國立政治大學資訊管理學系

碩士學位論文

行動支付品牌轉換因素之探討

Determinants of Brand Switch in Mobile Payment

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摘要

隨著金融科技的進步，行動支付的使用變得越來越普及。許多銀行、社群軟體、或是手機品牌都推出了行動支付功能，藉此為用戶提供更便捷的服務。例如，Samsung 於 2020 年起，在台灣正式與悠遊卡公司合作，推出交通支付功能，使用戶能直接使用相關設備搭乘大眾交通工具。然而，儘管台灣行動支付品牌的數量很多，但根據研究顯示，台灣的行動支付用戶往往只會選擇使用約一到四種支付品牌。因此，用戶之所以選擇從其他品牌轉向使用某個品牌，對於研究者與行動支付品牌而言，儼然成為一個重要的議題。

在本研究中，我們與知名的手機品牌 – Samsung 合作，探討會導致用戶轉換行動支付品牌的因素為何。本論文所定義的品牌轉換包括在短期內轉而使用特定品牌的暫時轉換。基於創新擴散理論和任務–技術匹配模型的概念，本研究建立了行動支付品牌轉換的研究模型，並透過資料分析該模型的顯著性。據研究結果顯示，相對優勢和轉換成本對品牌轉換意願有顯著影響，而使用地點與相對優勢的交互作用會顯著且正向地調節轉換意願。本研究結果可以加深我們對行動支付中，關於品牌轉換行為的理解，幫助包括 Samsung 在內的眾多行動支付品牌了解促使用戶轉換至使用其他品牌的原因，並能夠根據此研究結果優化現有服務，或推出新興服務，帶給消費者更加便利的生活。

關鍵詞：行動支付、創新擴散理論、任務–技術匹配模型、相對優勢、轉換成本、品牌轉換

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Abstract

With the progress of financial technology, mobile payment has become increasingly popular. Many banks, social software, and mobile phone brands have launched mobile payment functions to provide users with more convenient services. For example, Samsung attempted to cooperate with the Easy Card Company to launch transportation payment functions. However, despite the diversification of mobile payment brands, according to research, mobile payment users in Taiwan often choose to use only 1 to 4 payment brands. What drives users to choose a certain brand or switch from other brands to a certain brand has become a critical issue.

In this study, we cooperated with Samsung, a mobile phone brand, to examine the factors that lead users to switch their mobile payment brands. Our definition of brand switching includes the switch to use of a particular brand in a short period. We developed a research model based on the diffusion of innovation theory and the task–technology fit, and then conducted a field experiment and questionnaire collection to examine the model. The results of our research show that relative advantage and switching cost have a significant impact on brand switching intention, and location has a significant positive moderating effect on relative advantage and brand switching intention. The findings of this study can deepen our understanding of brand switching behavior in mobile payments, and help mobile payment brands such as Samsung understand the key factors that drive users to switch to other brands and optimize existing services or develop new ones.

Keywords: mobile payment, diffusion of innovation, task-technology fit, relative advantage, switching cost, brand switching

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Chapter 1. Introduction

Along with technological progress, mobile phones have become an indispensable commodity for people and have triggered growth in e-commerce. This change has led to the rise of various financial technologies, and people's consumption habits and types of payments have also changed. In the past, the payment method was by cash and credit cards, but since the evolution of mobile phones, mobile payment has gradually become a trend.

Due to strict regulations in Taiwan, the utilization rate of mobile payments has remained low. Since 2015, the relevant laws have become more flexible (Financial Supervisory Commission R.O.C., 2015), and many banks and companies have begun to enter the market. Therefore, many people refer to this year as the "starting year of the mobile payment era."

According to a survey of Taiwanese users' perceptions of mobile payment and their intentions after the influence of the epidemic conducted by the Market Intelligence & Consulting Institute (MIC) in 2021 (廖珈燕, 2022b), 69.1% of consumers identified mobile payment as their standard transaction method, lower than physical cards (74.0%) and cash (70.9%). Nevertheless, compared with 2020, users' preferences for mobile payment have gradually increased, and nearly 92.1% of users said they will start to use or continue to use mobile payment. Although the popularity of mobile payment in Taiwan has not currently exceeded cash, according to the report of MIC (胡自立, 2020b; 廖珈燕, 2022b), users want to avoid much more contact due to the impact of the COVID-19 pandemic, which has gradually increased the acceptance of mobile payment. However, in another survey of Taiwanese users' considerations and challenges in

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mobile payment, about 80% of the 5,000 subjects only used 1–4 mobile payments (廖珈燕, 2022a). In view that there are dozens of mobile payment providers in Taiwan, competition in this market is fierce.

Classified by payment method, there are two most common types of mobile payment. The first is the quick response code (QR code) payment that users pay by scanning a QR code, and the other is the direct use of non-contact near-field communication (NFC) scanned by mobile phones in payment physical stores or transportation services. The most widely used payment systems are those through NFC induction for payment, such as Apple Pay, Google Pay, and Samsung Pay, which can be used in almost all countries or regions. Nevertheless, these NFC-based payments can only be used for their designated products; for example, Apple Pay can only be used by users such as iPhone and Apple Watch, Samsung Pay can only be used by users of its specific series of smartphones or watches, and Google Pay allows users to make payments with Android phones, tablets, or watches. In Taiwan, according to the survey results for the first half-year of 2020 (胡自立, 2020a), Apple Pay ranked fourth in market share at 9.7%, Google Pay ranked 11th, and Samsung Pay ranked only 17th.

Samsung Pay was officially launched in Taiwan in 2017. Unlike Apple Pay and Google Pay, Samsung Pay has not only NFC induction, but has a feature suitable for traditional magnetic stripe credit card machines, which is called magnetic secure transmission (MST) induction. Nearly all payment terminals can accept this advanced technology. Further, there have been market forecasts that transportation is one of the highest growth potential mobile payment fields (胡自立, 2018). Samsung announced its official cooperation with the Easy Card Company in April 2019 (Samsung

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Newsroom Taiwan, 2019). This cooperation was released in March 2020 (Samsung Newsroom Taiwan, 2020), making it the only mobile payment that can simultaneously perform NFC sensing, MST induction, and Easy Card transportation payment functions. Although Samsung's mobile phone market share in Taiwan is second only to Apple and is the most convenient of these three types, Samsung Pay has the lowest mobile payment market share in these three types. Further, as previously mentioned, most users use only 1–4 mobile payments (廖珈燕, 2022a). Therefore, how to successfully attract users from several kinds of payments has become an important issue. Given this, Samsung is cooperating with us to conduct research exploring the factors that may cause users to switch from other payment forms to Samsung Pay, thereby increasing its market share and revenue.

However, existing research on brand switching mainly focuses on physical products (Sambandam & Lord, 1995) or the telecommunications industry (Srivastava & Sharma, 2013), while relevant research on mobile payment focuses on user intentions. For example, one study applied the technology acceptance model (TAM) (Davis, 1989) to describe the factors that influence users to adopt mobile payment (Shaikh & Karjaluoto, 2015). There are few studies on the factors of brand switching in mobile payments. Although time and location of the service affect customer's perceived value (Heinonen, 2004), only a few studies have considered the effects of these two factors on mobile payment.

In this study, we defined brand switching as users choosing to use a mobile payment brand that is different from the one used in the past. Our research will extend the diffusion of innovation theory and add the concept of task–technology fit to

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consider the location and time of use. The following are the research questions of this study:

1. Will functional factors affect users' brand switching?
2. Will psychological factors affect a user's brand conversion?
3. Will different usage scenarios affect users' experience of using mobile payment, which in turn prompts brand switching behavior?

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Chapter 2. Literature Review

2.1 Mobile Payment

There have been many strands of research on mobile payment, with the two most common being “technology” (Chandra et al., 2010; Kang, 2018; Liu et al., 2015; Ondrus & Pigneur, 2007) and “user behavior” (Lin et al., 2020; Mallat, 2007; Schierz et al., 2010). In recent years, the main focus in the field has been on customer behavior (Dahlberg et al., 2015), especially on user intention of adoption and continued use. One of the theoretical foundations often used is the diffusion of innovation (DOI), proposed by Rogers (1983). Scholars have integrated diffusion of innovation theory with other theories for research.

Mallat (2007) conducted a qualitative study on mobile payment based on the diffusion of innovation, and the results confirmed that relative advantages and compatibility are important factors affecting adoption behavior. Yang et al. (2012) used DOI theory and related research on consumer decision-making behavior to show that for current users, relative advantages, perceivable risks, and compatibility are all important factors. Arvidsson (2014) used technology adoption models and diffusion of innovation to confirm that ease of use, relative advantage, trust, and perceived risk influence attitudes toward using mobile payment. Oliveira et al. (2016) combined the unified theory of acceptance and use of technology 2 (UTAUT2) (Venkatesh et al., 2012) with DOI theory and perceived safety to explore the determinants of customer adoption and willingness to recommend the technology. According to their findings, compatibility, expected performance, social influence, and innovation all influence adoption behavior.

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Further, perceived risk has not only been confirmed to affect the willingness to adopt in the research on online payment but has also been explored in the research on online service adoption. The research on mobile marketing identified perceived risk as data security and consumer privacy and demonstrated that it would have a negative effect on adoption behavior (Bauer et al., 2005). Another study on online banking also found that perceived risk has a significant impact on willingness to adopt (Kesharwani & Bisht, 2012).

2.2 Relative Advantage of Mobile Payment

2.3.1 Service Stage

Based on the results of previous studies, we find that the compatibility and relative advantages of mobile payment are the key attributes impacting user adoption (Arvidsson, 2014; Mallat, 2007; Oliveira et al., 2016; Yang et al., 2012).

To more clearly elucidate the advantages of mobile payment, we used the concept of the service blueprint to explain the user experience process. The concept of service blueprint was proposed by Shostack (1982) and later developed into a process architecture diagram that illustrates the overall service. It can be used to describe the frequent interactions between the service system, participants, and business processes (Bitner et al., 2008). Through information visualization, the service blueprint provides a conductive way to analyze service performance.

When using mobile payment for the first time, users go through three processes: setting, payment, and viewing transaction details. However, our cooperation partner, Samsung Pay, is different from the other two payment brands; it allows transportation payments and offers exclusive rewards. We also consider whether these two services

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affect the user's experience of the service. We categorize the physical evidence into setting, transportation, store, and getting home. The blueprints of the three mobile payment brands are shown in Figures 2.1a–c.

In the setting phase, customer actions include registration and card-adding. The three payment brands performed similarly in the registration but slightly differently in card-adding. The performance differences mainly result from the number of merchants, banks, or enterprises involved in the cooperation. For example, Samsung Pay supports transportation payment features in Taiwan, which other global mobile payment brands do not offer. This allows users to directly pay transportation fees through Samsung Pay (Samsung Newsroom Taiwan, 2020).

When users use mobile payment in the store, they need to open the APP, find out the membership card, show the code to staff, find out the credit card, and conduct contactless payment. Due to technical limitations, only the new contactless payment machine has the NFC function, which allows Samsung Pay, Apple Pay, and Google Pay to complete the payment smoothly. Moreover, Samsung Pay has MST technology, which enables successful payments even with ordinary magnetic stripe readers (Samsung Newsroom U.S., 2015).

After payment is complete, customers may wish to check their transaction records. Unlike Apple Pay and Google Pay, Samsung Pay offers an exclusive service called "Samsung Rewards," in which users can aggregate their membership points through each payment (according to Samsung's official website).

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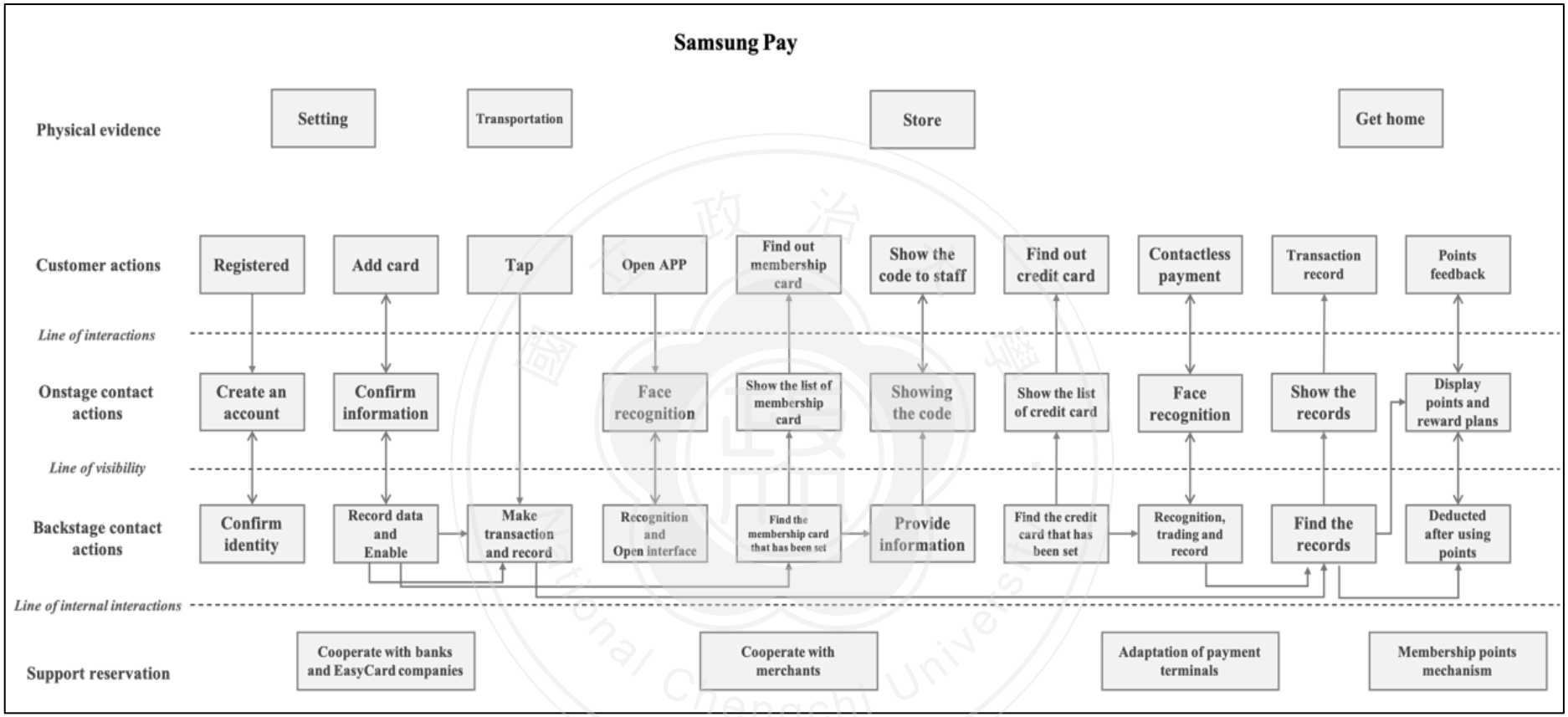

Figure 2.1a The service blueprint of Samsung Pay

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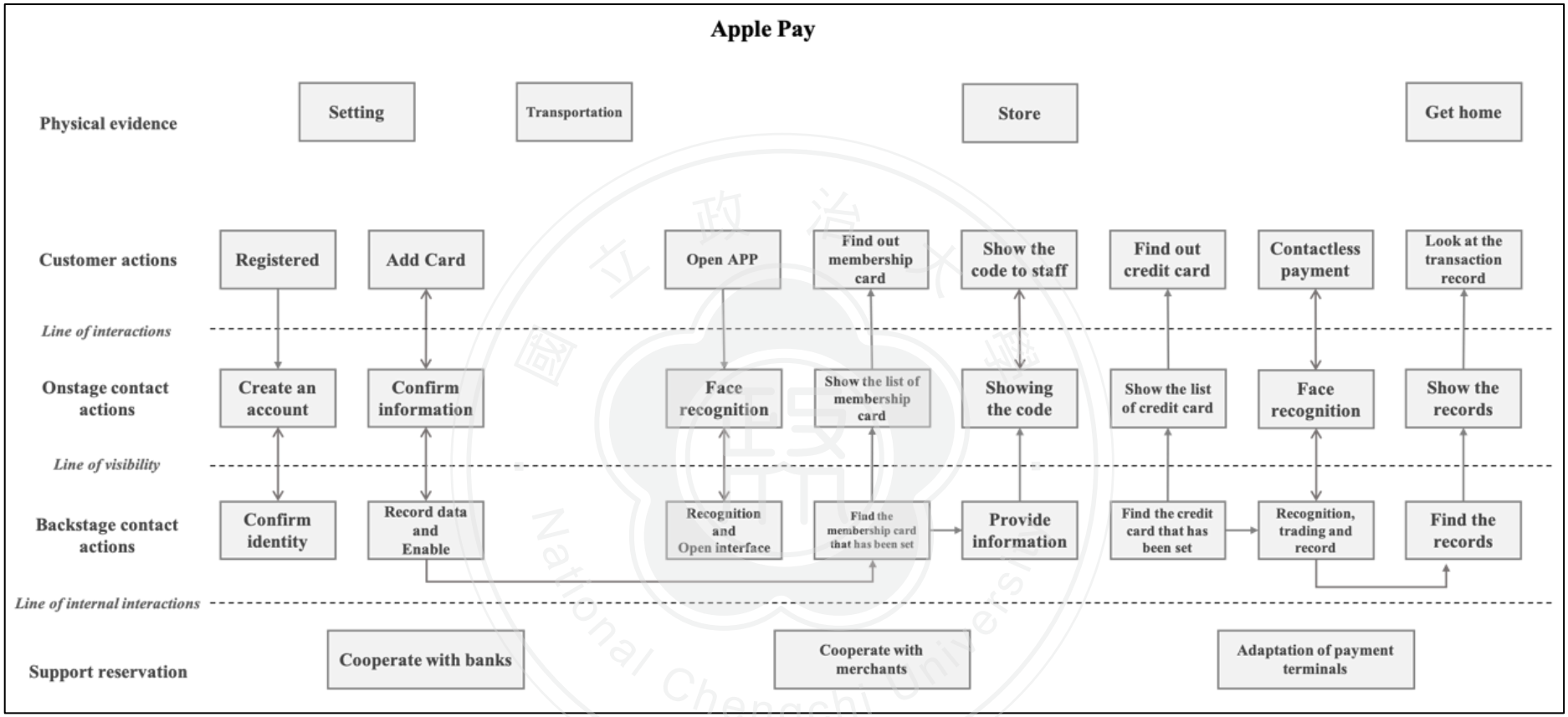

Figure 2.1b The service blueprint of Apple Pay

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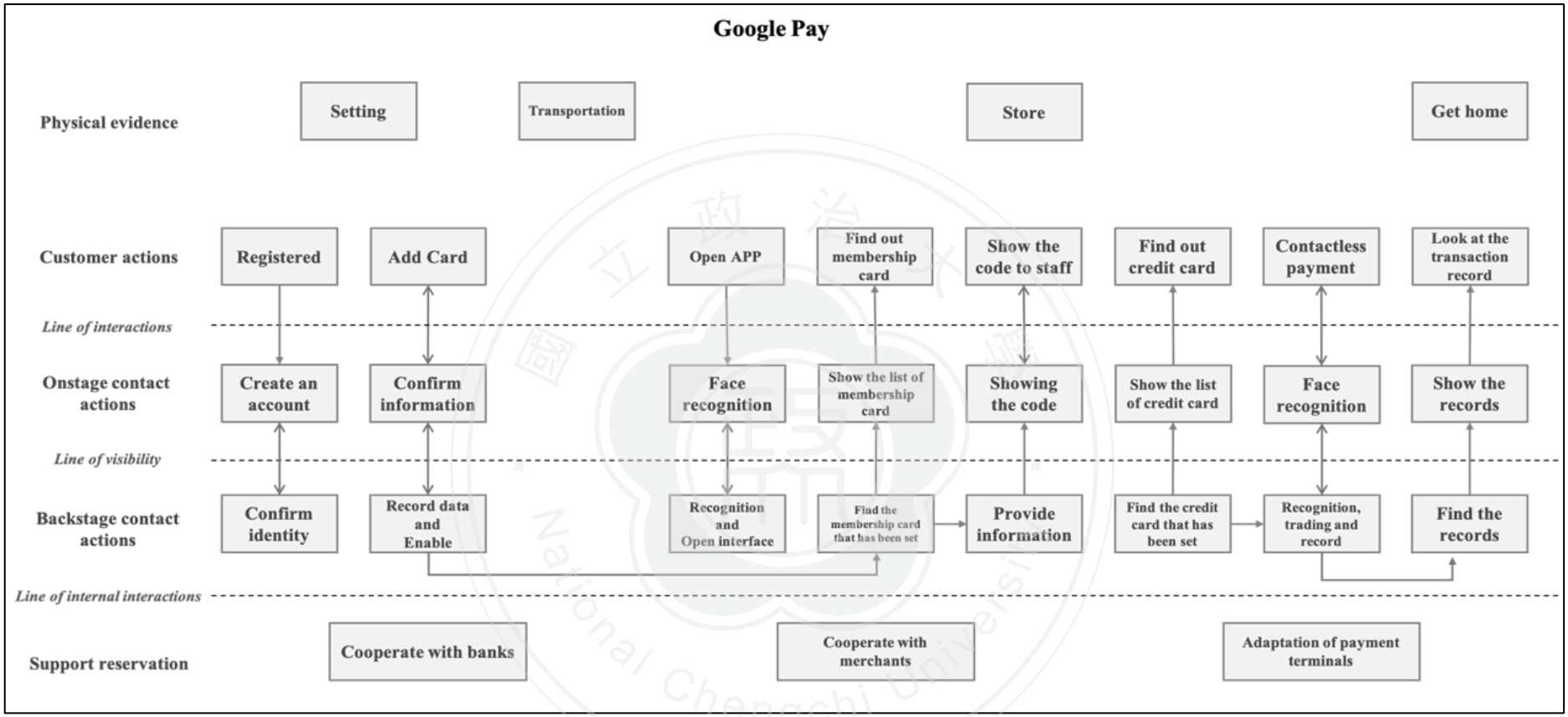

Figure 2.1c The service blueprint of Google Pay

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2.3.2 Dimensions

Diffusion of innovation theory (Rogers, 1983) defines relative advantage as the degree to which something is better than the replaced thing. Rogers (1983) also indicated that relative advantage can be divided into several sub-dimensions, such as the degree of saving time and effort and ways of offering rewards. Mallat (2007) defined relative advantage as the independence of time and place and the possibility of being available anytime, anywhere, etc. One study suggested that relative advantages may include convenience, efficiency, and universality (Yang et al., 2012).

Further, Choudhury and Karahanna (2008) suggested that relative advantage can be further explored from the viewpoint of the service lifecycle. They examined the relative advantages of electronic channels in two service stages: the information stage and the transactional stage. Inspired by their work, our research uses physical evidence as service stages and examines the relative advantage of Samsung Pay at each stage of the service blueprint.

Referring to the two relative sub-dimensions of advantages—time-saving and reward proposed by Rogers (1983)—and combining the scenes in the action service, we propose two measurement dimensions of convenience and reward. In this study, we also consider the compatibility and reliability that previous studies have often shown to influence adoption behavior (Schierz et al., 2010; Zhou, 2013). Ultimately, our research examines four relative strengths: convenience, reliability, compatibility, and rewarding.

In research on consumers and marketing activities, convenience is considered a service that reduces the time and effort required by users (Berry et al., 2002). Another study on mobile commerce defined convenience as a service that is readily available

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and makes life easier (Obe & Balogun, 2007). Williams (2021) extended the research definition from Berry et al. (2002) to mobile payment services and demonstrated that convenience has a positive effect on adoption. Many studies have confirmed that the convenience of mobile payments has a positive impact on adoption rates (De Kerviler et al., 2016; Humbani & Wiese, 2018). Given this, we define convenience as ease and time savings for customers, which are important in any use scenario for mobile payments.

Researchers have often considered reliability as an evaluation indicator of service quality (Gao & Waechter, 2017; Zhou, 2013), and have confirmed that service quality is an important factor that affects user trust, which in turn affects the continuity of mobile payment usage or mobile payment adoption. However, in a study on mobile payment, Meharia (2012) found that the reliability of a mobile device usage system affects the user's willingness to use it. We consider that when the quality of service provided can be stable enough for transactions to be completed smoothly every time, users will be more willing to use it. In view of previous research, we explore reliability independent of the service quality.

According to diffusion of innovation theory, compatibility is the consistency between the innovation and the adaptors' present value, needs, and experience (Rogers, 1983). Research has shown that perceived compatibility has a positive effect on adoption behavior (Schierz et al., 2010). In our research, we define compatibility as the service provided by Samsung Pay that fits the user's lifestyle and even provides more attractive services than others. Given the many types of banks and credit cards issued in Taiwan, the banks and cards that users often use may differ. We consider

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that if the mobile payment service is compatible with more banks or stores, including transportation scenarios, it will be more able to meet the user's payment habits.

Finally, "rewarding" refers to the benefits that users receive through effort or payment. A study on e-wallet adoption factors showed that positive rewards have a positive impact on adoption intentions (Saprikis, 2018). Among the three NFC payment methods, Samsung Pay launched a special award, the "Samsung Rewards." Users can earn points in exchange for discounts after consumption. Since feedback is generated after the transaction is completed, in this study, we consider the effect of rewarding in the scenarios of points feedback.

Table 2.2 summarizes the above discussion, showing the relative advantages of Samsung Pay in each service stage.

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Table 2.2 Relative advantage: dimensions and stages of service process

Stage of Service	Dimensions			
	Convenience	Reliability	Compatibility	Rewarding
Setting				
(1) Registered	✓			
(2) Add Card	✓			
Transportation				
(1) Tap	✓	✓	✓	
Store				
(1) Open APP	✓			
(2) Find Out Membership Card	✓		✓	
(3) Find Out Credit Card	✓		✓	
(4) Contactless Payment	✓	✓	✓	
Get Home				
(1) Transaction Record	✓			
(2) Points Feedback				✓

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2.3 Brand Switching

Brand switching refers to the process by which users switch from one brand to another (Grigoriou et al., 2018). This process includes discontinuing the original brand and adopting a new brand (Ping, 1993). In this study, brand switching refers not only to stopping to use the old brand for a long time and switching to use a new mobile payment but also to switching to using a specific brand in the short term.

Past research on brand switching has focused on products such as mobile phones (Appiah et al., 2019; Wong et al., 2019) and retail products (Michaelidou & Dibb, 2009), rarely on services. Most of the research on service-based activities focuses on online activities, and only a few studies have focused on mobile payment. The previous studiy considered the impact of product features on switching (Grigoriou et al., 2018), and found that product functional use and satisfaction are significantly related to brand switching behavior (Shukla, 2004). For example, Ye et al. (2008) studied the factors that influence the switching behavior of alternatives in information technology products. The results showed that the perceived ease of use, relative advantage, and perceived safety of the new product positively affect switching behavior. Bhattacherjee et al. (2012) researched the switching of information technology products or services. Their results confirmed that the relative advantages of new services, such as ease of use and increased efficiency, positively affect the willingness to switch. Further, the switching intention would, in turn, affect the switching behavior.

In addition to being affected by the functional value of the product, the psychological value of customers may also lead them to switch. Therefore, some scholars have put forward different views on this. Lam et al. (2010) applied the concept

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of customer–brand identity (CBI) derived from social proof theory in a study of switching behavior for new brands, and defined it as the customer's perceived relevance to the brand, confirming that perceived CBI would affect brand switching intentions. Dey et al. (2018) combined brand symbolism, believing that consumers will identify with brands with similar personalities and values, and establish personal social identity through brand choice. Other scholars have considered the variety-seeking behavior of customers. Previous research has suggested that seeking diversity may have an impact on customer loyalty (Berné et al., 2001; Shirin & Puth, 2011). Some scholars have considered the customer's variety-seeking behavior and studied the impact on brand switching (Givon, 1984; Trijp et al., 1996).

Switching costs are also an important factor when considering brand switching. It is defined as the cost of changing from one original service brand to another. In addition to monetary costs, the effort or time required for users to adapt to a new service brand is also a cost (Dick & Basu, 1994). Many previous studies have shown that switching costs may affect customers' brand loyalty (Lam et al., 2004; Yang & Peterson, 2004). When the cost is too high, customers may prefer not to change (Kim et al., 2004).

2.4 Task–Technology Fit

The task–technology fit (TTF) model was proposed by Goodhue and Thompson (1995). The authors believed that only if the functions provided by the system can improve performance in the appropriate task will customers choose to use information technology (Lee et al., 2007). In the past, a study used three mission characteristics of mobile banking—universality, immediacy, and matching of security with its

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corresponding technology—combined with unified theory of acceptance and use of technology (UTAUT) theory, to explore the adoption of mobile banking (Zhou et al., 2010). The results confirmed that the task characteristics and technical characteristics significantly affect the technical fit of the task, which in turn affects adoption behavior. Shih and Chen (2013) focused on estate agent's willingness to adopt mobile commerce technology. They used eight factors, such as quality, locatability of data, and system reliability, combined with the TAM model to conduct research, confirming that TTF can significantly affect intent.

Based on past research, it is clear that the fit between the user's task needs and the service's function affects willingness to adopt. Zhou et al. (2010) mentioned that service providers should distinguish users with different needs and preferences and provide appropriate services to increase usage. In other words, the provision of a specific service will enhance the perceived advantage of users who have a higher demand for the service, thereby promoting their willingness to use it.

One of the advantages of mobile payment is that it can be used anytime and anywhere (Kini & Thanarithiporn, 2004; Mallat, 2007). However, the user needs at different times and different locations may differ. In terms of timing of use, previous studies have confirmed that saving time is one of the advantages of using digital payments (Singh & Rana, 2017), and thus, more convenient payment services can save time more effectively, especially during peak hours for transaction activities. For example, Samsung Pay has a shortcut function on Samsung mobile phones that allows customers to pay quickly. We are interested in exploring whether users with a high demand for rush hours can find this function more attractive and perceive higher levels

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of relative advantage. In terms of location of use, Samsung Pay is different from Apple Pay and Google Pay in its transportation payment functions. We consider that Samsung Pay can strengthen the perception of relative advantage when users have high transportation payment needs, such as students and commuters. As a result, in this research, we take the time and location of payment as the task characteristics to distinguish the types of users and discuss their influence on brand switch behavior.

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Chapter 3. Research Framework

3.1 Research Framework

The current research on mobile payment is mostly about the intention of adoption or the continuance of usage intention (Cao et al., 2018; Kim et al., 2010; Mallat, 2007; Oliveira et al., 2016; Yang et al., 2012; Zhou, 2013), and only a few studies have examined brand switching. Brand switching is the process of switching from the original brand to the new brand. In this research, the brand switching is defined as the degree of willingness to switch.

Our study assesses the value and risks of service functions, the money and effort required to switch brands, and the user's tendency toward social and self-identification. Moreover, previous studies have often neglected that time and place may cause differences in customer demand. Generally, when the provision of services meets their needs, customers feel that the service is more advantageous to them. Zhou et al. (2010) also showed that when services can meet customer needs, the use of willingness would increase. Therefore, we propose to use time and location as moderating factors for relative advantage and brand switching decisions.

This study explores the key factors that affect the willingness to switch and the impact of time and place as the moderator factors between relative advantage and brand switching decisions.

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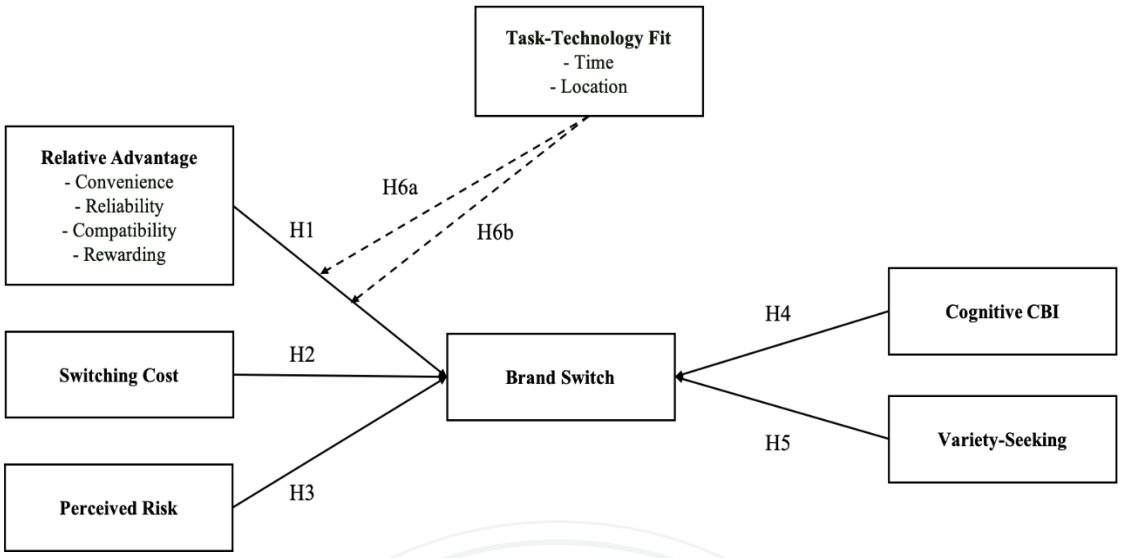

Figure 3.1 Research framework

3.2 Hypotheses

According to research on mobile service adoption, relative advantage positively affects willingness to adopt (Arvidsson, 2014; Kim et al., 2010). This means that users will want to use services with more advantages. Inspired by previous research (Choudhury and Karahanna, 2008), we examine the four relative advantages of each service stage in payment: convenience, reliability, compatibility, and reward. With these observations, we assume that when the services provided today are more advantageous than other services, users will be more willing to use them.

H1: Relative advantage has a positive effect on brand switch decisions.

Switching costs are one of the factors influencing brand switching or customer loyalty (Cheng et al., 2016; Yang & Peterson, 2004). Many previous studies have also confirmed that excessively high switching costs reduce willingness to switch (Jones et

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al., 2002; Kim et al., 2004; Lu et al., 2011). Therefore, we assume that switching cost will has a negative effect on the brand switch decision.

H2: Switching cost has a negative effect on brand switch decisions.

Previous studies have confirmed that perceived risk reduces the intention to adopt mobile services (Featherman & Pavlou, 2003; Lu et al., 2011). Given that consumers worry about privacy security and transaction risks, they assess the risks and uncertainties associated with the service before their mobile payment adoption (Arvidsson, 2014; Featherman & Pavlou, 2003; Yang et al., 2015). Thus, we assume that when a user feels that the mobile service is insecure compared to other services, the user will refuse to use and switch.

H3: Perceived risk has a negative effect on brand switch decisions.

Many studies have defined CBI as consumers' recognition and perception of the consistency between themselves and brand identity (Davvetas & Diamantopoulos, 2017; Stokburger-Sauer et al., 2012). Lam et al. (2010) confirmed that when the perceived CBI of existing brands is higher than that of new brands, users will reduce their willingness to switch. We propose that this result may also be applicable to the conversion behavior of mobile payment, and thus, we hypothesize:

H4: Cognitive CBI has a positive effect on brand switch decisions.

Variety-seeking refers to the tendency of customers to seek diversity when choosing services or goods (Kahn, 1995). A study confirmed that variety-seeking may

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cause consumers to switch brands (Bass et al., 1972). For example, Trijp et al. (1996) confirmed that customers solve the boredom of the original brand by choosing new brand services to satisfy their desire for novelty and excitement. We propose that this finding would apply to mobile payment as well, and thus put forward the following hypothesis:

H5: Variety-seeking has a positive effect on brand switch decisions.

According to Zhou et al. (2010), if a service can meet users' specific needs, adoption intention could be increased. Mobility is an advantage and characteristic of mobile services because it provides users with ubiquitous use, allowing them to conduct activities anytime and anywhere (Au & Kauffman, 2008; Kim et al., 2010). However, they ignored that users may have different usage needs with regard to these two factors – time and location.

For example, for people who need to commute daily, payment services for transportation may be even more important to them. Rogers (1983) defined relative advantage as the degree to which innovative services are better. When the service can be provided at a specific time or place, the experience should be better for users with specific needs; that is, the perception of relative advantage should be more positive. In turn, it improves the willingness to switch. In view of this, we use time and location as the moderators between relative advantage and brand switching, and put forward the following hypothesis:

H6a: For users at a specific time, the relative advantage more likely associates with the brand switch.

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H6b: For users at a specific location, the relative advantage more likely associates with the brand switch.

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Chapter 4. Research Methodology

4.1 Case Background: Samsung Pay

Samsung Pay is a payment service launched by Samsung on several designated mobile phones. The service was launched in Taiwan in 2017 (Samsung Newsroom Taiwan, 2017). Unlike the other two NFC induction payment services, Apple Pay and Google Pay, Samsung Pay has an MST induction that can adapt to multiple machines. To bring more convenience to users, Samsung Pay cooperated with Easy Card to launch the transportation payment function in 2020 (Samsung Newsroom Taiwan, 2020). Samsung Pay is partnering with us to determine how a new mobile payment service can be adopted by customers in light of the many similar services existing in the market.

The services provided by Samsung Pay and to be experienced in our research are shown in Table 4.1.

Table 4.1 The Samsung Pay service

Screenshot or Schematic	**The Description of Service**
	**Set up** For first-time use, users need to check whether their phones support NFC or MST. When users get started, they must have an account with Samsung, then a registered fingerprint, or the personal identification number of Samsung Pay. Moreover, they need to add their payment cards or transport cards.

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	**Top up** In addition to using a credit card to top up your Easy Card online, users can also go to the add-value machine or convenience store to recharge their virtual transport card in cash.
	**Payment** They can swipe up from the bottom of the phone's screen to open the payment service if they have set up the Quick Access shortcut.
	**Transit** Easy Card support is unique to Samsung Pay among mobile payment brands. Even if users have not unlocked their phone, they can directly place their phone on a bus, MRT, and Taiwan Railway card reader to make a payment.

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	**Reward** Besides the credit card bonus, every time users use Samsung Pay to make a payment, they can get Samsung Rewards points. The accumulated points can be used to redeem gifts directly or participate in games to win high-value gifts.
	**Purchase tracking** After payment, users can check their detailed transaction records on their phones.

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4.2 Measurement

Table 4.2 summarizes the research structure and variables in this research. Please see the complete questionnaire in Appendices A and B.

Table 4.2 Measurement of the constructs

Independent Variables		
Components	**Items**	**Relative Advantage**
Convenience	CON1	Compared with the other mobile payment brands, the extent to which Samsung pay is relatively easy to use and saves time (adopted from Kim et al., 2010; Moore & Benbasat, 1991; Tan & Teo, 2000).
	CON2	
	CON3	
	CON4	
	CON5	
	CON6	
	CON7	
	CON8	
	CON9	
	CON10	
Reliability	REL1	Compared with other mobile payment brands, the extent to which Samsung Pay is relatively executed stably (adopted from Kim et al., 2010; Zhou, 2013).
	REL2	
	REL3	
	REL4	
Compatibility	COM1	Compared with other mobile payment brands, the extent to which Samsung Pay is relatively more compatible with existing payment services and mobile phone models (adopted from Moore & Benbasat, 1991; Plouffe et al., 2001; Schierz et al., 2010).
	COM2	
	COM3	
	COM4	
	COM5	
	COM6	
	COM7	
	COM8	
	COM9	
	COM10	

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Rewarding	REW1	Compared with other mobile payment brands, the extent to which Samsung pay is provided attractive bonus (adopted from Wang et al., 2019; Zhao et al., 2012).
	REW2	
	REW3	
Components	**Items**	**Measures of Switching Cost**
Switching Cost	SC1	The cost of time or effort will be incurred to switch to Samsung Pay (Lam et al., 2010).
	SC2	
	SC3	
	SC4	
	SC5	
	SC6	
Components	**Items**	**Measures of Perceived Risk**
Perceived Risk	PR1	Compared with other payment brands, the service security of Samsung Pay (adopted from Luarn & Lin, 2005; McKnight et al., 2002; Parasuraman et al., 2005; Schierz et al., 2010; Shao et al., 2019).
	PR2	
	PR3	
	PR4	
	PR5	
	PR6	
Components	**Items**	**Measures of Cognitive CBI**
Cognitive CBI	CBI1	Users perceive the relevance of the brand image to themselves (Lam et al., 2010).
	CBI2	
	CBI3	
	CBI4	
	CBI5	
Components	**Items**	**Measures of Variety-Seeking**
Variety-Seeking	VS1	The ability of users to pursue new technologies or new services (Kim et al., 2010; Mahatanankoon, 2007; Raju, 1980).
	VS2	
	VS3	
	VS4	
	VS5	
	VS6	
	VS7	

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	VS8	
	VS9	
	VS10	
	VS11	
	VS12	
	VS13	
	VS14	
Moderating Variables		
Components	**Items**	**Task Fit**
Time	TF1	The specific time when the user uses Samsung Pay. The specific time in our research was the rush hour of Taipei MRT, 7:00-9:00 and 17:00-19:30.
Location	TF2	The specific location when the user uses Samsung Pay. The specific location in our research was used for transportation payments.
Dependent Variables		
Components	**Items**	**Measures of Brand Switch**
Brand Switch	BS1	The degree of willingness to switch to using Samsung pay (adapted from Davis, 1989; Gefen et al., 2003; Kim et al., 2010; Schierz et al., 2010; Venkatesh & Davis, 2000).
	BS2	
	BS3	
	BS4	
	BS5	
	BS6	

4.3 Data Collection

In this study, the target audience was students at National Chengchi University. Our study can be divided into two parts. The first part is the experience stage. We invited some students, provided Samsung mobile phones for them, and gave everyone

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one hundred dollars to experience Samsung Pay. The second part was to fill out the questionnaire. They could use Samsung Pay for pre-setting, value-adding, payment, and transportation experiences. After the respondents completed the experience, we asked them to fill out a paper-based questionnaire. They also needed to provide their testing data, including user name, machine model, time of use, location of use, and the general category of point of sale (POS) machines. The complete contents of the testing data are presented in Appendix C. Eventually, we invited 79 respondents to experience Samsung's mobile phone and to complete the questionnaire.

Among the 79 questionnaires, item SC6 had many missing values, so we deleted this item. In the remaining questions, we found that 13 questionnaires had missing values and were distributed among 9 items. However, because each item did not have more than 10% missing values (up to only 5%), we used the average of the items to make up for the missing values, finally retaining 79 questionnaires.

Table 4-3 summarizes the respondents' profiles. Of the respondents, 41.77% were male, 58.23% were female, and most were 18–20 years old, accounting for 58.23%. About 51.90% of respondents had used mobile payment services, and most of the respondents had used Line Pay (26.58%), followed by Apple Pay (20.25%). Except for those who had never used mobile payment (48.10%), most people used the tool 1–3 times on average in a month (26.58%). Moreover, most people had only used it for less than 6 months (20.25%) or for 1 to 2 years (16.46%), and only a few people had used it for more than 3 years (1.27%).

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Table 4.3 Descriptive statistics of respondents' characteristics

		Frequency	%
Gender	Male	33	41.77%
	Female	46	58.23%
Age	18–20 years old	46	58.23%
	21–23 years old	28	35.44%
	Over 23 years old	5	6.33%
Used Experience of mobile payment	Use before	41	51.90%
	Never use before	38	48.10%
Mobile payment service that have used before (Check)	Line Pay	21	26.58%
	Apple Pay	16	20.25%
	JKO Pay	8	10.13%
	Google Pay	6	7.59%
	Taiwan Pay	0	0.00%
	Samsung Pay	5	6.33%
	Alipay	12	15.19%
	Pi 拍錢包	1	1.27%
	GAMA Pay	0	0.00%
	O' Pay	0	0.00%
	ezPay	0	0.00%
	Others	5	6.33%
	Never use before	38	48.10%
Times of uses mobile payment for a month	1–3 times	21	26.58%
	4-10 times	11	13.92%
	11–20 times	4	5.06%
	More than 21 times	5	6.33%
	Never use before	38	48.10%
How long have used mobile payment	Less than 6 months	16	20.25%
	Less than 1 year	9	11.39%
	1–2 years	13	16.46%
	2–3 years	2	2.53%
	Over 3 years	1	1.27%
	Never use before	38	48.10%

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Chapter 5. Model Analysis and Results

Our research model is a reflective-formative type of second-order hierarchical component model (HCM). This structure can reduce the collinearity problem among the indicators (Limaj & Bernroider, 2019) or reduce the number of indicators in the model to make the model more concise (Afthanorhan, 2014).

Given our use of the HCM, we used partial least squares structural equation modeling (PLS-SEM) for data analysis. Researchers have pointed out that PLS-SEM is suitable for analyzing complex models with a small number of samples and a large number of latent variables, and can handle both reflective and formative structural models (趙珮晴 & 余民寧, 2018; Hair et al., 2014). In the higher-order model analysis, we used the embedded two-stage method proposed by Ringle et al. (2012). We first calculated the latent variable in the first-order model analysis through PLS, stored the results in the raw data, and then used them to detect the causality of the two-order model.

5.1 Measurement Model Analysis

First, we analyzed the model to confirm the reliability and validity of the questionnaire.

In the reliability analysis, we used composite reliability (CR) and Cronbach's alpha values to observe the consistency between the variables. The CR value should be higher than 0.7 (Gefen et al., 2000), and the Cronbach's alpha value needs to be greater than 0.7 (Nunnally, 1978). The results are shown in Table 5-1.

In validity, we observe the degree of similarity with the actual situation, which can be divided into two measures: convergent validity and discriminant validity.

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Convergent validity can confirm the relationship between each measurement item and its dimensions. There are two common criteria. One is that the factor loadings should be higher than 0.7 (Barclay et al., 1995; Hair et al., 2014), and the other is that the average variance extracted (AVE) of the construct should be higher than 0.5 (Chin, 1998). However, in the four dimensions of convenience, compatibility, reliability, and rewarding, there were some items that did not meet the above criteria, which we deleted. We only kept the dimensions and items that met the criteria. The final results are shown in Table 5-1, which ensures that this study has convergent validity.

Table 5.1 Item reliability analysis and convergent validity analysis

Components	**Item**	**Loadings**	**Composite Reliability**	**Cronbach's Alpha**	**Average Variance Extracted (AVE)**
Convenience	CON1	0.839	0.954	0.943	0.746
	CON2	0.847			
	CON3	0.855			
	CON4	0.898			
	CON5	0.902			
	CON6	0.877			
	CON7	0.825			
Reliability	REL1	0.841	0.910	0.869	0.717
	REL2	0.912			
	REL3	0.862			
	REL4	0.764			
Compatibility	COM1	0.789	0.881	0.819	0.649
	COM2	0.883			
	COM5	0.778			
	COM6	0.768			
Rewarding	REW1	0.880	0.930	0.888	0.816
	REW2	0.913			
	REW3	0.917			
Switching Cost	SC2	0.884	0.905	0.860	0.706
	SC3	0.722			
	SC4	0.873			
	SC5	0.871			
Perceived Risk	PR1	0.901	0.963	0.953	0.811

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	PR2	0.914			
	PR3	0.950			
	PR4	0.916			
	PR5	0.886			
	PR6	0.832			
Cognitive CBI	CBI1	0.800	0.914	0.884	0.679
	CBI2	0.810			
	CBI3	0.792			
	CBI4	0.832			
	CBI5	0.885			
Variety-Seeking	VS2	0.717	0.925	0.909	0.639
	VS3	0.750			
	VS4	0.875			
	VS5	0.873			
	VS8	0.722			
	VS10	0.849			
	VS12	0.789			
Time	Time	1.000	1.000	1.000	1.000
Location	Location	1.000	1.000	1.000	1.000
Brand Switch	BS1	0.922	0.950	0.933	0.792
	BS2	0.929			
	BS3	0.942			
	BS4	0.867			
	BS5	0.781			

The discriminant validity is to confirm that each construct is different. Our study used two test standards. One was the cross-loading matrix, and the loadings of each measurement item for its construct must be greater than those of other constructs (Chin, 1998). The other was that the square root of the average variance extracted (AVE) must be greater than that of the other constructs (Fornell & Larcker, 1981). Table 5-2 shows the cross-loading matrix, while Table 5-3 shows that the square root of the AVE of each construct was also higher than the correlation with other constructs. The results showed that our model had discriminant validity.

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Table 5.2 Factor structure matrix of loadings and cross-loadings

Items	Con-ven-ience	Relia-bility	Com-patibil ity	Re-ward-ing	Switc hing Cost	Per-ceived Risk	Cogni tive CBI	Vari-ety-Seekin g	Time	Loca-tion	Brand Switch
CON1	0.839	0.511	0.540	0.310	-0.484	0.467	0.157	0.284	-0.015	-0.020	0.517
CON2	0.847	0.523	0.623	0.276	-0.462	0.560	0.159	0.253	-0.050	-0.139	0.467
CON3	0.855	0.568	0.675	0.295	-0.513	0.581	0.153	0.311	-0.018	-0.124	0.520
CON4	0.898	0.552	0.637	0.321	-0.485	0.530	0.217	0.314	-0.031	0.043	0.596
CON5	0.902	0.554	0.633	0.354	-0.496	0.549	0.252	0.292	0.013	-0.012	0.592
CON6	0.877	0.519	0.636	0.350	-0.577	0.527	0.208	0.261	-0.031	-0.107	0.598
CON7	0.825	0.559	0.766	0.397	-0.480	0.601	0.292	0.226	-0.024	0.025	0.591
REL1	0.643	0.841	0.649	0.219	-0.395	0.598	0.299	0.146	-0.062	-0.162	0.515
REL2	0.584	0.912	0.555	0.090	-0.435	0.433	0.216	0.258	-0.137	0.037	0.504
REL3	0.482	0.862	0.392	0.079	-0.350	0.420	0.117	0.161	-0.119	0.044	0.418
REL4	0.347	0.764	0.323	0.123	-0.233	0.230	0.196	0.247	-0.023	0.146	0.201
COM1	0.523	0.363	0.789	0.423	-0.477	0.384	0.153	0.378	-0.100	-0.166	0.527
COM2	0.632	0.482	0.883	0.449	-0.423	0.558	0.161	0.259	-0.070	-0.104	0.576
COM5	0.670	0.637	0.778	0.339	-0.333	0.636	0.325	0.218	-0.064	-0.117	0.547
COM6	0.569	0.390	0.768	0.306	-0.335	0.490	0.109	0.203	-0.113	-0.028	0.514
REW1	0.410	0.156	0.454	0.880	-0.309	0.418	0.353	0.106	0.001	-0.067	0.505
REW2	0.287	0.091	0.330	0.913	-0.158	0.409	0.275	0.260	0.041	0.046	0.458
REW3	0.324	0.165	0.476	0.917	-0.300	0.421	0.309	0.267	-0.020	-0.021	0.553
SC2	-0.579	-0.421	-0.504	-0.286	0.884	-0.456	-0.237	-0.355	-0.004	0.047	-0.584
SC3	-0.322	-0.345	-0.298	-0.033	0.722	-0.159	-0.222	-0.232	-0.001	0.182	-0.375
SC4	-0.462	-0.323	-0.327	-0.306	0.873	-0.338	-0.312	-0.144	-0.125	0.038	-0.530
SC5	-0.538	-0.356	-0.468	-0.292	0.871	-0.372	-0.261	-0.312	0.047	0.088	-0.563
PR1	0.556	0.389	0.571	0.424	-0.334	0.901	0.447	0.318	0.016	-0.014	0.439
PR2	0.552	0.389	0.568	0.448	-0.347	0.914	0.438	0.219	0.077	-0.035	0.496
PR3	0.569	0.516	0.591	0.399	-0.344	0.950	0.427	0.251	0.028	0.087	0.517
PR4	0.620	0.535	0.611	0.453	-0.474	0.916	0.400	0.292	-0.046	-0.034	0.559
PR5	0.549	0.523	0.623	0.386	-0.384	0.886	0.426	0.361	-0.052	0.093	0.471
PR6	0.564	0.437	0.545	0.378	-0.320	0.832	0.392	0.332	0.106	0.103	0.458
CBI1	0.322	0.231	0.250	0.235	-0.329	0.458	0.800	0.391	-0.019	0.117	0.322
CBI2	0.115	0.229	0.107	0.197	-0.250	0.370	0.810	0.229	0.018	-0.021	0.178
CBI3	0.191	0.158	0.135	0.327	-0.182	0.363	0.792	0.168	0.025	0.063	0.224
CBI4	0.187	0.185	0.278	0.332	-0.292	0.353	0.832	0.289	-0.099	0.001	0.342
CBI5	0.108	0.239	0.129	0.326	-0.162	0.362	0.885	0.208	-0.048	-0.021	0.235
VS2	0.006	0.038	0.083	0.062	-0.180	0.150	0.320	0.717	-0.174	0.227	0.010
VS3	0.233	0.213	0.225	0.114	-0.147	0.345	0.319	0.750	-0.048	0.275	0.168
VS4	0.243	0.186	0.273	0.199	-0.217	0.326	0.424	0.875	-0.118	0.067	0.243
VS5	0.226	0.200	0.215	0.257	-0.288	0.294	0.300	0.873	-0.094	0.111	0.319
VS8	0.237	0.080	0.316	0.286	-0.138	0.210	0.075	0.722	-0.176	0.132	0.246
VS10	0.318	0.230	0.310	0.156	-0.356	0.238	0.259	0.849	-0.193	-0.001	0.310

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VS12	0.316	0.241	0.250	0.069	-0.331	0.208	0.241	0.789	-0.176	0.002	0.231
Time	-0.026	-0.104	-0.106	0.006	-0.024	0.022	-0.039	-0.170	1.000	0.262	-0.137
Location	-0.054	-0.001	-0.129	-0.020	0.095	0.035	0.041	0.106	0.262	1.000	-0.061
BS1	0.616	0.480	0.662	0.542	-0.554	0.574	0.288	0.174	-0.085	-0.015	0.922
BS2	0.546	0.486	0.608	0.429	-0.614	0.455	0.289	0.297	-0.147	-0.097	0.929
BS3	0.639	0.476	0.639	0.513	-0.599	0.503	0.218	0.248	-0.164	-0.049	0.942

Table 5.3 Correlations of constructs

	Convenience	**Reliability**	**Compatibility**	**Rewarding**	**Switching Cost**	**Perceived Risk**	**Cognitive CBI**	**Variety-Seeking**	**Time**	**Location**	**Brand Switch**
Convenience	0.864										
Reliability	0.627	0.847									
Compatibility	0.748	0.590	0.806								
Rewarding	0.382	0.156	0.471	0.904							
Switching Cost	-0.578	-0.429	-0.484	-0.291	0.840						
Perceived Risk	0.632	0.519	0.650	0.461	-0.411	0.901					
Cognitive CBI	0.239	0.252	0.238	0.349	-0.307	0.467	0.824				
Variety-Seeking	0.321	0.234	0.325	0.228	-0.314	0.326	0.329	0.799			
Time	-0.026	-0.104	-0.106	0.006	-0.024	0.022	-0.039	-0.170	1.000		
Location	-0.054	-0.001	-0.129	-0.020	0.095	0.035	0.041	0.106	0.262	1.000	
Brand Switch	0.643	0.506	0.673	0.563	-0.620	0.547	0.334	0.320	-0.137	-0.061	0.890

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Due to the relative advantage, which is composed of four lower-order components—convenience, compatibility, reliability, and rewarding—the validity of this high-order structure must be additionally verified. According to Hair et al. (2020), the first step is to verify convergent validity. The criterion was that the path coefficient of the formative latent variable and reflective latent variables must be greater than 0.7. Given that this study does not have a reflective variable of relative advantage, we do not consider this criterion. Then, a collinearity analysis was used to detect. This method is based on the variation inflation factor (VIF). According to previous research, the VIF value must be less than 3.0 to indicate that the model does not have a collinearity problem. Next, the weight of each item was tested to confirm the contribution of each item. Finally, we confirmed that the outer loadings of each formative indicator were greater than 0.5.

Table 5-4 shows that the VIF values of the three lower-order structures are all less than 3.0, indicating that the model in this study did not have a collinearity problem. The loads on each lower-order structure were both higher than 0.5, indicating that the items were still essential.

Table 5.4 Measurement model

Construct	Item	Scale	Weights	Loadings	T-Values	VIF
Relative Advantage	Convenience	Formative	0.293	0.840	1.665*	2.615
	Reliability		0.216	0.660	1.534	1.817
	Compatibility		0.325	0.879	2.149**	2.716
	Rewarding		0.440	0.739	3.222**	1.343
*Notes: *p<0.1; **p<0.05; ***p<0.01*						

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5.2 Structural Model Analysis

In the structural model analysis, we performed bootstrapping repeated sampling 5000 times, used the R^2 value to represent the explanatory power of the structural model, and used the p-value to confirm the significance of the model. Tables 5-5 shows the path coefficients and overall explanatory power of our research model, where the findings show that the model explains 67.5% of brand switching intention. Table 5-6 summarizes whether each hypothesis was supported. In the results of independent variables, the relative advantage had a positive effect on brand switching intention ($T = 4.669$, $p < 0.01$), and the switching cost had a negative effect on brand switching intention ($T = 2.834$, $p < 0.05$). Therefore, H1 and H2 were supported. However, perceived risk, cognitive CBI, and variety-seeking have no significant effect on brand switching intention. Therefore, H3, H4, and H5 were not supported. In the results of the moderating variable, the factor of location had a significant impact on the brand switching intention ($T = 1.741$, $p < 0.1$), which shows that H6b was supported. However, the time factor did not have a significant moderate effect between relative advantage and brand switching. Therefore, H6a was not supported.

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Table 5.5 Testing of hypotheses

Dependent Variable: Brand Switching Intention		
R^2	0.675	
Independent Variables	**Path Coefficients**	**T-Values**
Relative Advantage	0.554	4.669***
Switching Cost	-0.277	2.834**
Perceived Risk	-0.014	0.106 （0.916）
Cognitive CBI	0.050	0.515 (0.607)
Variety-Seeking	0.001	0.016 (0.988)
Moderating Effects	**Path Coefficients**	**T-Values**
Relative Advantage*Time	-0.161	1.314 (0.189)
Relative Advantage*Location	0.118	1.741*
*Notes: *p<0.1; **p<0.05; ***p<0.01*		

Table 5.6 The Summary of hypothesis results

Dependent Variable: Brand Switching Intention		
Independent Variables	**Hypothesis**	**Results**
Relative Advantage	H1	Supported
Switching Cost	H2	Supported
Perceived Risk	H3	Not Supported
Cognitive CBI	H4	Not Supported
Variety-Seeking	H5	Not Supported
Moderating Effects	**Hypothesis**	**Results**
Relative Advantage*Time	H6a	Not Supported
Relative Advantage*Location	H6b	Supported

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Chapter 6. Discussion

According to the results of our research, switching cost negatively affected brand switching willingness. This result is consistent with our hypothesis and the results of previous research. Relative advantage positively affected brand switching intention. This result relates directly to one of our research questions: functional factors may influence brand switching behavior. However, we also found that another functional factor, perceived risk, did not have a significant effect on switching intentions. To confirm the reasons for the insignificant effect, we assessed the mean and standard deviation of the items measured in perceived risk (shown in Table 6.1). We found that the standard deviation was low. We speculate that this result may be due to the differences in perceived risk among respondents being small, and thus no significant difference in switch intention.

However, psychological factors, perceived CBI, and variety-seeking did not significantly affect switching intentions. Cognitive CBI did not have an impact on switch intention. We suppose that this may be because the average value of its measurement items was lower than the others (shown in Table 6.1), indicating that the respondents had a lower recognition of Samsung and that their willingness to switch was also lower. Moreover, the feedback given by most respondents in the questionnaire was on function or user experience optimization, such as “sensitivity should be strengthened” and “increase the cooperation of manufacturers,” indicating that the respondents were more focused on the functional advantages of services. Some respondents believed that brands should strengthen their brand image to increase their willingness to use and switch. In terms of variety-seeking, the average of each

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measurement item was high (shown in Table 6.1), indicating that respondents preferred to use a variety of services. We speculate that while respondents may want to experience new services, they may not necessarily want to switch to new brands.

Lastly, there was a moderating effect between relative advantage and brand switching intention. However, according to the results of this study, only usage location had a significant moderating effect on relative advantage and brand switching intention. This result suggests that people who have more usage needs in a specific location are more aware of the differences in services, which in turn prompts switching behavior. The moderating effect of time was not significant, which means that even if it is used frequently at a specific time, it will not affect the relationship between relative advantage and brand switching.

Table 6.1 Mean and standard deviation

Construct	Mean	Standard Deviation
Relative Advantage	4.368	1.210
Switching Cost	3.703	1.637
Perceived Risk	4.097	1.038
Cognitive CBI	3.473	1.600
Variety-Seeking	4.691	1.510
Time	0.182	0.211
Location	0.246	0.210

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Chapter 7. Conclusion

Most previous research on mobile payment has discussed the willingness to use, or the willingness to continue to use, and a few studies have explored factors of mobile payment brand switching. In recent years, more and more people are using mobile payment, but most people only use 1–4 mobile payment brands. Therefore, determining how to make users willing to switch to their brands to increase market share and revenue has become an important issue.

Based on previous research, we propose a model that evaluates the value and risk of a service, users' inclinations toward social and self-identity, and adds the moderating effects of time and place that previous research has ignored in an attempt to determine what drives users to switch. Our research invited respondents to experience a mobile phone and asked them to answer a questionnaire and provide their usage details after the experience.

After checking the reliability and validity of the model, we performed PLS structural modeling to confirm the path coefficients and significance. Based on the results, our research reveals the following findings: First, switching cost significantly and negatively affects brand switching intention. Second, although perceived risk does not significantly affect brand switching intention, relative advantage significantly and positively influences brand switching intention. This result shows that functional factors are more likely to significantly affect switching intention than psychological factors, such as cognitive CBI and variety-seeking. Lastly, between usage time and usage location, only the latter significantly and positively moderated the effect between relative advantage and brand switching.

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7.1 Contributions

In the academic aspect, our research fills the gap in the scant research on mobile payment brand switching factors. The results of this study show that compared with psychological factors (perceived CBI and variety-seeking), one of the functional factors (relative advantage) significantly influences users' brand switching intentions. Moreover, according to the questionnaire feedback from respondents, more people provided suggestions on functional services. However, previous studies have not considered the influence of time and place when using mobile payment. In this study, we demonstrated that usage location interacts with relative advantage, thus affecting brand switching intentions, and that the moderating effect of location is as positive as we expected.

In the industry, with the results of our research, Samsung, and even other mobile payment provider brands can understand the key reasons driving users to switch to other brands. They can also optimize existing services or introduce new features to increase their market share based on the results of research and feedback from respondents.

7.2 Limitations and Future Research

This study has several research limitations. First, we focused only on student groups. More than half of the participants were between the ages of 18 and 20 years, and they were all students at National Chengchi University. This shows that our respondents cannot represent all mobile payment users. Thus, future research should study and compare more diverse groups. Further, the sample size was small, indicating the need to include more respondents to experience the mobile payment and fill in the

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questionnaire in the future. Our study only assessed the use of a single brand, Samsung Pay; therefore, its findings may not be applicable to other brands. Future studies should explore the research question in the context of other brands.

Moreover, in the switching cost, only the measurement items of the effort and time required for users to adapt to the new service meet the reliability and validity criteria. Future research could add some questions about monetary costs to make the analysis of switching costs more detailed. Finally, brand switching in this study is defined not only as using only one new mobile payment for a long time but also as switching to use a specific brand in a short period. Therefore, the respondents in this study also included those who had never used mobile payment before. Future research could explore this limitation in more detail to confirm the differences in measuring items of brand switching.

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Appendix A: Complete Questionnaire

(English Version)

Samsung Transportation Card User Experience Questionnaire

Department：_____ Student ID：_____ Name：_____

Thank you again for participating in our experiment. This questionnaire is divided into five parts. Please answer the following questions based on your testing experience in the previous few weeks.

Part 1

We want to know about your previous experience using mobile payment. Please answer the following questions based on your experience:

1. Before this Samsung transportation card experience, what mobile payment services have you used? (Check)
   ☐ Never use before ☐ Line Pay ☐ Apple Pay ☐ JKO Pay
   ☐ Google Pay ☐ Taiwan Pay
   ☐ Samsung Pay ☐ Alipay ☐ Pi 拍錢包 ☐ GAMA PAY ☐ O' Pay
   ☐ ezPay
   ☐ Others, such as_____

2. Where do you mainly use mobile payment? (Check)
   ☐ Never use before ☐ Purchase a product ☐ Pay the tickets
   ☐ Buy food/beverage
   ☐ Take bus/MRT/uBike ☐ Make online purchases
   ☐ Make in-app purchases (for example, the additional payment in the game app)

3. How often do you use mobile payment every month?
   ☐ Never use before ☐ 1–3 time ☐ 4–10 times
   ☐ 11–20 times ☐ More than 21 times

4. How long have you used mobile payment?
   ☐ Never use before ☐ Less than 6 months ☐ Less than 1 year
   ☐ 12 years ☐ 2–3 years ☐ Over 3 years

5. For the mobile payment you currently use most, circle the option that best reflects your degree of agreement. There are seven levels of agreement: 1: strongly disagree 2: disagree 3: somewhat disagree 4: no opinion 5: somewhat agree 6: agree 7: strongly agree.

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5.1 The current mobile payment service has outstanding service quality	1 2 3 4 5 6 7
5.2 I am very satisfied with the current mobile payment service I have used	1 2 3 4 5 6 7
5.3 The current mobile payment service handled all of my tasks in a satisfactory manner.	1 2 3 4 5 6 7

Part 2 Technology Acceptance Attitude

We want to know your attitude toward the acceptance of emerging technologies. Please answer the following questions and choose the option that best reflects your level of agreement. There are seven levels of agreement: 1: strongly disagree 2: disagree 3: somewhat disagree 4: no opinion 5: somewhat agree 6: agree 7: strongly agree.

Factor	Question	Score
VS1	1. I frequently change the display screen on my mobile phone	1 2 3 4 5 6 7
VS2	2. I am continually seeking new ideas and experiences to use my phone.	1 2 3 4 5 6 7
VS3	3. When things get boring, I like to find some new and unfamiliar activity with my mobile phone	1 2 3 4 5 6 7
VS4	4. I prefer trying new mobile service to a more routine usage	1 2 3 4 5 6 7
VS5	5. I like to experience with mobile novelty and change my daily usage	1 2 3 4 5 6 7
VS6	6. Shops with thousands of app in mobile app store fascinate me	1 2 3 4 5 6 7
VS7	7. I would get tired of using the same mobile payment service every time	1 2 3 4 5 6 7
VS8	8. I am interested in new and varied usage of my mobile phone	1 2 3 4 5 6 7
VS9	9. I am this kind of person who would ty any new technical product or service once	1 2 3 4 5 6 7
VS10	10. I am willing to take risk in trying new technology	1 2 3 4 5 6 7
VS11	11. Adopting a technology may be an economic necessity	1 2 3 4 5 6 7

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VS12	12. I am interested in new technology	1 2 3 4 5 6 7
VS13	13. I tend to be first in buying new technology products	1 2 3 4 5 6 7
VS14	14. I still feel uncertain about new technology	1 2 3 4 5 6 7

Part 3 Samsung Pay Usage Experience

We want to know what you think after using Samsung Pay. Please answer the following questions and choose the option that best reflects your level of agreement. There are seven levels of agreement: 1: strongly disagree, 2: disagree, 3: somewhat disagree, 4: no opinion, 5: somewhat agree, 6: agree, 7: strongly agree.

Factor	Question	Score
CON1	1. The setup instructions provided by Samsung pay is much clearer and more understandable than any other mobile payment service	1 2 3 4 5 6 7
CON2	2. The setup instructions provided by Samsung pay is much clearer and more understandable than any other mobile payment service	1 2 3 4 5 6 7
CON3	3. The setup instructions provided by Samsung pay is much clearer and understandable than any other mobile payment service	1 2 3 4 5 6 7
COM1	4. I would find Samsung pay supports more banks and credit unions than any other mobile payment service does	1 2 3 4 5 6 7
COM2	5. The card support of Samsung pay is superior to other mobile payment service	1 2 3 4 5 6 7
COM3	6. Samsung pay supports transport card while other mobile payment services do not	1 2 3 4 5 6 7
COM4	7. I would find Samsung pay works on a wide range of Samsung devices that I seldom find any other mobile payment service does	1 2 3 4 5 6 7

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COM5	8. Samsung pay has better device compatibility than other mobile payment service	1 2 3 4 5 6 7
COM6	9. Samsung pay can function well in many Samsung devices that other mobile payment service can only work on limited ones	1 2 3 4 5 6 7
COM7	10. I would find Samsung pay works in certain stores that other mobile payment service does not	1 2 3 4 5 6 7
COM8	11. I would find Samsung pay works in certain in-store POS that other mobile payment service does not	1 2 3 4 5 6 7
COM9	12. I would find Samsung pay has transit features that are NOT offered by other mobile payment service	1 2 3 4 5 6 7
COM10	13. I would find Samsung pay works in certain in-app purchases (e.g., PChome) that other mobile payment service does not.	1 2 3 4 5 6 7
CON4	14. I would find Samsung pay provides simpler payment process than any other mobile payment service	1 2 3 4 5 6 7
CON5	15. I would find Samsung pay provides easier payment process than any other mobile payment service	1 2 3 4 5 6 7
CON6	16. Samsung pay allows for a faster payment than any other mobile payment service	1 2 3 4 5 6 7
CON7	17. Payment tasks handled by Samsung pay is more efficient than those handled by any other mobile payment service	1 2 3 4 5 6 7
PR1	18. I have more(less) security concerns while using Samsung pay than using any other mobile payment service	1 2 3 4 5 6 7
PR2	19. I am more(less) concerned about the privacy of personal information while using Samsung pay than using any other mobile payment service	1 2 3 4 5 6 7

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PR3	20. Compared with other mobile payment service, the risk of an unauthorized third party overseeing the payment process is relatively low when using Samsung pay	1 2 3 4 5 6 7
PR4	21. Compared with other mobile payment service, the risk of abuse of usage information (e.g., names of business partners, payment amount) is relatively low when using Samsung pay	1 2 3 4 5 6 7
PR5	22. Compared with other mobile payment service, the risk of abuse of billing information (e.g., credit card number, bank amount data) is relatively low when using Samsung pay	1 2 3 4 5 6 7
PR6	23. Compared with other mobile payment service, I would find Samsung pay is relatively more secured in conducting my payment transactions	1 2 3 4 5 6 7
REL1	24. Compared with other mobile payment services, the problems making a transaction in Samsung pay are relatively less	1 2 3 4 5 6 7
REL2	25. Compared with other mobile payment services, payment errors in Samsung pay are relatively less	1 2 3 4 5 6 7
REL3	26. Compared with other mobile payment services, Samsung pay is seldom not working	1 2 3 4 5 6 7
REL4	27. Compared with other mobile payment services, Samsung pay seldom fails	1 2 3 4 5 6 7
REW1	28. Samsung pay offers better bonus rewards for eligible purchases than any other mobile payment service	1 2 3 4 5 6 7
REW2	29. Samsung pay offer more merchant discounts for eligible purchases than any other mobile payment service	1 2 3 4 5 6 7
REW3	30. Samsung rewards programs offered by Samsung pay is more attractive than those provided by other mobile payment services	1 2 3 4 5 6 7

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CON8	31. Samsung pay allows me to track my purchases more easily than any other mobile payment service	1 2 3 4 5 6 7
CON9	32. I would find Samsung pay provides a smarter way to keep track of my purchases and transactions than any other mobile payment service	1 2 3 4 5 6 7
CON10	33. Samsung pay allows me to manage my purchase information more efficiently.	1 2 3 4 5 6 7

Part 4 Samsung Pay Usage Intention

We want to know your intention to use Samsung Pay in the future. Please answer the following questions and choose the option that best reflects your level of agreement. There are seven levels of agreement: 1: strongly disagree, 2: disagree, 3: somewhat disagree, 4: no opinion, 5: somewhat agree, 6: agree, 7: strongly agree.

Factor	Question	Score
BS1	1. Given the opportunity, I will pay for purchases with Samsung pay rather than my use mobile payment service	1 2 3 4 5 6 7
BS2	2. I am willing to use Samsung pay in the near future	1 2 3 4 5 6 7
BS3	3. Assuming that I have access to the Samsung pay, I intend to switch from my used mobile payment service to try it	1 2 3 4 5 6 7
BS4	4. I predict I would use Samsung pay to buy products and services rather than sticking to my former mobile payment service	1 2 3 4 5 6 7
BS5	5. I plan to switch from my mobile payment service to Samsung pay in the future	1 2 3 4 5 6 7
BS6	6. I now pay for purchases with Samsung pay	1 2 3 4 5 6 7
SC1	7. If I switched to Samsung pay, I might have to learn new routines and ways of using the service	1 2 3 4 5 6 7
SC2	8. If I switched to Samsung pay, it might be a real hassle	1 2 3 4 5 6 7

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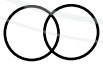
SC3	9. If I switched to Samsung pay, I might have to spend a lot of time finding how to use the service	1 2 3 4 5 6 7
SC4	10. I cannot afford the time to get the information to fully evaluate other mobile payment services	1 2 3 4 5 6 7
SC5	11. There are a lot of formalities involved in switching to a new mobile payment service	1 2 3 4 5 6 7
SC6	12. To switch to Samsung pay, I have to spend at least $_____ to get a compatible phone	

Part5 Samsung Brand Identity

We want to know your thoughts on the Samsung brand. Please answer the following questions based on your brand awareness of Samsung.

1. Please circle the most suitable scale based on the difference between your personal identity and Samsung's identity (A → H).

Factor	Question	Score
CBI1	My identity Samsung's identity	
	A 	Far
	B 	Close Together but Separate
	C 	Very Small Overlap
	D 	Small Overlap
	E 	Moderate Overlap
	F 	Large Overlap
	G 	Very Large Overlap
	H 	Complete Overlap

2. Please answer the following questions and choose the option that best reflects your level of agreement. There are seven levels of agreement: 1: strongly

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disagree, 2: disagree, 3: somewhat disagree, 4: no opinion, 5: somewhat agree, 6: agree, 7: strongly agree.		
Factor	Question	Score
CBI2	2.1 When someone praises Samsung, it feels like a personal compliment	1 2 3 4 5 6 7
CBI3	2.2 I would experience an emotional loss if I had to stop using Samsung	1 2 3 4 5 6 7
CBI4	2.3 When someone praises Samsung, it feels like a personal compliment	1 2 3 4 5 6 7
CBI5	2.4 I think I am a good partner for Samsung	1 2 3 4 5 6 7
Personal Information and Relevant Experience		
1. Age		☐ 18–20 years old ☐ 21–22 years old ☐ over 23 years old
2. Gender		☐ Male ☐ Female
Other Valuable Opinions		
3. Do you think Samsung Pay has any functions that you have not used on other mobile payment services, and which you especially like?		
4. Based on your experience with other mobile payment, what new features would you suggest for Samsung Pay? How can Samsung Pay be improved?		
5. What kind of discounts or gifts that you would suggest Samsung Pay provides to make young people want to start using the mobile payment more.		

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6. Following the previous question, what kind of channel do you think is more effective for the delivery of the marketing message?

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Appendix B: Complete Questionnaire

(Chinese Version)

Samsung 交通卡使用體驗問卷

系級：_____　　學號：_____　　姓名：_____

再次感謝您參與我們的測試，問卷共分成五個部分，請根據前幾週的測試經驗，回答下列問題。

第一部份 行動支付的使用經驗

我們想瞭解您過去使用行動支付的經驗，請根據您的使用經驗，回答以下問題：

1. 在此次 Samsung 交通卡的體驗前，您曾經使用過那些行動支付服務？（複選）
   □從未使用過 □Line Pay □Apple Pay □街口支付 □Google Pay
   □Taiwan Pay
   □Samsung Pay □支付寶 □Pi 拍錢包 □橘子支付 □歐付寶
   □ezPay 簡單付
   □其他 (請說明)_____

2. 您最主要使用行動支付在哪些方面？（複選）
   □從未使用過 □購買商品 □購票 □購買食物/飲料
   □搭乘大眾交通工具 □網路購物
   □軟體內的購物 In-App Purchase (譬如遊戲 app 裡的額外付費)

3. 請問您每月使用行動支付的頻率為何？
   □從未使用過 □1-3 次 □4-10 次 □11-20 次 □多於 21 次

4. 請問您使用行動支付已多久了？
   □從未使用過 □少於六個月 □少於一年 □1-2 年
   □2-3 年 □超過 3 年

5. 針對您目前最主要使用的行動支付服務，圈選最能反映您同意程度的選項。同意的程度分為七個等級：1: 非常不同意 2: 不同意 3: 有點不同意 4: 沒意見 5: 有點同意 6: 同意 7: 非常同意

5-1. 我目前使用的行動支付服務的服務品質很高	1　2　3　4　5　6　7
5-2. 我對目前使用的行動支付服務很滿意	1　2　3　4　5　6　7

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5-3. 我目前使用的行動支付服務讓我支付時很便利	1 2 3 4 5 6 7

第二部份 科技接受態度

我們想瞭解您對新興科技接受的態度，請根據下列問題，圈選最能反映您同意程度的選項。同意的程度分為七個等級：1: 非常不同意 2: 不同意 3: 有點不同意 4: 沒意見 5: 有點同意 6: 同意 7: 非常同意

Factor	Question	Score
VS1	1. 我常喜歡換手機的桌布	1 2 3 4 5 6 7
VS2	2. 在手機使用上，我持續關注新的想法與體驗	1 2 3 4 5 6 7
VS3	3. 無聊的時候，我喜歡看手機上有什麼新的或我不熟悉的使用撇步	1 2 3 4 5 6 7
VS4	4. 除了手機正常使用外，我更喜愛嘗試新的行動服務	1 2 3 4 5 6 7
VS5	5. 我喜歡體驗手機新的行動服務，並樂於改變我的使用習慣	1 2 3 4 5 6 7
VS6	6. 我很喜歡在 Google Store 或是 App Store 看看有什麼新的 App	1 2 3 4 5 6 7
VS7	7. 如果每次付帳都使用相同的行動支付服務會讓我覺得有點無聊	1 2 3 4 5 6 7
VS8	8. 我喜歡各種新的、不同的手機行動服務	1 2 3 4 5 6 7
VS9	9. 我是那種對新的科技產品或服務至少會試用一次的人	1 2 3 4 5 6 7
VS10	10. 我勇於接受新科技的挑戰	1 2 3 4 5 6 7
VS11	11. 我會接受一種新科技的原因一定是它可以幫我省錢、省時	1 2 3 4 5 6 7
VS12	12. 我喜歡新科技	1 2 3 4 5 6 7

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VS13	13. 我常會率先購買新的科技商品	1 2 3 4 5 6 7
VS14	14. 我其實對新科技是抱持疑惑的態度	1 2 3 4 5 6 7

第三部份 Samsung Pay 使用體驗

我們想瞭解您對 Samsung Pay 使用後的想法，請根據下列問題，圈選最能反映您同意程度的選項。同意的程度分為七個等級：1: 非常不同意 2: 不同意 3: 有點不同意 4: 沒意見 5: 有點同意 6: 同意 7: 非常同意

Factor	Question	Score
CON1	1. Samsung Pay 的設定流程跟其他行動支付服務相比是相對簡單的	1 2 3 4 5 6 7
CON2	2. Samsung Pay 的設定步驟較其他行動支付服務來的相對容易	1 2 3 4 5 6 7
CON3	3. Samsung Pay 的設定指引較其他行動支付服務來的相對清楚易懂	1 2 3 4 5 6 7
COM1	4. 相較其他行動支付服務，Samsung Pay 支援的銀行及信用卡公司數目是有優勢的	1 2 3 4 5 6 7
COM2	5. 在卡片支援上，Samsung Pay 優於其他行動支付服務	1 2 3 4 5 6 7
COM3	6. Samsung Pay 在支援交通卡的服務上是其他行動支付服務沒有的	1 2 3 4 5 6 7
COM4	7. 許多 SamSung 的手機型號都支援 Samsung Pay，這是其他行動支付所沒有的優勢	1 2 3 4 5 6 7
COM5	8. Samsung Pay 在手機支援上優於其他行動支付服務	1 2 3 4 5 6 7
COM6	9. 其他行動支付服務在機器上的限制比 Samsung Pay 來的相對較多	1 2 3 4 5 6 7
COM7	10. 與其他行動支付服務相較，我發現有較多商家接受 Samsung Pay	1 2 3 4 5 6 7

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COM8	11. 我發現有些商家的 POS 機接受 Samsung Pay 但不一定接受其他的行動支付服務	1 2 3 4 5 6 7
COM9	12. 我發現其他的行動支付服務不一定有類似 Samsung Pay 的交通卡支付功能	1 2 3 4 5 6 7
COM10	13. 我發現 Samsung Pay 有支援一些 In-App 的購買（如 PChome App）是其他行動支付所沒有的	1 2 3 4 5 6 7
CON4	14. 我發現 Samsung Pay 的支付流程是相對簡單的	1 2 3 4 5 6 7
CON5	15. 我發現 Samsung Pay 的支付流程是相對容易的	1 2 3 4 5 6 7
CON6	16. 我發現 Samsung Pay 的支付流程是相對快速的	1 2 3 4 5 6 7
CON7	17. 與其他行動支付服務相較，Samsung Pay 的支付流程算是有效率	1 2 3 4 5 6 7
PR1	18. 與其他行動支付服務相較，我在使用 Samsung Pay 時比較沒有安全上的疑慮	1 2 3 4 5 6 7
PR2	19. 與其他行動支付服務相較，我在使用 Samsung Pay 時比較沒有個資洩漏的疑慮	1 2 3 4 5 6 7
PR3	20. 使用 Samsung Pay 在資料洩漏給第三方的風險是較低的	1 2 3 4 5 6 7
PR4	21. 使用 Samsung Pay 比較不會有使用者資訊（譬如購買地點、產品名目等資訊）被濫用的風險	1 2 3 4 5 6 7
PR5	22. 使用 Samsung Pay 比較不會有帳務資訊（譬如信用卡號、購買金額等資訊）被濫用的風險	1 2 3 4 5 6 7
PR6	23. Samsung Pay 相對其他行動支付服務是較安全的	1 2 3 4 5 6 7
REL1	24. 與其他行動支付服務相較，我使用 Samsung Pay 交易時的問題較少	1 2 3 4 5 6 7

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REL2	25. 使用 Samsung Pay 發生交易錯誤的機率較少	1 2 3 4 5 6 7
REL3	26. 與其他行動支付服務相較，使用 Samsung Pay 很少出現無法付款的情況	1 2 3 4 5 6 7
REL4	27. Samsung Pay 通常都能正常使用	1 2 3 4 5 6 7
REW1	28. 與其他行動支付服務相較，Samsung Pay 有較優的使用者回饋方案	1 2 3 4 5 6 7
REW2	29. 使用 Samsung Pay 有較優的商品折扣	1 2 3 4 5 6 7
REW3	30. Samsung Pay 的使用者回饋方案是相對吸引人的	1 2 3 4 5 6 7
CON8	31. 與其他行動支付服務相較，Samsung Pay 讓我更容易追溯我的支出紀錄	1 2 3 4 5 6 7
CON9	32. Samsung Pay 提供一套更聰明的帳目管理機制	1 2 3 4 5 6 7
CON10	33. Samsung Pay 讓我更有效率的管理我的支出	1 2 3 4 5 6 7

第四部份 Samgsung Pay 使用意圖

我們想瞭解您對 SamsungPay 的後續使用意圖，請根據下列問題，圈選最能反映您同意程度的選項。同意的程度分為七個等級：1: 非常不同意 2: 不同意 3: 有點不同意 4: 沒意見 5: 有點同意 6: 同意 7: 非常同意

Factor	Question	Score
BS1	1. 如果有機會，我會使用 Samsung pay 為主要支付工具，而非其他的行動支付服務	1 2 3 4 5 6 7
BS2	2. 我願意在近期使用 Samsung pay	1 2 3 4 5 6 7
BS3	3. 假設我可以使用 Samsung pay，我會願意從現在慣用的行動支付服務換成 Samsung pay	1 2 3 4 5 6 7
BS4	4. 我不一定非要使用現在的支付工具，改用 Samsung pay 也未嘗不可	1 2 3 4 5 6 7

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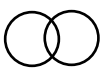
BS5	5. 我打算在未來改用 Samsung pay 為主要支付工具	1 2 3 4 5 6 7
BS6	6. 我現在已開始使用 Samsung pay 來支付了	1 2 3 4 5 6 7
SC1	7. 如果我要使用 Samsung pay，我還需要學習一下使用的方法	1 2 3 4 5 6 7
SC2	8. 我覺得要將主要支付工具換成 Samsung pay 是很麻煩的一件事	1 2 3 4 5 6 7
SC3	9. 如果我要換成 Samsung pay 來支付，我還需要花一下時間熟悉如何操作	1 2 3 4 5 6 7
SC4	10. 將支付工具換成 Samsung pay 的利弊得失需要花時間研究，但我沒那時間	1 2 3 4 5 6 7
SC5	11. 我覺得更換行動支付工具的手續很龐雜	1 2 3 4 5 6 7
SC6	12. 如果我要使用 Samsung pay，我需要至少花台幣$_____（e,g,購買可支援的手機、相關電信規費）	

第五部份 Samsung 品牌形象

我們想瞭解您對 Samsung 品牌的想法，請根據您對 Samsung 的品牌認知，回答以下問題。

1. 請針對您的個人形象與 Samsung 的品牌形象差異，圈選最合適的尺度(A->H)

Factor	Question	Score
CBI1	我的個人形象　Samsung 品牌形象	
	A 	距離遙遠
	B 	靠近但仍分開
	C 	非常小的重疊
	D 	小部份重疊
	E 	部份重疊

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	F		大部分重疊
	G		非常大部分重疊
	H		完全重疊

2. 請根據下列問題，圈選最能反映您同意程度的選項。同意的程度分為七個等級：1: 非常不同意 2: 不同意 3: 有點不同意 4: 沒意見 5: 有點同意 6: 同意 7: 非常同意

Factor	Question	Score
CBI2	2.1 當別人稱讚 Samsung，我會感到欣喜	1 2 3 4 5 6 7
CBI3	2.2 如果以後我被迫不能使用 Samsung 產品，我會感到失落	1 2 3 4 5 6 7
CBI4	2.3 我相信我跟 Samsung 建立某些連結是對我有益的	1 2 3 4 5 6 7
CBI5	2.4 我認為我是 Samsung 的好夥伴	1 2 3 4 5 6 7

個人資料與相關經驗

1. 年齡	□ 18-20 歲 □ 21-22 歲 □ 23 歲以上
2. 性別	□ 男 □ 女

其他寶貴意見

3. 您覺得 Samsung Pay 是否有任何功能，是您使用過其他行動支付服務所沒有，而您特別喜愛的。

4. 就您使用其他行動支付的經驗，您會建議 Samsung pay 新增什麼功能？或有什麼地方可以改進？

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5. 您會建議 Samsung pay 提供什麼樣的優惠內容或贈品，讓年輕人更想開始使用。
6. 承上題，該類行銷訊息的傳遞，您覺得什麼樣的宣傳管道比較有效？

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Appendix C：Description of Samsung Pay Fields

Test Data Items

Factor	Items	Required	Example
	Tester Name	V	王大元
	Device Model	V	Note9
	Test Date	V	2019/12/2
TF1	Test Time	V	13:40
	POS Category	V	參考「FT 規劃工作表」B 欄位：加值, Transit-捷運, Transit- BUS/客運, etc.
	POS/ Dongle Model	X	
	POS Vendor	X	
TF2	Test Location	V	• 7-11 金恩門市 • 捷運文湖線/動物園站加值機 • 捷運文湖線/麟光站 1 號出口閘門 • 北市痴心店(政大商院) • 50 嵐 信陽店
	Test Purpose	V	TopUp or Payment
	PASS (1 time try)	based on actual	
	BAD (Pass at 2 or 3 times try)	based on actual	
	Fail (Pass at 4+ times try or Fails)	based on actual	
	Picture for problemed POS	based on actual	
	Results for plastic test	based on actual	Success or Failed
	Remark/ Comments	based on actual	

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