT

HREC Project Number:	HRE2017-0871
Project Title:	How Does Digital Finance Support Personal Financial Management in Rural China?
Principal Investigator:	A/P Dr. Yap Ching Seng
Student researcher:	Ms. Wu Xiao Qian
Version Number:	1
Version Date:	25/12/2017

What is the Project About?

- Background of the research project

China has become the leading nation with the largest online population and fastest-growing digital finance market in recent years. In rural areas, digital finance penetrates rapidly and plays an important role in promoting financial inclusion which is one of the key policies of Chinese government for developing rural China.

- Aim of Project

The aim of this study is to investigate how digital finance support personal financial management among rural residents in China.

- Contribution

The outcomes of this study are to examine the elements influence rural user to use digital finance platform (DFP) for personal finance and its consequences. Investigating the potential factors affecting the use of DFP and its impact on rural residents could promote the financial inclusion in China. Since illustrating the factors render rural China to use DFP to manage personal finance would provide empirical insights for developing appropriate digital financial products to satisfy the needs of rural residents in the future. Thereby the financial wellness and financial inclusion of rural areas could be promoted. Thus, this study will be of significance to the providers of digital financial products, Chinese rural residents and the overall financial system in China.

- Participants

The current rural Chinese residents who are living in villages, above 18 years old and are the users of digital finance platform will be randomly selected to participate in questionnaire survey.

Who is doing the Research?

- The project is being conducted by Ms. Wu Xiao Qian with the supervision under A/P Dr. Yap Ching Seng, A/P Dr. Pauline Ho Poh Ling, A/P Dr. Changyong Zhang.
- This project is funded by Curtin Malaysia Postgraduate Research Scholarship
- Participants will not be paid for participating in this project.

Why am I being asked to take part and what will I have to do?

- You have been asked to take part because you have met the following conditions:
  1) village resident in rural China
  2) above 18 years old
  3) the user of digital finance platform for personal financial management
- You will be asked to participate in filling out a questionnaire in this research. The questionnaire may take about 10-15 minutes to complete. We will ask you questions about what the factors render you to choose to use digital finance platform to manage your personal finance and its consequences such as what the digital finance platform is you use most frequently and what is the frequency you use it in last six months.
- The completed online questionnaire will be returned in electronically basis and the completed offline questionnaire will be collected by hand.

Are there any benefits' to being in the research project?

- There will be no direct benefits to you from participating in this research.

Are there any risks, side-effects, discomforts or inconveniences from being in the research project?

- There are no foreseeable risks from this research project.

Who will have access to my information?

- The information collected in this interview will be non-identifiable and treated as anonymous. Any information collected and used during this research will be treated as confidential. Only the research team and the Curtin University Ethics Committee will have access to the information in this research. The information collected will be kept for 7 years after the completion of the research according to the research and development policies of Curtin University.

Will you tell me the results of the research?

- A summary of the project's overall results will be made available to you if you wish to have it.

Do I have to take part in the research project?

- Please note that your participation of this study is entirely voluntary. You have the right to refuse or withdraw from participating the survey whenever you want. This research is approved by Curtin University

What happens next and who can I contact about the research?

- For further information about this research, please contact either: A/P Dr. Yap Ching Seng (yapchingseng@curtin.edu.my) or Ms. Wu Xiao Qian (xiaoqian.wu@postgrad.curtin.edu.my)

Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number HRE2017-0871). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

Appendix 6.0: Participant Information Statement (Chinese Version)

参与者信息声明

HREC 项目编码:	HRE2017-0871
项目标题：	数字金融如何支持中国农村的个人理财？
主要研究者：	叶勤生副教授
学生研究员：	伍晓倩
版本编号：	1
版本日期：	25/11/2017

这个项目是关于什么？

- 研究项目的背景

中国近年来已经成为网络人口最多，数字金融市场增长最快的国家。在农村，数字金融的迅速渗透为促进普惠金融的发展，中国政府发展农村的重要政策之一，发挥了重要的作用。

- 研究项目的目的

本研究的目的是调查数字金融如何支持中国农村居民的个人理财。

- 研究贡献

本研究的预期成果是考察及分析影响农村用户使用数字金融平台（DFP）进行个人理财的因素及其影响。通过调查影响数字金融平台使用的潜在因素及其对于农村居民的影响，促进了中国普惠金融的发展。更具体地说，阐明影响中国农村居民使用数字金融平台进行个人理财的因素，将为未来开发适当的，能满足农村居民需求的金融产品提供实证分析，从而促进农村的金融健康及金融普惠性。因此，这项研究对于数字金融产品的提供者，中国的农村居民以及中国整体的金融体系都具有重要意义。

- 参与者

目前居住于农村，年满 18 岁，且为数字金融平台用户的中国农村居民将会被随机抽选参与问卷调查。

谁在进行研究？

- 该研究正在由伍晓倩在叶勤生副教授，何宝玲副教授及张长勇副教授的指导下完成。
- 本研究项目由科廷大学马来西亚分校研究生奖学金资助。
- 参与本项目的参与者不会被给予任何物质回报。

为什么我会被要求参与以及我需要做什么？

- 您被要求参与此项目是因为您满足了以下条件：
  1) 中国农村居民
  2) 年满 18 岁
  3) 使用数字金融平台进行个人理财的使用者
- 在本研究中，您会被要求填写一份问卷调查。这份问卷可能需要 10-15 分钟的时间来完成。我们将会问您关于为何选择数字金融平台来进行个人理财的原因以及其影响，例如：请写下一个您最常用于个人理财的数字金融平台的名字，以及您在 6 个月里使用其的次数。
- 已完成的在线问卷调查将以电子形式收集，而已完成的离线问卷调查将被人工收集。

参与此项目能否得到任何好处？

- 本次研究并不会给参与者带来任何直接的利益。

在研究项目中是否有任何风险，副作用，不适或不便？

- 这个研究项目没有可预见的风险

谁可以访问我的信息？

- 收集到的信息是不会识别出个人身份的，且被以匿名方式处理的信息。任何在该研究中收集和使用的信息都将被视为保密信息，只有研究小组以及科廷大学伦理委员会才能获得这些信息。根据科廷大学研究与发展政策，收集到的信息将在研究完成后保存 7 年。

你会告诉我这项研究的结果吗？

- 如果您希望获得该项目的总体研究成果摘要我们会提供给您。

我必须要参加这个研究项目吗？

- 请注意，您参与本研究完全是基于自愿原则。您有权随时拒绝或退出问卷调查。这项研究是经过科廷大学批准的。

接下来会发生什么以及关于这项研究我可以联系谁？

- 若您想了解更多本研究的相关信息，请联系：叶勤生副教授 (yapchingseng@curtin.edu.my) 或伍晓倩女士 (xiaoqian.wu@postgrad.curtin.edu.my)

此次研究已经得到科廷大学人类研究伦理委员会（HREC）的批准（HREC 批准号：HRE2017-0871）。如果您希望与没有直接参与研究的的人讨论该研究，特别是关于研究的进行或者您作为参与者的权利的任何事项，或是希望做出保密的投诉，您可以联系伦理办公室人员：(08) 9266 9223 或经理，电话：(08) 9266 7093，电子邮件：hrec@curtin.edu.au。

Appendix 7.0: Ethics Approval Letter

Curtin University

Office of Research and Development

GPO Box U1987
Perth Western Australia 6845

Telephone +61 8 9266 7863
Facsimile +61 8 9266 3793
Web research.curtin.edu.au

19-Dec-2017

Name: CS Yap Yap
Department/School: Curtin Malaysia
Email: Csyap.Yap@curtin.edu.au

Dear CS Yap Yap

RE: Ethics Office approval
Approval number: HRE2017-0871

Thank you for submitting your application to the Human Research Ethics Office for the project **How Does Digital Finance Support Personal Financial Management in Rural China?**.

Your application was reviewed through the Curtin University Negligible risk review process.

The review outcome is: **Approved**.

Your proposal meets the requirements described in the National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research (2007)*.

Approval is granted for a period of one year from **19-Dec-2017** to **18-Dec-2018**. Continuation of approval will be granted on an annual basis following submission of an annual report.

Personnel authorised to work on this project:

Name	Role
Wu, Xiao Qian	Student
Yap, CS Yap	CI

Approved documents:

Document

Standard conditions of approval

1. Research must be conducted according to the approved proposal
2. Report in a timely manner anything that might warrant review of ethical approval of the project including:
   - proposed changes to the approved proposal or conduct of the study

- unanticipated problems that might affect continued ethical acceptability of the project
- major deviations from the approved proposal and/or regulatory guidelines
- serious adverse events

3. Amendments to the proposal must be approved by the Human Research Ethics Office before they are implemented (except where an amendment is undertaken to eliminate an immediate risk to participants)
4. An annual progress report must be submitted to the Human Research Ethics Office on or before the anniversary of approval and a completion report submitted on completion of the project
5. Personnel working on this project must be adequately qualified by education, training and experience for their role, or supervised
6. Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, that bears on this project
7. Changes to personnel working on this project must be reported to the Human Research Ethics Office
8. Data and primary materials must be retained and stored in accordance with the Western Australian University Sector Disposal Authority (WAUSDA) and the Curtin University Research Data and Primary Materials policy
9. Where practicable, results of the research should be made available to the research participants in a timely and clear manner
10. Unless prohibited by contractual obligations, results of the research should be disseminated in a manner that will allow public scrutiny; the Human Research Ethics Office must be informed of any constraints on publication
11. Approval is dependent upon ongoing compliance of the research with the Australian Code for the Responsible Conduct of Research, the National Statement on Ethical Conduct in Human Research, applicable legal requirements, and with Curtin University policies, procedures and governance requirements
12. The Human Research Ethics Office may conduct audits on a portion of approved projects.

Special Conditions of Approval
None

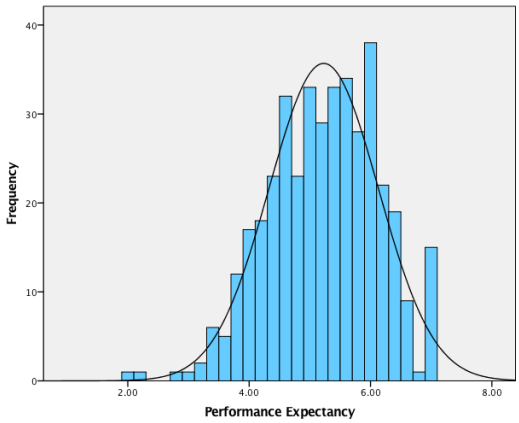
This letter constitutes low risk/negligible risk approval only. This project may not proceed until you have met all of the Curtin University research governance requirements.

Should you have any queries regarding consideration of your project, please contact the Ethics Support Officer for your faculty or the Ethics Office at hrec@curtin.edu.au or on 9266 2784.

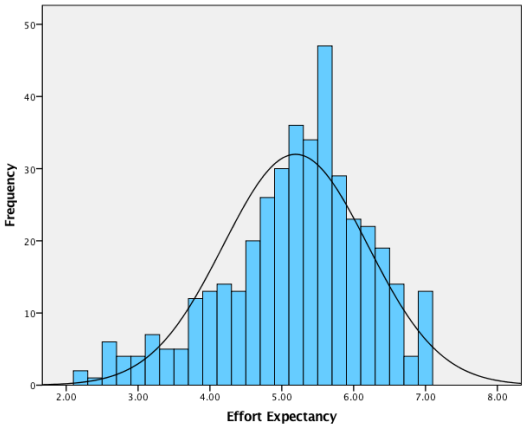
Yours sincerely

Amy Bowater
Acting Manager, Research Integrity

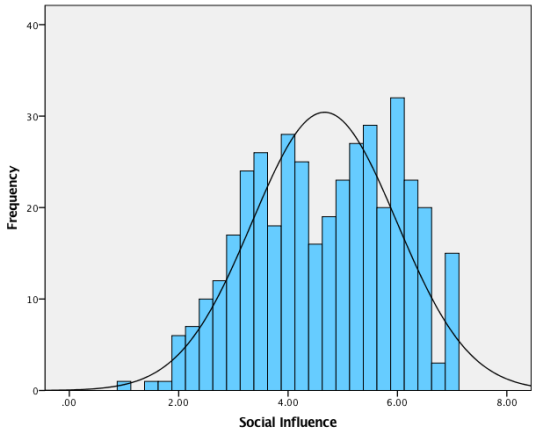
Appendix 8.0: Histograms of Constructs Normality Distribution



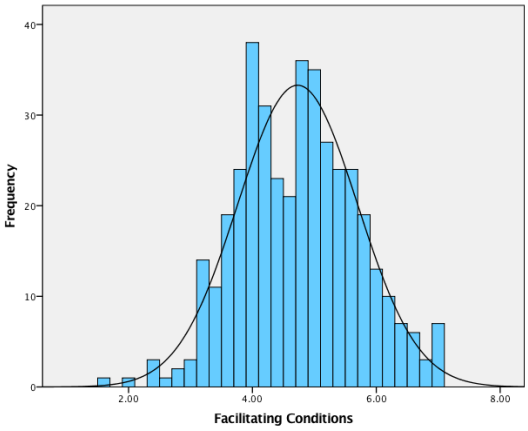
(Performance Expectancy Histogram)



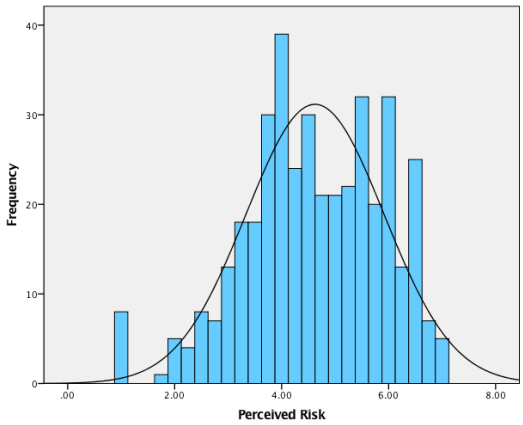
(Effort Expectancy Histogram)



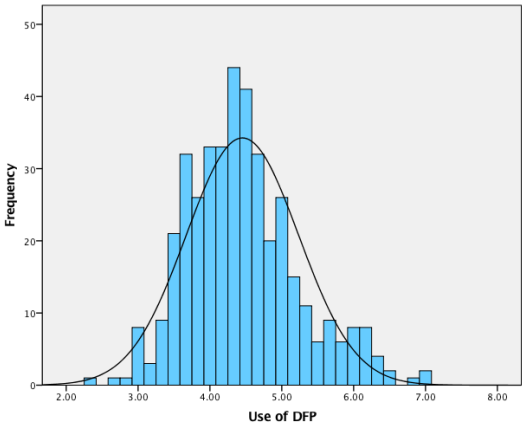
(Social Influence Histogram)



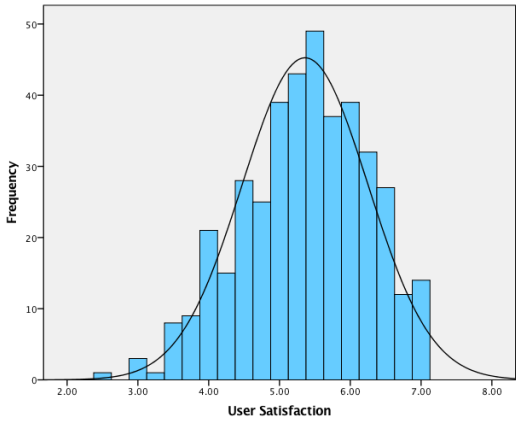
(Facilitating Conditions Histogram)



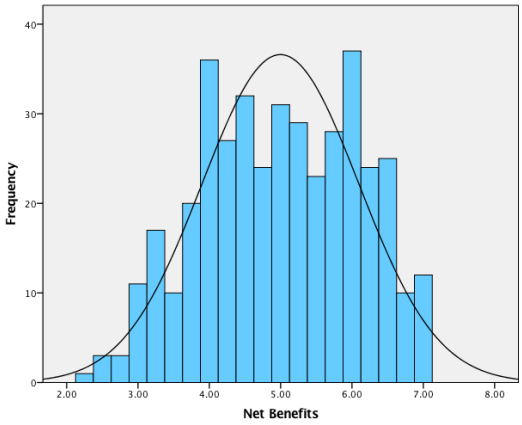
(Perceived Risk Histogram)



(Use of DFP Histogram)



(User Satisfaction Histogram)



(Net Benefits Histogram)

Appendix 9.0: Demographic Data: Age

Age	Frequency (N)	Percentage (%)	Cumulative Percentage (%)
18	32	7.94	7.94
19	23	5.71	13.65
20	37	9.18	22.83
21	29	7.20	30.02
22	47	11.66	41.69
23	28	6.95	48.64
24	25	6.20	54.84
25	22	5.46	60.30
26	20	4.96	65.26
27	14	3.47	68.73
28	22	5.46	74.19
29	9	2.23	76.43
30	20	4.96	81.39
31	4	0.99	82.38
32	10	2.48	84.86
33	10	2.48	87.34
34	2	0.50	87.84
35	17	4.22	92.06
36	3	0.74	92.80

37	1	0.25	93.05
38	3	0.74	93.80
39	3	0.74	94.54
40	5	1.24	95.78
41	1	0.25	96.03
42	2	0.50	96.53
43	3	0.74	97.27
44	4	0.99	98.26
45	3	0.74	99.01
46	1	0.25	99.26
47	2	0.50	99.75
49	1	0.25	100.00

Appendix 10.0: Harman's Single-factor Test Result

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.093	27.278	27.278	10.093	**27.278**	**27.278**
2	2.724	7.361	34.640			
3	1.948	5.266	39.906			
4	1.712	4.626	44.532			
5	1.487	4.018	48.550			
6	1.345	3.636	52.186			
7	1.218	3.291	55.476			
8	1.016	2.745	58.221			
9	.917	2.479	60.700			
10	.864	2.335	63.034			
11	.830	2.244	65.278			
12	.806	2.179	67.457			
13	.778	2.102	69.559			
14	.749	2.023	71.582			
15	.702	1.896	73.478			
16	.689	1.862	75.340			
17	.654	1.769	77.109			
18	.618	1.671	78.780			
19	.607	1.639	80.419			

20	.569	1.537	81.956			
21	.540	1.459	83.416			
22	.514	1.389	84.805			
23	.498	1.346	86.151			
24	.482	1.303	87.454			
25	.468	1.265	88.720			
26	.461	1.247	89.967			
27	.434	1.174	91.141			
28	.423	1.144	92.285			
29	.396	1.072	93.357			
30	.369	.998	94.354			
31	.345	.933	95.288			
32	.342	.925	96.213			
33	.326	.881	97.094			
34	.298	.805	97.899			
35	.283	.764	98.663			
36	.271	.732	99.395			
37	.224	.605	100.000			
Extraction Method: Principal Component Analysis.						

Appendix 11.0 SPSS Outputs

Platform

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Alipay	23	5.71	5.7	5.71
	Ant	6	1.49	1.5	7.20
	EF	1	.25	.2	7.44
	Heidou	1	.25	.2	7.69
	JD Fina	8	1.99	2.0	9.68
	Tencent	28	6.95	6.9	16.63
	XJB	1	.25	.2	16.87
	Yu'ebao	333	82.63	82.6	99.50
	ZLW	2	.50	.5	100.00
	Total	403	100.0	100.0	

Frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	2.73	2.73	2.73
	2	99	24.57	24.57	27.30
	3	104	25.81	25.81	53.10
	4	80	19.85	19.85	72.95
	5	109	27.05	27.05	100.00
	Total	403	100.00	100.00	

Device

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	2.98	2.98	2.98
	2	53	13.15	13.15	16.13
	3	302	74.94	74.94	91.07
	4	36	8.93	8.93	100.00
	Total	403	100.00	100.00	

Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	67	16.63	16.63	16.63
	2	235	58.31	58.31	74.94
	3	83	20.60	20.60	95.53
	4	18	4.47	4.47	100.00
	Total	403	100.00	100.00	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	194	48.14	48.14	48.14
	2	209	51.86	51.86	100.00
	Total	403	100.00	100.00	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	32	7.94	7.94	7.94
	19	23	5.71	5.71	13.65
	20	37	9.18	9.18	22.83
	21	29	7.20	7.20	30.02
	22	47	11.66	11.66	41.69
	23	28	6.95	6.95	48.64
	24	25	6.20	6.20	54.84
	25	22	5.46	5.46	60.30
	26	20	4.96	4.96	65.26
	27	14	3.47	3.47	68.73
	28	22	5.46	5.46	74.19
	29	9	2.23	2.23	76.43
	30	20	4.96	4.96	81.39
	31	4	.99	.99	82.38
	32	10	2.48	2.48	84.86
	33	10	2.48	2.48	87.34
	34	2	.50	.50	87.84
	35	17	4.22	4.22	92.06
	36	3	.74	.74	92.80
	37	1	.25	.25	93.05
	38	3	.74	.74	93.80
	39	3	.74	.74	94.54
	40	5	1.24	1.24	95.78
	41	1	.25	.25	96.03
	42	2	.50	.50	96.53
	43	3	.74	.74	97.27
	44	4	.99	.99	98.26
	45	3	.74	.74	99.01
	46	1	.25	.25	99.26
	47	2	.50	.50	99.75
	49	1	.25	.25	100.00
	Total	403	100.00	100.00	

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	403	18	49	25.64	6.578
Valid N (listwise)	403				

Age1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	55	13.6	13.648	13.6
	2	253	62.8	62.779	76.4
	3	73	18.1	18.114	94.5
	4	22	5.5	5.459	100.0
	Total	403	100.0	100.0	

Remark: 1=18-19(<20) years old 2=20-29 years old 3=30-39 years old 4=40-49 years old

Edu

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.25	.25	.25
	2	47	11.66	11.66	11.91
	3	103	25.56	25.56	37.47
	4	83	20.60	20.60	58.06
	5	169	41.94	41.94	100.00
	Total	403	100.00	100.00	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	139	34.49	34.49	34.49
	2	128	31.76	31.76	66.25
	3	42	10.42	10.42	76.67
	4	1	.25	.25	76.92
	5	30	7.44	7.44	84.37
	6	16	3.97	3.97	88.34
	7	8	1.99	1.99	90.32
	8	10	2.48	2.48	92.80
	9	11	2.73	2.73	95.53
	11	6	1.49	1.49	97.02
	12	3	.74	.74	97.77
	13	1	.25	.25	98.01
	15	8	1.99	1.99	100.00
	Total	403	100.00	100.00	

Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	69	17.12	17.12	17.12
	2	24	5.96	5.96	23.08
	3	27	6.70	6.70	29.78
	4	33	8.19	8.19	37.97
	5	32	7.94	7.94	45.91
	6	90	22.33	22.33	68.24
	7	91	22.58	22.58	90.82
	8	28	6.95	6.95	97.77
	9	9	2.23	2.23	100.00
	Total	403	100.00	100.00	

Descriptive Statistics

	N	Mean	Std. Deviation
USE1	403	5.658	1.166
USE2	403	5.159	1.459
USE3	403	4.082	1.823
USE4	403	5.928	.888
USE5	403	2.799	1.453
USE6	403	3.087	1.642
PE1	403	5.533	1.199
PE2	403	5.261	1.312
PE3	403	5.365	1.237
PE4	403	5.007	1.519
PE5	403	4.973	1.515
EE1	403	5.320	1.344
EE2	403	5.164	1.304
EE3	403	5.156	1.352
EE4	403	5.213	1.289
EE5	403	5.104	1.414
FC1	403	5.593	1.177
FC2	403	4.623	1.597
FC3	403	5.025	1.479
FC4	403	3.660	1.751
FC5	403	4.747	1.569
SI1	403	4.906	1.641
SI2	403	4.754	1.612
SI3	403	4.710	1.664
SI4	403	4.293	1.711
PR1	403	4.566	1.667
PR2	403	4.752	1.510
PR3		4.653	1.603
PR4	403	4.524	1.703
US1	403	5.444	1.223
US2	403	5.459	1.118
US3	403	5.077	1.422
US4	403	5.464	1.153
NB1	403	5.290	1.326
NB2	403	5.325	1.164
NB3	403	4.772	1.586
NB4	403	4.600	1.751
Valid N (listwise)	403		

Descriptive Statistics

	N	Mean	Std. Deviation
USE	403	4.452	.782
PE	403	5.228	.901
EE	403	5.192	1.005
FC	403	4.730	.966
SI	403	4.666	1.321
PR	403	4.623	1.290
US	403	5.361	.888
NB	403	4.997	1.098
Valid N (listwise)	403		

Appendix 12.0 SEM-PLS Outputs

Outer Loadings								
	Effort Expectancy	Facilitating Conditions	Net Benefits	Perceived Risk	Performance Expectancy	Social Influence	Use of Digital Finance Platform	User Satisfaction
EE1	0.830							
EE2	0.807							
EE3	0.821							
EE4	0.761							
EE5	0.515							
FC1		0.697						
FC2		0.791						
FC3		0.787						
NB1			0.741					
NB3			0.818					
NB4			0.836					
PE1					0.764			
PE2					0.790			
PE3					0.736			
PE4					0.713			
PR1				0.619				
PR2				0.839				
PR3				0.647				
PR4				0.885				
SI1						0.815		
SI2						0.777		
SI3						0.827		
SI4						0.770		
US1								0.788
US2								0.748
US4								0.740
USE1							0.848	
USE2							0.441	
USE3							0.583	
USE4							0.429	
USE5							0.164	
USE6							0.169	

CR/AVE				
	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Effort Expectancy	0.807	0.838	0.867	0.572
Facilitating Conditions	0.639	0.653	0.803	0.577
Net Benefits	0.717	0.724	0.841	0.639
Perceived Risk		1.000		
Performance Expectancy	0.744	0.750	0.838	0.565
Social Influence	0.809	0.810	0.875	0.636
Use of Digital Finance Platform		1.000		
User Satisfaction	0.636	0.642	0.803	0.576

Fornell								
	Effort Expectancy	Facilitating Conditions	Net Benefits	Perceived Risk	Performance Expectancy	Social Influence	Use of Digital Finance Platform	User Satisfaction
Effort Expectancy	0.756							
Facilitating Conditions	0.551	0.760						
Net Benefits	0.481	0.612	0.799					
Perceived Risk	0.169	0.259	0.362					
Performance Expectancy	0.503	0.606	0.577	0.223	0.752			
Social Influence	0.406	0.558	0.665	0.369	0.583	0.798		
Use of Digital Finance Platform	0.451	0.490	0.482	0.326	0.573	0.466		
User Satisfaction	0.493	0.526	0.579	0.276	0.540	0.507	0.443	0.759

HTMT						
	Effort Expectancy	Facilitating Conditions	Net Benefits	Performance Expectancy	Social Influence	User Satisfaction
Effort Expectancy						
Facilitating Conditions	0.750					
Net Benefits	0.621	0.873				
Performance Expectancy	0.643	0.858	0.797			
Social Influence	0.491	0.753	0.874	0.748		
User Satisfaction	0.671	0.817	0.857	0.773	0.698	

HTMT Inferential					
	Original Sample (O)	Sample Mean (M)	Bias	5%	95%
Facilitating Conditions -> Effort Expectancy	0.750	0.751	0.001	0.655	0.852
Net Benefits -> Effort Expectancy	0.621	0.617	-0.004	0.532	0.710
Net Benefits -> Facilitating Conditions	0.873	0.869	-0.004	0.788	0.969
Performance Expectancy -> Effort Expectancy	0.643	0.644	0.001	0.544	0.729
Performance Expectancy -> Facilitating Conditions	0.858	0.858	0.000	0.772	0.944
Performance Expectancy -> Net Benefits	0.797	0.795	-0.002	0.718	0.884
Social Influence -> Effort Expectancy	0.491	0.493	0.002	0.397	0.566
Social Influence -> Facilitating Conditions	0.753	0.753	0.000	0.630	0.852
Social Influence -> Net Benefits	0.874	0.872	-0.002	0.811	0.936
Social Influence -> Performance Expectancy	0.748	0.749	0.000	0.680	0.820
User Satisfaction -> Effort Expectancy	0.671	0.668	-0.003	0.573	0.759
User Satisfaction -> Facilitating Conditions	0.817	0.817	0.000	0.711	0.939
User Satisfaction -> Net Benefits	0.857	0.858	0.001	0.768	0.942
User Satisfaction -> Performance Expectancy	0.773	0.773	-0.001	0.674	0.865
User Satisfaction -> Social Influence	0.698	0.697	-0.001	0.612	0.778

Cross - Loadings								
	Effort Expectancy	Facilitating Conditions	Net Benefits	Perceived Risk	Performance Expectancy	Social Influence	Use of Digital Finance Platform	User Satisfaction
EE1	0.830	0.499	0.439	0.179	0.440	0.355	0.398	0.451
EE2	0.807	0.466	0.418	0.182	0.403	0.328	0.370	0.361
EE3	0.821	0.424	0.368	0.146	0.393	0.326	0.359	0.423
EE4	0.761	0.416	0.346	0.100	0.378	0.328	0.343	0.338
EE5	0.515	0.215	0.196	-0.043	0.263	0.153	0.191	0.268
FC1	0.447	0.697	0.263	0.174	0.405	0.275	0.308	0.397
FC2	0.442	0.791	0.616	0.243	0.532	0.515	0.439	0.405
FC3	0.372	0.787	0.460	0.161	0.427	0.448	0.352	0.402
NB1	0.416	0.546	0.741	0.246	0.476	0.502	0.346	0.540
NB3	0.346	0.432	0.818	0.272	0.476	0.528	0.397	0.412
NB4	0.398	0.500	0.836	0.345	0.439	0.563	0.410	0.450
PE1	0.428	0.498	0.437	0.199	0.764	0.467	0.480	0.461
PE2	0.330	0.476	0.448	0.190	0.790	0.442	0.439	0.390
PE3	0.373	0.444	0.396	0.134	0.736	0.433	0.435	0.406
PE4	0.379	0.392	0.464	0.142	0.713	0.404	0.351	0.355
PR1	0.096	0.264	0.328	0.619	0.174	0.374	0.202	0.146
PR2	0.190	0.179	0.293	0.839	0.168	0.292	0.274	0.234
PR3	0.125	0.196	0.323	0.647	0.199	0.286	0.211	0.181
PR4	0.103	0.259	0.312	0.885	0.203	0.336	0.289	0.241
SI1	0.305	0.436	0.523	0.330	0.478	0.815	0.369	0.412
SI2	0.340	0.504	0.472	0.233	0.463	0.777	0.377	0.431
SI3	0.313	0.405	0.566	0.327	0.450	0.827	0.385	0.404
SI4	0.339	0.435	0.561	0.287	0.469	0.770	0.353	0.369
US1	0.470	0.461	0.495	0.233	0.437	0.432	0.384	0.788
US2	0.336	0.363	0.387	0.201	0.377	0.333	0.287	0.748
US4	0.296	0.362	0.424	0.191	0.410	0.377	0.324	0.740
USE1	0.450	0.381	0.384	0.224	0.477	0.349	0.848	0.420
USE2	0.147	0.267	0.194	0.048	0.319	0.162	0.441	0.214
USE3	0.153	0.296	0.361	0.304	0.332	0.377	0.583	0.147
USE4	0.197	0.285	0.131	0.131	0.274	0.167	0.429	0.240
USE5	0.114	0.033	0.135	0.124	0.004	0.098	0.164	0.050
USE6	0.067	0.038	0.147	0.065	0.006	0.115	0.169	0.080

Outer Weight								
	Effort Expectancy	Facilitating Conditions	Net Benefits	Perceived Risk	Performance Expectancy	Social Influence	Use of Digital Finance Platform	User Satisfaction
EE1	0.310							
EE2	0.288							
EE3	0.280							
EE4	0.268							
EE5	0.149							
FC1		0.367						
FC2		0.523						
FC3		0.419						
NB1			0.374					
NB3			0.430					
NB4			0.444					
PE1					0.374			
PE2					0.342			
PE3					0.339			
PE4					0.273			
PR1				-0.024				
PR2				0.500				
PR3				0.145				
PR4				0.566				
SI1						0.312		
SI2						0.318		
SI3						0.325		
SI4						0.299		
US1								0.507
US2								0.379
US4								0.428
USE1							0.702	
USE2							0.116	
USE3							0.403	
USE4							0.242	
USE5							0.048	
USE6							0.042	

Outer VIF	
	VIF
EE1	1.958
EE2	1.830
EE3	1.926
EE4	1.609
EE5	1.195
FC1	1.259
FC2	1.205
FC3	1.375
NB1	1.299
NB3	1.476
NB4	1.519
PE1	1.375
PE2	1.553
PE3	1.349
PE4	1.416
PR1	1.736
PR2	1.581
PR3	1.580
PR4	1.697
SI1	1.862
SI2	1.543
SI3	1.906
SI4	1.558
US1	1.219
US2	1.311
US4	1.236
USE1	1.095
USE2	1.175
USE3	1.166
USE4	1.110
USE5	1.644
USE6	1.594

Outer Weights					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
EE1 <- Effort Expectancy	0.310	0.310	0.027	11.526	0.000
EE2 <- Effort Expectancy	0.288	0.288	0.029	9.787	0.000
EE3 <- Effort Expectancy	0.280	0.279	0.024	11.567	0.000
EE4 <- Effort Expectancy	0.268	0.265	0.031	8.648	0.000
EE5 <- Effort Expectancy	0.149	0.148	0.043	3.476	0.001
FC1 <- Facilitating Conditions	0.367	0.362	0.043	8.547	0.000
FC2 <- Facilitating Conditions	0.523	0.526	0.048	10.959	0.000
FC3 <- Facilitating Conditions	0.419	0.419	0.033	12.850	0.000
NB1 <- Net Benefits	0.374	0.373	0.036	10.312	0.000
NB3 <- Net Benefits	0.430	0.429	0.034	12.612	0.000
NB4 <- Net Benefits	0.444	0.444	0.033	13.268	0.000
PE1 <- Performance Expectancy	0.374	0.373	0.025	14.746	0.000
PE2 <- Performance Expectancy	0.342	0.341	0.022	15.839	0.000
PE3 <- Performance Expectancy	0.339	0.339	0.025	13.421	0.000
PE4 <- Performance Expectancy	0.273	0.274	0.027	10.197	0.000
PR1 -> Perceived Risk	-0.024	-0.019	0.190	0.125	0.901
PR2 -> Perceived Risk	0.500	0.487	0.161	3.099	0.002
PR3 -> Perceived Risk	0.145	0.137	0.188	0.774	0.439
PR4 -> Perceived Risk	0.566	0.545	0.179	3.167	0.002
SI1 <- Social Influence	0.312	0.311	0.022	14.314	0.000
SI2 <- Social Influence	0.318	0.318	0.026	12.345	0.000
SI3 <- Social Influence	0.325	0.326	0.023	13.953	0.000
SI4 <- Social Influence	0.299	0.299	0.026	11.288	0.000
US1 <- User Satisfaction	0.507	0.510	0.048	10.599	0.000
US2 <- User Satisfaction	0.379	0.374	0.045	8.379	0.000
US4 <- User Satisfaction	0.428	0.428	0.039	10.870	0.000
USE1 -> Use of Digital Finance Platform	0.702	0.698	0.061	11.525	0.000
USE2 -> Use of Digital Finance Platform	0.116	0.107	0.082	1.419	0.156
USE3 -> Use of Digital Finance Platform	0.403	0.402	0.078	5.179	0.000
USE4 -> Use of Digital Finance Platform	0.242	0.234	0.067	3.587	0.000
USE5 -> Use of Digital Finance Platform	0.048	0.047	0.087	0.555	0.579
USE6 -> Use of Digital Finance Platform	0.042	0.044	0.084	0.497	0.619

Inner VIF								
	Effort Expectancy	Facilitating Conditions	Net Benefits	Perceived Risk	Performance Expectancy	Social Influence	Use of Digital Finance Platform	User Satisfaction
Effort Expectancy							1.540	
Facilitating Conditions							1.979	
Net Benefits								
Perceived Risk							1.164	
Performance Expectancy							1.925	
Social Influence							1.818	
Use of Digital Finance Platform			1.000					1.000
User Satisfaction								

Path Coefficient					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Effort Expectancy -> Use of Digital Finance Platform	0.158	0.161	0.053	2.972	0.001
Facilitating Conditions -> Use of Digital Finance Platform	0.106	0.107	0.057	1.853	0.032
Perceived Risk -> Use of Digital Finance Platform	0.165	0.175	0.050	3.312	0.000
Performance Expectancy -> Use of Digital Finance Platform	0.345	0.342	0.067	5.123	0.000
Social Influence -> Use of Digital Finance Platform	0.080	0.083	0.064	1.239	0.108
Use of Digital Finance Platform -> Net Benefits	0.482	0.492	0.037	13.197	0.000
Use of Digital Finance Platform -> User Satisfaction	0.443	0.451	0.047	9.340	0.000

CI Bias					
	Original Sample (O)	Sample Mean (M)	Bias	5%	95%
Effort Expectancy -> Use of Digital Finance Platform	0.158	0.161	0.003	0.066	0.241
Facilitating Conditions -> Use of Digital Finance Platform	0.106	0.107	0.001	0.013	0.203
Perceived Risk -> Use of Digital Finance Platform	0.165	0.175	0.010	0.076	0.238
Performance Expectancy -> Use of Digital Finance Platform	0.345	0.342	-0.003	0.235	0.455
Social Influence -> Use of Digital Finance Platform	0.080	0.083	0.003	-0.026	0.185
Use of Digital Finance Platform -> Net Benefits	0.482	0.492	0.010	0.409	0.531
Use of Digital Finance Platform -> User Satisfaction	0.443	0.451	0.009	0.352	0.510

R sqaure		
	R Square	R Square Adjusted
Net Benefits	0.233	0.231
Use of Digital Finance Platform	0.412	0.405
User Satisfaction	0.196	0.194

f sqaure								
	Effort Expectancy	Facilitating Conditions	Net Benefits	Perceived Risk	Performance Expectancy	Social Influence	Use of Digital Finance Platform	User Satisfaction
Effort Expectancy							0.028	
Facilitating Conditions							0.010	
Net Benefits								
Perceived Risk							0.040	
Performance Expectancy							0.105	
Social Influence							0.006	
Use of Digital Finance Platform			0.303					0.244
User Satisfaction								

Q sqaure			
	SSO	SSE	Q^2 (=1-SSE/SSO)
Effort Expectancy	2015.000	2015.000	
Facilitating Conditions	1209.000	1209.000	
Net Benefits	1209.000	1041.105	0.139
Perceived Risk	1612.000	1612.000	
Performance Expectancy	1612.000	1612.000	
Social Influence	1612.000	1612.000	
Use of Digital Finance Platform	2418.000	2194.931	0.092
User Satisfaction	1209.000	1084.731	0.103