

## ЭКОНОМИЧЕСКИЙ ФАКУЛЬТЕТ

### THE ANALYSIS OF DEVELOPMENT AND INFLUENCE OF DIGITAL ECONOMY ON THE FINANCIAL PAYMENT SYSTEM IN CHINA

**Sui Haonan**

*Belarussian State University, Minsk;*

*suihaonan61@gmail.com;*

*Scientific Advisor – Catherine Gospodarik, PhD, Associate Professor*

Aiming at the practical problems of china's payment system under the digital economy. This thesis analyzes the development process and current situation of China's payment system by using the 'literature research method' and 'comparative analysis method' and 'PEST analysis' and 'SWOT analysis', and point out the most prominent problem in the payment system---security. Fully consider the development of China's digital economy, this paper proposes a solution and related strategies to improve system security based on block chain technology.

**Key words:** digital economy; payment system; security; block chain technology

At present, China is in a period of rapid economic development. The more rapid the economic development, the more important the payment system. Payment system is a safe and efficient platform constructed by computer technology and network communication technology. It provides fund circulation channels and clearing services for payers, and effectively monitors payment risks. Payment system plays an important role in the healthy development of national economy and is an important part of economic and financial activities. In China, the payment system is mainly completed by China's modern payment system and the third-party payment system [1].

China's modern payment system is developed and constructed by the people's safety and efficiency. Therefore, to build a well payment system and ensure the safe and stable operation of CNAPS (China National Advanced Payment System) is not only the requirement of providing payment and clearing services, but also the requirement of preventing financial risks and maintaining financial stability.

In the era of agricultural economy, the key production factors of economic development are land and labor; in the era of industrial economy, the key production factors of economic development are capital and technology; in the era of digital economy, the key production factors of economic development are data. Data becomes the core asset of competition between enterprises and countries in the future, which is "new oil in the future". With the advent of the digital era, the amount of payment transactions completed through data transmission is increasing day by day, and the cash payment gradually fades

out of people's vision. The popularity of online banking, credit cards and Alipay has changed the mode of cash flow in traditional transactions. After more than ten years of rapid development, the third-party payment agencies have become an important complementary force to the payment service market in China. In the process of this change, on the one hand, commercial banks have listed it as an important financial innovation direction and business growth point, on the other hand, many third-party payment institutions have invested and operated electronic payment platform. The rapid development of digital payment based on Internet and mobile communication has not only changed the traditional production mode, but also changed the traditional payment habits, becoming a new growth point of the world economy [2].

With the help of digital technology, the third party payment system has been developing rapidly and many new payment methods have been developed. For example, Alipay's fingerprint recognition payment only requires a mobile phone with NFC (near field communication) function, so that it can easily complete payment. Liberated the credit card to the people's fetters, and created the era of no card transactions. The payment behavior completed by fingerprint identification technology is an innovation of Alipay's payment method.

The third-party payment will transfer from the payment service of a single industrial chain to the integration of cross industrial chain. It will penetrate into more application service fields in various application forms, such as online and offline, PC terminal and mobile terminal. So that the whole industry will develop towards a various pattern. Industrial integration will bring product integration and market integration among related industries, thus forming a new economic format. Generally speaking, the third-party payment as a beneficial supplement to China's payment system, It has brought financial innovation to China's financial industry, promoted the prosperity of China's Internet economy and the improvement of the payment system, and promoted China's e-commerce and e-finance system to a new level, making greater contributions to China's economic development [3].

The research includes three parts. The first part explains the concept of digital economy through the understanding of digital economy at home and abroad. Under the support of three laws, the development law of digital economy is revealed. The birth of several landmark events shows the development process of China's digital economy [4].

The second part introduces the current situation and development of China's payment system. The problems and causes of each subsystem are analyzed. China's financial payment system always includes China's modern payment system and the third-party payment system, each of which involves

the analysis of system security. At the end of this chapter, two cases are cited to analyze the most popular third-party payment system in China [5].

In the third part, blockchain payment technology is proposed. This technology uses cryptography and digital signature, which can solve the security problem of the payment system proposed in part 2. With the help of blockchain technology, a new POS payment system is designed. This system can use the mobile PC terminal to complete the payment with the seller directly, omitting the intermediate mechanism of the original POS payment system. At the same time, because of the existence of the underlying technology of the blockchain, this system has the characteristics of high security and non tampering. And for the future development of payment system with the help of digital economy, some suggestions are put forward. Under the construction of system security, many new biological payment methods (such as Iris pay, sound wave pay, face scan pay) are gradually developing. Maybe in the future, biological payment will completely replace password payment and become the main payment method of payment system [6].

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