

Differences between Chinese Mobile Payment and Foreign Mobile Payment

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Abstract. Modern times have seen the emergence of creative payment methods thanks to technological advancements, with mobile payments becoming a major global influence. However, each country has a very different acceptance and trend for these digital transactions. The first section of this thorough analysis looks at how mobile payment systems have developed in China over the years and how they stand now in comparison to other nations. It explores the relationship between consumer behavior, regulatory settings, and technology improvements to understand the fundamental causes for the widespread use of mobile payments. The research then carefully examines the differences in mobile payment methods between China and other areas using Porter's Diamond Model as a theoretical lens. It also looks at the difficulties foreign mobile payment apps have when tried to break into the Chinese market, such as the strong presence of well-established local rivals, the complexity of currency conversion rates, and the deeply ingrained user habits. The goal of this research is to present a comprehensive picture of the state of mobile payments and the many elements affecting their worldwide trend.

1 Introduction

With the development of smart phones and other mobile devices, and with the emergence of 5G, mobile payment has gradually become popular, and today, it has developed rapidly and has achieved certain development in various countries. China's development has been particularly remarkable. Although the development of credit card in China is relatively late, it has gradually developed and improved up to now [1]. At the same time, many mobile payment platforms have emerged in China, such as Alipay and WeChat pay [2]. WeChat Pay, an all-in-one application (app), is so popular in China that it and Alipay could even make the country cashless. Mobile payments are also growing rapidly in other countries. According to Juniper Projections, the worldwide industry for mobile payments has been anticipated to grow from \$240 billion in 2011 to \$670 billion by 2015. There is a 17916.16% increase. Gartner predicted that between 2011 and 2016, the global market for mobile payments will grow at an average annual rate of 42% [3]. So, in general, there are developments in mobile payments in various countries. Many countries have also aimed wanted to integrate the development of mobile payments into the national market circulation, but while some efforts have been successful, others have not. In the Chinese market, there is a rich variety of mobile

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payment software, thus many other software suppliers in other countries also want to enter into this market. But most of them fail. There may be many differences between China and other countries. PayPal once tried to enter the Chinese market but failed because of some differences. This could be due to differences in currency, consumer habits, and some other factors. The research scope of this paper mainly focuses on China and the United State. The main research method is Porter's diamond theorem and case search. And it also examines why China's mobile payment has diversified through a PEST analysis. This study will elaborate on the development situation and methods of mobile payments in China and other countries, analyse the differences through Porter's Diamond Model, and explore why PayPal, as an online payment tool, cannot open the Chinese market.

2 Literature review

The term "mobile payment" describes the practice of a unit or individual users sending payment instructions to contactless bank financial institutions via their mobile devices, the Internet, or both in order to initiate monetary payments and fund transfers. Integrated with the features of financial institutions, application providers, terminal equipment, and the Internet, there comes the mobile payment [3]. Mobile payment is a new technology payment method. It is not limited by time and place, and is very rapid. Using mobile payment as an instrument for digital revolution [4], people's lifestyles have become more fast-paced.

In China, there are various methods of mobile payment. For instance, Taobao, a retail platform, is integrated with Alipay; JD, another retail platform, is incorporated with WeChat; Meituan, at the meanwhile, works with both mobile payment entities [5]. Thus, it is evident that in China, the mobile payment patterns are very diverse and comprehensive. They come in many forms, not limited to credit cards and bank cards.

The mobile payment initiative is being implemented in other countries as well. iGoogle Wallet, a wireless payment solution, was introduced by Google [3]. In Jordan, there are some mobile payment app to facilitate a cashless society [6]. However, some developing countries reluctant to adopt mobile payments.

Additionally, mobile payments have many advantages. First, it can make people's life more convenient and efficient. Some unnecessary time loss can be reduced. For instance, most diners at restaurants take around two hours to finish a dinner, while delivery services may serve meals in as little as an hour [4]. Second, it also offers many job opportunities. However, it has some cons too. Information leaks and the uncertainty make it no more secure than the other payment methods [5]. It is a useful tool; however, it cannot completely mitigate the risks associated with money laundering [2]. Finally, it is not very user-friendly for seniors. This is because it is hard for them to embrace new things, and they are unwilling to take time to learn new payment methods.

3 The different ways of development of the mobile payment in China and why they develop these ways

3.1 The different ways

In China, there are plenty of ways of mobile payment with many companies introducing numerous apps to facilitate it. Meanwhile, the development of bank and credit cards is also highly valued.

Firstly, the development of apps is very diverse. There are many different apps for mobile payments. For instance, Taobao and JD, two bid online trading platform. They are largely responsible for making online trading increasingly popular. Taobao has had strong financial

results recently and is the industry leader in terms of user volume, user quality, company scale, and market size.

A popular application called WeChat has changed the way Chinese people make daily payments. Packet, which is a red packet that is sent from one person to another through WeChat; mini-programs, which are smaller applications that offer users services like booking tickets, requesting a cab, finding lodging, shopping, and utilities; games; and city services, which include paying utility bills and fines, monitoring air quality, filing reports to the police, and so on [7]. They are more convenient and faster and contribute a lot in building a cash-and/or card-less lifestyle of the Chinese society.

However, at the same time, it carries a lot of risk. For instance, Third-party payment has become more popular as due to advancements in Internet science, technology, and e-commerce. While providing convenience to the public, third-party payment platforms have become tools for money laundering, due to a lack of regulatory standards and internal control issues [2].

Additionally, while the credit cards development began relatively late and slow, it is now reaching the beginning of the industrialization phase. The credit card sector was consistently recognized as a promising industry in the country till a century ago. China's National Bureau of Statistics first mentioned "credit card financial institutions service activities" in 1984, citing the United Nations "International Standard Industrial Classification of All Economic Activities" as designated by the "National economy industry division and code" and led by the establishment of China's Industrial and Commercial Bank. To create an autonomous legal entity for the credit card centre; to implement a self-funded, independently confirmed business management system; and to independently manage the creation, operation, and administration of credit card products [1]. Constantly improve and broaden the credit card products' functional range; provide value-added services on top of the essential features, such unique card designs, product exclusivity rights, and co-branded card interests [8].

Another popular way of working with mobile payments is e-commerce. China's online retail sales in the first half of the year were 7.1 trillion yuan, up 9.8%, according to data from the Ministry of Commerce. Of this amount, 25.3% came from the online retail sales of physical items, which came in at 5.96 trillion yuan, up 8.8% [9]. Especially, during COVID - 19, the epidemic driving the increase in the share of online consumption, thus changing the structure of the retail market. The main mechanism is that while the epidemic improves the activity of e-commerce, it also reduces the service quality of consumers' offline shopping. Furthermore, this study confirms that online consumption mitigates the negative impact of the epidemic on overall consumption expenditure. Heterogeneity analysis showed that the COVID-19 pandemic significantly increased the online share of necessities and consumption upgrades.

3.2 The reasons

According to the PEST analysis, the reasons are as follows.

On the social and economic level, there are a lot of remote rural areas in China. Rural families must incur higher expenditures for transportation, communication, physical strength, and information acquisition when engaging in economic activities because of the inconveniences associated with information and transportation. It is evident that mobile payments can assist in getting around these issues [10]. In order to improve the welfare of rural families, mobile payments can mitigate the drawbacks of traditional financial payment methods and lower the high transaction costs brought on by outdated infrastructure [10].

On a technical level, the emergence of 5G technology in China has created more space for the development of mobile payments. There will be more ways to make mobile payments.

On a political level, the Chinese government has been encouraged the development of mobile payments.

Overall, China has actively promoted the diversification of China's mobile payment at the four levels of politics, economy, society and technology.

4 The different ways of development of the mobile payment in other countries and why they develop these ways

4.1 The different ways

In other countries, the development of mobile payments is also well. The governments of a number of developing countries, such as Kenya, Iraq, and Myanmar have shown initiative in offering their citizens government-to-person payments via mobile technology [11]. This improves system transparency and enables the government to pay salaries and wages [12].

Furthermore, the technology has increased tax collecting effectiveness. Other advantages will come from the growth of the mobile finance sector in developing countries [12]. In Myanmar, Non-bank firms were granted Mobile Financial Service Licenses (MFS) by the Central Bank of Myanmar in March 2016. The unbanked in Myanmar may now be digitally connected via mobile payment providers, and the country's financial culture is strengthened by the CBM, which shifts the economy from cash-based to digital [13]. "Digital Wallet" is the concept from which mobile wallets are formed. It began in 1996 when Sam Pitroda, the creator of Digital Wallet, submitted the patent application to the US [13].

Google Wallet, a wireless payment solution, was introduced by Google. The ISIS was started by the three main U.S. mobile providers (Verizon Wireless, AT & T, and T-Mobile), and NFC mobile payments were implemented in Salt Lake City. The mobile payment initiative is being implemented in other nations as well. The worldwide supply chain for mobile payments will reach maturity [3]. The global market for mobile payments was expected to expand from \$240 billion in 2011 to \$670 billion by 2015, according to Juniper Projections. This represents a rise of 179.16%. According to Gartner, the worldwide market for mobile payments would increase at an average annual pace of 42% between 2011 and 2016 [3].

In America, although there are many basic everyday apps that function as mobile payments, such as takeout and express delivery apps, credit card or bank card payments still rank as the most popular payment method due to their excellent development.

Furthermore, in Thailand, mobile payment systems such as m Pay, Blue Pay, Alipay, and True Money Wallet started to emerge after 2017. These systems use QR codes to scan payment codes. 2018 saw the introduction of QR code payment. 94% of Thai citizens pay with cash, 24% use credit or bank cards, and 10% use the Internet, with 18% using both cash and credit cards. These figures show the distribution of payment methods in the country [14]. As of right now, bank card and cash payments are the primary modes of payment accepted in Thailand; internet payments are normally not accepted there [14]. Furthermore, credit card payments are quite convenient in Thailand, since the bank card system is reasonably well-developed. Mobile payments are also possible to some extent [14]. The national strategy plan for electronic payments was accepted by Thailand as part of the Thailand 4.0 plan, and the government of Thailand strongly supports the growth of electronic payment in Thailand. The installation of broadband networks in every Thai hamlet and financial allocation are among the national development goals outlined in the government of Thailand's "Thailand 4.0" program, which also includes electronic mobile network payment. Building a nationwide broadband network is essential to close the digital gap between Thailand and other countries, and using e-commerce can propel contemporary economic growth [14]. The rapid expansion

of mobile payment in Thailand has been facilitated by the collaborative promotion and usage of electronic payment in many locations, including food and beverage outlets, retail establishments, petrol stations, and e-platform retailers. In Thailand, e-commerce is growing at a very quick pace. Relevant research indicates that over 50% of Internet users have shopped on social media or electronic platforms [14]. Thus, Thailand has also developed a good mobile payment network platform, but there are still limitations.

4.2 The reason why those countries develop mobile payment in those ways

Why those countries choose develop these ways? First, the governments are worried about the security of mobile payments. Just like some information might leak out due to hacks. The growth of Internet technology and economic globalization has led to a diversification, flexibility, and extreme concealment in the methods and channels used for self-money laundering. The third-party payment platforms are crucial to self-money laundering scheme. Due to their features and operation methods, they offer financial services and quick payment options, but they also carry some risks of money laundering [2]. For example, in America, the population is changing, with an increasing proportion of those aged 65 and above making up the country's population [15]. Research has shown that an aging population raises crime rates in the country [15]. But since network and mobile crimes are so dangerous, one should exercise caution while developing mobile payment systems. As a result, the US has developed only a few transaction platforms rather than a large number of payment app. Another example is Thailand, it wants to change the status quo. It is a pity that the network technology is not particularly developed. However, the credit card system is relatively perfect. So, it has developed the credit card system, and following China, has introduced Alipay, which is a mature app for online payment. In general, all countries have developed better mobile payment methods according to their own national conditions.

5 The difference between China and other countries and why will have these differences

5.1 The different ways

In China, there are many mobile payment methods. There is a lot of convenient payment software on smartphones. This means that Chinese people do not need to carry cash or cards. QR code payment is widespread. Relatively, credit card developed late and slow in this country.

As for other countries, they are not fully developed like China did. Some countries are ready to develop software for mobile payments, but they have not a complete system and plan. There is a serious problem in that some country worries about the safety issues. As a result, they cannot develop mobile payment comprehensively. For example, The United States is one of the world's great powers. Although, they don't have to worry about technology and resources, security there should be given more attention to. The centralized information management provided by digital payments is quite convenient for governments and companies. But if this concentrated knowledge is disclosed to the public, there will be additional danger and dire repercussions. One such instance is the 2021 data leak that Facebook experienced. Over 533 million people were impacted by the information leak, which including phone numbers, locations, biographies, and complete names. If somebody with bad intentions exploits this sensitive information, the results could be dire. These include of property loss, exposing of residential addresses, and illicit loans [5]. Moreover, globally, China is the leader in mobile payments, being among the first and the finest. Mobile payments,

shown by WeChat and Alipay, are currently ubiquitous in Chinese society [16]. PayPal, an American company, tried to enter the Chinese market but was unable to gain a foothold.

6 The reason analysis

In terms of corporate strategic structure and competitors, the United States does not have an advantage. Although PayPal has adopted some strategies to adapt to the Chinese market, its market share in the country is still limited, mainly due to the already fierce competition in the domestic payment market, especially the dominance of Alipay and WeChat Pay. At the same time, China's mobile payment enterprises such as Alipay and WeChat Pay have adopted active marketing strategies and formed strong competitive advantages. At the same time, China's legal environment imposes restrictions on overseas software.

In terms of demand conditions, Chinese consumers have a high acceptance and demand for mobile payment, which will promote the rapid innovation and popularization of mobile payment services. However, in other countries, the demand for mobile payment may not be as strong because of consumer habits and cultural differences.

As for factor conditions of production, the rapid development of e-commerce online services and other industries in China has provided strong support for mobile payment and formed a good industrial ecosystem. For example, many mobile device providers in China, such as Xiaomi and Huawei, provide basic hardware supporting mobile payment. At the same time, there are more mobile operators, such as China Mobile, China Unicom, China Telecom and so on. However, in other countries, such as Thailand, the support for mobile payments in the development of related industries is relatively weak. Therefore, mobile payment cannot be developed well by itself. But as an Alipay follower, is also growing [14].

For factors of production conditions, China has a huge Internet user base and a rapidly developing technology industry in the field of mobile payments. For example, the development of 5G in China has provided good conditions for the development of mobile payments. At the same time, China has a large population and more people use the Internet, so mobile payment can become popular among the public very quickly. In contrast, some countries may be deficient in certain factors of production. For example, Thailand may not be as technologically advanced as China [14]. The United States, for example, may have the same level of investment in technology as China does but does not have as many Internet users as China does.

7 Conclusion

This paper finds that there are differences in the development of mobile payment between China and other countries. Mobile payment software is well developed in China. In other countries, credit and bank cards are still the main mobile payment methods. This is largely due to inter-state factors, for some countries' security is one of the factors they have to consider, in addition to economic and technological development conditions, and other reasons. At the same time, this paper also found and analysed why foreign mobile payment software has failed to enter into China and why it was not widely welcomed by people. This is mainly due to the fierce market competition in China, where Alipay and WeChat Pay occupy a large market share, making it difficult for foreign software to survive. It also needs to adapt to different user behaviours in other countries. However, due to the differences between culture and lifestyle, it is difficult to meet the needs, and software must be continuously optimized and innovated to achieve diversification. In addition, there is also the issue of currency, because different countries will have different currencies, which will involve the exchange rate, so there will be currency conversion fees during currency

conversion, thus increasing the transaction cost. Of course, there are additional reasons, such as the state of the economy and the development of technology.

In this study, the difference between China's development and that of other countries was made clear. It also identified their differences. At the same time, it also analyses the reasons for the differences, and why the countries cannot open the market to each other. This study provides thought-provoking materials and factors for the future development of mobile payment convergence. It also clarified the challenges of integrated development among different countries. This is particularly beneficial for countries that want to integrate mobile payments. It provides basic information to other researchers who want to study how to integrate the development of mobile payments. Future research could focus on how to address these challenges. The countries included in the current study are not very comprehensive, and future studies should involve more countries

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