RESEARCH ON THE CURRENT SITUATION AND COUNTERMEASURES OF SINO-THAI CROSS-BORDER E-COMMERCE DEVELOPMENT

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MASTER OF SCIENCE

IN DIGITAL INNOVATION AND FINANCIAL TECHNOLOGY

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AN INDEPENDENT STUDY SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUREMENTS FOR THE DEGREE OF MASTER OF SCIENCE
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หัวข้อวิทยานิพนธ์ การค้นคว้าวิจัย เรื่อง สถานการณ์ในปัจจุบันและ แนวทางในการแก้ไขเพื่อการพัฒนาอีคอมเมิร์ซข้ามพรมแดนจีน-ไทย

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บทคัดย่อ

ในสภาพแวดล้อมโลกในปัจจุบันด้วยการพัฒนาอย่างรวดเร็วของอีคอมเมิร์ซที่ไม่ใช่ทางกายภาพการค้าต่างประเทศของจีนและไทยข้ามพรมแดนอีคอมเมิร์ซจะค่อยๆก้าวไปสู่ความสามัคคีและความก้าวหน้าร่วมกัน.มีผู้คนจำนวนมากขึ้นตั้งข้อสังเกตว่า อีคอมเมิร์ซข้ามพรมแดนเป็นหนึ่งในประเด็นร้อนทางสังคมของจีนและไทย อยู่ระหว่างสองประเทศในเอเชียที่มีประเพณีแตกต่างกันและสองประเทศกำลังพัฒนาในเอเชียตะวันออกที่มีสังคมเหมือนกันแต่แตกต่างกัน.งานวิจัยอิสระชิ้นนี้ได้วิเคราะห์การพัฒนาอีคอมเมิร์ซข้ามพรมแดนระหว่างจีน-ไทยเป็นหลัก รวมถึงปัญหาที่เกิดขึ้นขณะเดียวกัน.การศึกษาอิสระนี้เริ่มต้นด้วยความแตกต่างทางวัฒนธรรม, พฤติกรรมการบริโภค, ความแตกต่างทางภาษา, และต้นทุนของนโยบายการทำธุรกรรมสูง, รวมกับเทคโนโลยีใหม่เช่น blockchain เพื่อสร้างรูปแบบการค้าใหม่ของอีคอมเมิร์ซข้ามพรมแดน, ส่งผลให้กำไรที่สูงขึ้นในตลาดอีคอมเมิร์ซข้ามพรมแดนที่มีอยู่, และได้รับส่วนแบ่งการตลาดมากขึ้น.การบรรลุการเปลี่ยนแปลงรูปแบบธุรกิจที่ขับเคลื่อนด้วยนวัตกรรมและการหาจุดเติบโตของกำไรใหม่เป็นหัวข้อที่ได้รับการกล่าวถึงอีกครั้งในการศึกษาอิสระครั้งนี้.การศึกษาอิสระนี้ได้ศึกษาความจำเป็นและความเป็นไปได้ในการพัฒนาอีคอมเมิร์ซข้ามพรมแดนและส่งเสริมการพัฒนาการค้าระหว่างจีนกับไทยผ่านการศึกษาวรรณกรรมและการวิเคราะห์เชิงปริมาณ.

คำหลัก: อีคอมเมิร์ซข้ามพรมแดน, บล็อกเชน, ใบสมัคร

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ABSTRACT

In the current global environment, with the rapid development of non-entity e-commerce, cross-border e-commerce in foreign trade between China and Thailand is gradually moving towards harmony and common progress. More and more people are noticing this new area between two Asian countries with different customs and two developing East Asian countries with the same but different societies, cross-border e-commerce, as one of the hot social topics in China and Thailand. This independent study mainly analyzes the development of Sino-Thai cross-border e-commerce, as well as the problems that exist at the same time. This independent study starts with cultural differences, consumption habits, language differences and high transaction policy costs, and combines new technologies such as block chain to build a new trade model of cross-border e-commerce, so that in the existing cross-border e-commerce market, higher profits can be obtained, and a larger market share can be obtained. Realizing innovation driven business model change and finding new profit growth points are the topics discussed again in this independent study. This independent study studied the necessity and feasibility of developing cross-border e-commerce and promoting the development of Sino-Thai trade through literature research and quantitative analysis.

Keywords：cross-border e-commerce，block chain，application

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LIST OF ABBREVIATIONS

ICO	Initial Coin Offering
ASEAN	Association of Southeast Asian Nations
GDP	Gross Domestic Product
COVID-19	Corona Virus Disease 2019
B2B	Business-to-Business
B2C	Business-to-Customer
C2C	Consumer-to-Consumer
APP	Application
GMV	Gross Merchandise Volume
VC	Venture Capital
IOT	Internet of Thing
CBEC	Cross-Border Electronic-Commerce
EV	Enterprise Value
FCF	Free Cash Flow

CHAPTER 1

INTRODUCTION AND DIGITAL STARTUP

1.1 Introduction

In view of the Thailand is located in the center of Asia, it is also in the middle of ten ASEAN countries. Thailand is connected to the "the Belt and Road" initiative between China and ASEAN markets. Thailand is the logistics, alternative and financial center of the "the Belt and Road" initiative. Therefore, these provide significant opportunities and challenges for Sino-Thai cross-border electronic trade, and provide tremendous probability for the improvement of cross-border electronic trade. With the expansion of the scope of Sino-Thai trade, cross-border e-commerce has become increasingly important in Sino-Thai trade. According to the world development indicator from the World Bank, in 2021, Thailand's population reached 69.95 million, the total GDP achieved $505981.66 million, and the per capita GDP level achieved $7233.39, making it the second largest economy in ASEAN countries after Indonesia. At the same time, in 2020, Thailand's internet usage rate exceeded 75% and achieved 77.84%, and it is one of the countries with the highest Internet penetration rate in Southeast Asia.

In order to promote economic growth, the Thai government and society have vigorously developed e-commerce. Previously, merchants in Thailand had developed very well in the digital economy. Many merchants sold and traded goods through the Internet, and at the meantime used historical transaction data to better understand customer needs. Especially after the outbreak of COVID-19 in 2020, there has been a surge in demand for online shopping, especially B2C and B2B businesses, due to urban lockdowns and home quarantine. The driving factor behind this growth is what Thailand has done in recent years in terms of internet penetration and smartphone penetration. In 2022, the nearest data of the United Nations Conference on Trade and Development in the E-commerce Week shows that although a large number of countries and regions relax

the control and restriction on physical commerce, consumer e-commerce activity is still growing rapidly in 2021, and online sales are also growing rapidly. The proportion of Internet users implementing online shopping has risen from 53% before the outbreak of the epidemic (2019) to 60% after the outbreak (2020 to 2021), which is shown in 66 countries and regions with statistical data. According to the Digital Economy Promotion Agency , Thailand's e-commerce market is growing at an annual rate of about 9.2% and is expected to reach 12% by 2023. In the meantime, the mobile phone usage rate of Thailand's population has exceeded 40%. These above advancements have laid a certain basis for the rapid growth of electronic commerce in Thailand.

In Thailand's e-commerce market, the cross-border e-commerce trade volume exceeds 30%. According to , currently more than 50% of customers in Thailand buy and sell things from overseas. At the same time, China, Japan and the United States are the peak three overseas addresses for Thai products. With more and more Thai e-commerce businesses aiming for opportunities arising from cross-border e-commerce, In my independent study, I need to analyze the existing issues in the development of cross-border e-commerce to explore possible innovations and opportunities in the future.

At the moment, China is the second largest economy next to the United States. And China and Thailand have had very good political and economic relations since history. In terms of economy, the economic relations between China and Thailand have developed very rapidly, and China and Thailand have now become important economic and trade partners of each other. In terms of politics, China and Thailand have maintained friendly relations in accordance with the "Five Principles of Peaceful Coexistence" and the purposes and principles of the UN Charter. In recent years, China and Thailand enjoy stable political relations and close cooperation, which has created a favorable environment for bilateral economic and trade exchanges.

According to China (CHN) and Thailand (THA) Trade | OEC, the total value of Thailand's exports to China in 2020 is $30.2 billion, which ranks second among all exporting countries in Thailand. At the same time, China has signed an agreement with Thailand and neighboring Laos to establish a China-Laos-Thailand Free Trade Zone to upgrade the growth of CBEC because of Thailand's proximity to southwestern China. At the same time, China and Thailand joined the Regional Comprehensive Economic

Partnership (RCEP), which marks the gradual deepening of the cooperation between China and Thailand in economic and trade relations.

Figure 1.1 Trilateral Free Trade Zone Shared by China, Thailand and Laos

But at this time, there are still many issues to be resolved if the cross-border e-commerce between China and Thailand wants to achieve higher level and larger scale development. For one thing, due to language barriers and different living environments, cross-border e-commerce between China and Thailand has caused huge cultural differences between the two countries. At the present time, the trade between China and Thailand is mainly based on raw materials. Thailand mainly exports chemical fertilizers, rubber and other products to China. China takes advantage of its own world factories to mainly export wireless telephones, computers and their parts, steel plates and other products to Thailand. To increase the volume of goods traded for daily consumption, models of cross-border e-commerce trade must be innovative. So we must fully understand the cultural differences and consumption habit differences between China and Thailand due to language, geography and other factors. In addition to traditional import and export trade, China and Thailand should also promote cross-border e-commerce trade in agricultural products, necessities, non-staple food and other fields.

1.2 Problem

1.2.1 Supplier/Customer Pain Points

Table 1.1 Supplier/Customer Pain Points

Pain Points	Supplier Pain Points	Customer Pain Points
1	Cross-border logistics	Consumer preference differences
2		Cultural differences

For the moment, there are two main pain points in the improvement of CBEC , namely the supplier pain points and the customer pain point. In terms of supplier pain points, cross-border logistics is the main pain point of CBEC. According to the customer pain point, consumer preference differences and cultural differences are the basic pain points of CBEC.

As far as cross-border logistics is concerned, cross-border logistics involves the transfer of many geographical locations, requires many steps, generates a lot of data, and has inconsistent regulatory calibers in different countries. These complicated procedures make it difficult to track the whole process of cross-border logistics. In the case of package loss, it is also arduous to define responsibility. The traditional logistics system lacks transparency, and the information between all parties has an island effect, which means that different countries are not functionally related to each other, information is not shared and exchanged, and information is incompatible with business processes and applications. This leads to information asymmetry between different entities, which delays the efficiency of logistics, resulting in longer cross-border logistics and poor timeliness.

In terms of commodity consumption, consumers in different countries have different demands for products due to the long geographical distance. The demand for products suitable for the country is often not acclimatized in cross-border logistics. For example, for some local specialty products, the audience is limited to consumers in a certain region of the country. Once the changes in cross-border consumer demand are not

considered according to local conditions, blind sales will cause problems such as product slowdown and inventory backlog.

At the same time, cross-border goods are often very inconvenient after sale due to the long physical distance between the product and the consumer. This leads to the proliferation of counterfeit goods at the source of cross-border commodities or the proliferation of counterfeit goods in which the products are exchanged in the middle. The problems that have seriously affected consumers' shopping experience and loyalty to cross-border e-commerce platforms are the prevalence of fake goods and the difficulty in returning and replacing goods.

Because of this, we must first solve the two pain points of the supplier sides and the customer sides, so that cross-border e-commerce can achieve and continue to cultivate on a larger scale. If new cross-border e-commerce operation and transaction models can be explored in these two major pain points, then new business opportunities can be found and new business opportunities can be generated to achieve profitability.

1.2.2 Business Opportunities

This plan starts from the two major pain points of the current cross-border e-commerce, aiming at the pain points of the supply side, using block chain technology to improve the existing drawbacks. For the pain points on the sales side, a brand-new application is designed to help cross-border e-commerce realize a new B2B2C business model based on consumer demand by using location-based service technology and management information system.

Since our main focus on the supply side is system upgrade and the application of block chain technology, the current technology integration has formed a comprehensive set of services. Therefore, the main model we adopt on the supply side is the purchase of technology and ancillary services. For our digital startup project, we mainly focus on innovation on the demand side.

On the demand side, we plan to build a "Tie-in" APP between China and Thailand, which has two sub-applications. The platform is designed to connect local stores in China and Thailand through an app and sell a variety of goods in China and Thailand. There are

cultural differences between Thai businesses and Chinese consumers, as well as language differences that can cause communication difficulties. Therefore, our trade platform will provide bilingual services, allowing Thai merchants to share their products with Chinese customers, thereby promoting Sino-Thai trade. In the future, the "Connect" application can be downloaded from IOS and Android.

In order to sell goods conveniently, people from China and Thailand can register with their local identification cards. However, they have to pay by targeted bank card. In China, consumers are required to pay by Union Pay card. In Thailand, consumers are required to pay by Visa Card. The goods will mainly be transferred using airline.

We know that if we just sell good through e-commerce, we cannot beat the existing successful firms such as Taobao, JD, and Amazon. However, our e-commerce platform “Tie-in” is not just a platform for sales. Actually, we are a combination of e-commerce platform and businesses rating recommendation platform. In Brief, we are a combination of Amazon and Yelp. Hence, we will utilize each one’s advantage and perform better than them.

We will build a lifestyle platform that is convenient for Chinese customers to communicate with Thai companies. Therefore, we will share the business information of Thailand for Chinese tourists from a Chinese perspective, including eating, buying, beautifying (massage), traveling, and staying. At the same time, our team will also start from the perspective of Thailand, learn from the successful experience of marketing and promotion in Thailand, and share China's business information for Thai people. At the same time, we will recommend excellent merchants to customers in both countries based on star rating and distance. In addition, we will meet the needs of tourists interested in all aspects of leisure and entertainment in both China and Thailand. We will build a convenient platform for Chinese and Thai merchants to facilitate their communication with tourists and optimize Sino-Thai trade.

1.2.3 Job to be Done

Our digital entrepreneurship project is to innovate the traditional cross-border e-commerce operation mode and provide mature implementation solutions for traditional

enterprises. In order to successfully solve the two major pain points of cross-border e-commerce today and successfully launch our digital project, we need to accomplish the coming works during the implementation phase of the project.

1) Market Survey and analysis：We will investigate the acceptance to adopt our innovative mobile APP and the solution to cross-border logistics. We will collect and analyze data for cross-border enterprises.

2) Product Design：We will design a cross-border application which is called the “Tie-in” APP, and provide a whole process efficiency improvement solution for the cross-border logistics network.

3) Legal Issues：We will learn and abide by the laws of both China and Thailand. Every activity will be executed under the permission of the Law.

4) Financial Analysis：We will develop a financial plan and a valuation projection of our project over the next several years, which is necessary for us to raise funds and operate in the future.

5) Fund Analysis：We will communicate with the investors and organize the suitable fund-raising rounds and the amounts of money that are needed for us.

1.2.4 Ideation and Business Concepts

There are two parts in our digital startup project. These two parts are the customer side and the supplier side. On the customer side, we design a brand-new CBEC APP. On the supplier side, we provide a set of logistics efficiency improvement models based on block chain technology.

On the customer side, we will design an APP called "Tie-in", which is similar to the combination of a merchant rating APP and an e-commerce shopping APP. This application allows us to solve problems arising from cross-border cultural, linguistic and other differences. Improving the user stickiness and user utilization of cross-border e-commerce is the future role of the new functions we added.

In conformity with our digital startup plan, we will set up a project team and two sub-project teams to be responsible for the advancement of the supplier side and customer side sub-projects. According to the BCG matrix model, CBEC APP projects are in question mark position. This category is characterized by a higher growth rate of the market, but a lower market share owned by companies currently operating this business.

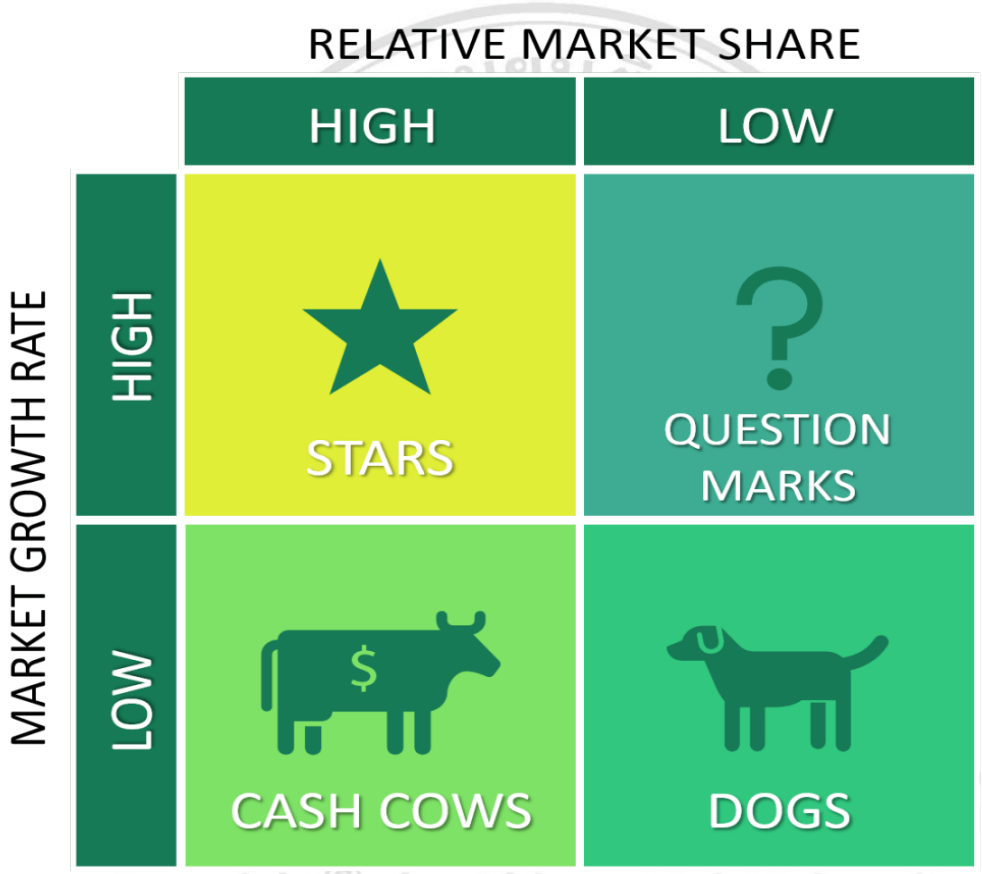

Figure 1.2 BCG Matrix

On the basis of the BCG model, question marks are those corporate entities with low market shares in fast-paced markets. At this time, companies need a lot of investment and resources to expand their market share. They also require extensive monitoring, as investments in question marks are largely funded by cash flow.

Question marks don't always see hope for success. Even after huge investments, it is difficult to gain market share. When market growth slows, they lose their appeal and end up being unfavorable dogs positions in the BCG matrix.

For companies at this stage, the strategic options available are market development, market penetration, product development and divestiture.

If an enterprise chooses a market growth strategy, this strategy means that it needs to adjoin existing products with new markets, that is, it needs to use existing products to find new market stages. Therefore, the company's business needs innovative product positioning to meet the requirements of consumers in emerging markets, or to find new breakthrough points by adjusting sales methods and targeted marketing promotion to solve the pain points facing the industry at present.

The market development strategy is suitable for enterprises that have just entered the industry. After gaining a foothold in the industry, the enterprise should adopt the market penetration strategy. Under the market penetration strategy, corporate managers should consider the strategies when entering the market, the products and marketing together contribute to the purpose of enhancing market penetration.

After that, after the company's products have high market credibility and customer satisfaction, the company should also adopt a product development strategy. This strategy is suitable for companies that rely on existing products to have gained a certain market share and have a high level of cash flow. This strategy allows companies to leverage the reputation and trademarks of existing products to attract users to new products. Specifically, for our CBEC APP, we can derive related sub-businesses, such as cross-border e-commerce live streaming and other new services.

Finally, when the project is fully mature and the industry enters a recession period, we can withdraw from the current industry by means of asset divestiture or sell our business at a higher price.

1.3 Proposed Solution

1.3.1 Market – Segmentation and Target Segment on E-Commerce

The business target markets of our digital entrepreneurship projects are China and Thailand, which are the two Asian markets. In the Chinese market, according to the data

of the Statistical Bulletin of National Economic and Social Development in 2021 issued by the National Bureau of Statistics of China, China's economic scale will exceed 110 trillion yuan, becoming another peak in China's history, and China has maintained its position as the world's second largest economy. In the Thai market, Thailand's GDP ranks second in ASEAN. Because China and Thailand are very important in the Asian market, with the continuous improvement of our business, we may also expand our business to other countries and regions in Southeast Asia in the future.

1.3.2 Convincing Business Model

Figure 1.3 Porter's Five Forces Mode

Porter's five force model and BCG matrix model are the basis for our business prospect analysis.

The analysis of the BCG model has been described in the previous part of the proposal. In this section, we will further analyze the prospects of the project based on Porter's Five Forces Model.

Seen from the threat of alternative products or services, although there are already relevant CBEC APP on the market to provide services. Nevertheless, some problems exist in most CBEC APP. Specifically, their problems include the lack of Chinese language options, the high price of products, and the lack of support for Alipay and WeChat

payment. At the same time, Chinese consumers do not yet have the habit of cross-border shopping. As China is an export-oriented country, China has a complete range of goods and the government is vigorously expanding domestic demand, so consumers often choose local products. In addition, cross-border shopping has the characteristics of difficult after-sales service for Chinese and Thai consumers.

At this point, we have created our differentiated features compared with other products from the perspective of improving the speed of supply chain response and operation and focusing on localization and customization on the demand side. Thus we have a higher competitiveness.

In terms of bargaining power, consumers have higher bargaining power than suppliers due to tariffs and higher transportation costs for cross-border goods. Merchants need to use consumer demand and price range as a reference for their own pricing. Therefore, our cross-border logistics model under block chain technology can help merchants reduce the cost of unit products. Thereby increasing the competitiveness compared with local products.

From the perspective of threat of new entrants, this field is still in the blue ocean, and we have a first-mover advantage. Therefore, we should use the characteristics of economies of scale as soon as possible to raise industry barriers to organize the entry of new entrants.

1.4 Digital Enabling

1.4.1 Digital Technology or Platforms

At the present time, What provide technical in favor of our cross-border e-commerce innovations are the appearance of the block chain technology and the appearance of mobile phone applications. The logistics efficiency of cross-border e-commerce can be greatly improved with the sustain of block chain technology. With the support of mobile applications and algorithms, we can accurately push the products that users are satisfied with according to their personal preferences. At the same time, we can constantly adjust our recommendation mechanism by analyzing users' historical

transaction behavior, comprehensively covering users' different needs, so that users can get a better experience.

On the supplier side, we mainly use block chain technology. The block chain can realize the transfer of information in the entire network through the hierarchical structure of the network connected by nodes and can test the reliability of the information. This feature saves time and cost for the application of intelligent logistics models. The very free access capability is provided by the block chain node, which can independently access the block chain system without any interference to the overall system. The solution of adding block chain + big data makes use of big data, which makes the expansion of basic users of the Internet of Things more targeted, and promotes the expansion of users among intelligent logistics users.

On the customer side, we want to design a new mobile CBEC APP. This mobile CBEC APP will mainly use five technologies, and the specific technical information is as follows.

First of all, we will build our shopping platform based on WXML and JAVA script technology. Our mobile phone APP has two sub-applications, one satisfies the mobile phone application, and the other will be designed as an H5-based social platform applet. Take WeChat as an example. At present, it has built-in thousands of mini-programs. Some very famous e-commerce platforms in China, such as JD and Pinduoduo, both of which have small programs on WeChat. Our mini programs in China will be carried on WeChat, and in Thailand we will mainly use mobile phone applications.

Our application supports multiple languages, this technology is supported by markup language provided by WXML and style language provided by WXSS.

In the second place, we will use LBS Positioning Technology. LBS technology is usually used in mobile phones, it can provide location services, once we adapt this technology to our cross-border e-commerce application, we get the user's geographic location information. Using this information, we can get the user's geographic coordinates message. This message is then combined with the GIS platform to provide us with geographic location-based product push.

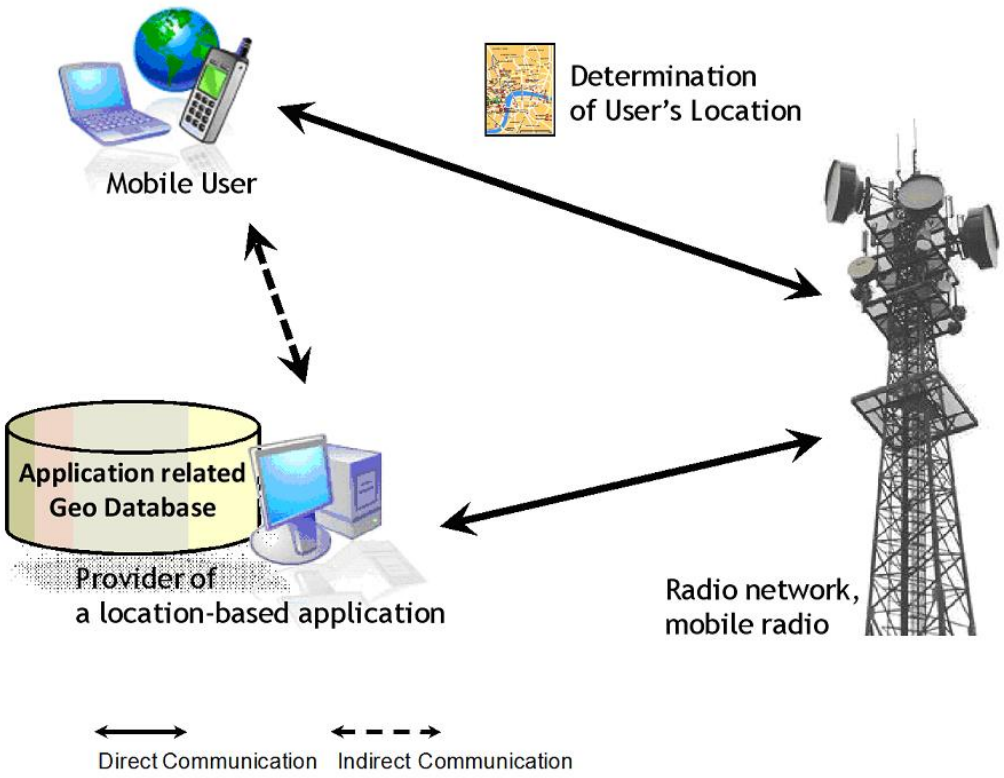

Figure 1.4 LBS Positioning Technolog

It can be seen from the above figure that there are mainly three participants in LBS positioning technology. The three participants are mobile users, location-based application providers and wireless networks. The mobile user sends a request to obtain the geographic location to the radio network, and the radio network obtains the location from the application through positioning. The geographic location data is obtained from the related geographic database, and then returned to the mobile user. Using this technology, we can obtain real-time geographic location information with the user's permission, and then serve our customized product push.

The third, we will use ThinkPHP technology. This technology is a quick and easy model-view-controller, which is an “object-oriented programming”. This technology has three components, namely model, view and controller. Our e-commerce platform users choose to browse Pages and so on need the support of this technology. Each time a user browses a product, a URL will be sent to the server, and the server will process it based on ThinkPHP technology.

Figure 1.5 ThinkPHP

The Fourth, in China we use Tencent cloud servers to process our massive transaction data. Our application sends data to Tencent Cloud, which is processed on the front-end and back-end via PHP. In Thailand we use Amazon's AWS cloud server for data processing.

JAVA technology is mainly used to write the overall framework logic of cross-border e-commerce application. LBS technology is used to locate consumers. This technology is our core. It can help us grasp the location information of consumers and make recommendations more suitable for consumers. Commodities based on local living

and consumption habits. ThinkPHP technology is currently the main programming language for lightweight applications. In China, there are many mini programs in WeChat, and e-commerce platforms such as JD.com also have their own mini programs on WeChat. Our small programs will also be mainly written with ThinkPHP technology.

1.5 Business Canvas

Business canvas is a common business language, which is explicit and direct for investors and customers to get an overview of the several aspects of a company's operation. It is proposed by Alexander Osterwalder and it mainly includes eight parts, which are key partners, key activities, and so on. For our digital startup project, using business canvas can help us get a comprehensive recognition of the project and it is convenient for us to introduce the project when facing the investors.

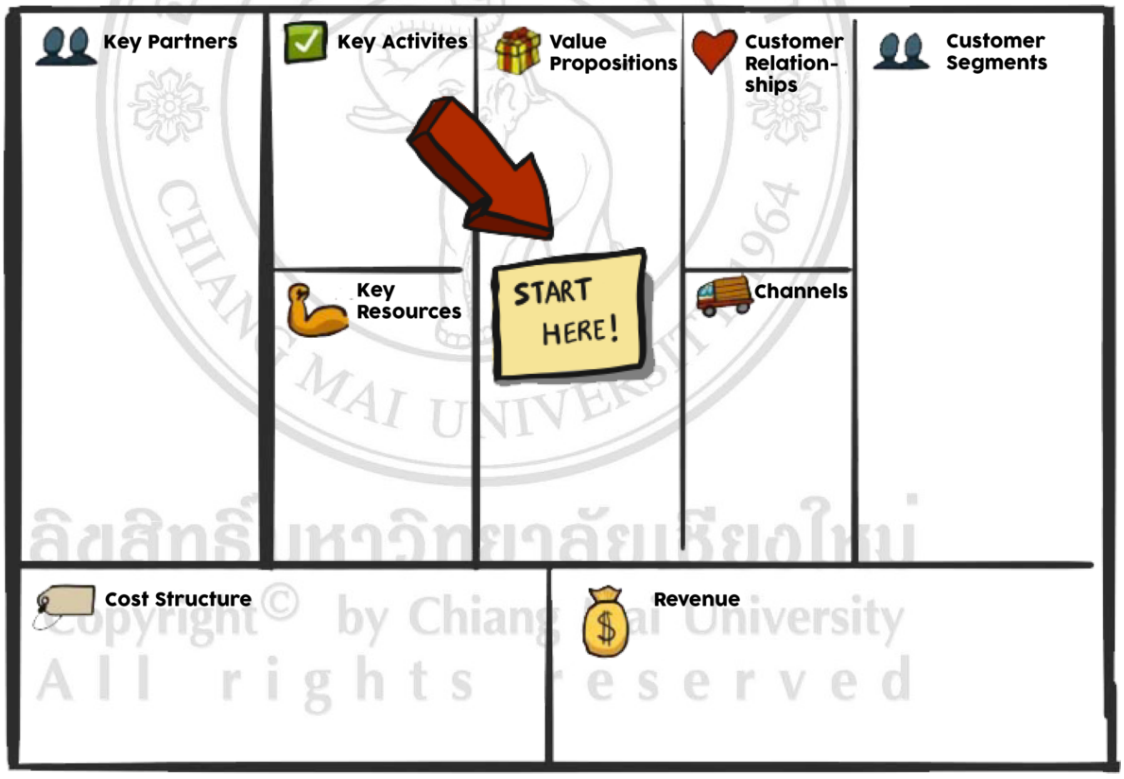

Figure 1.6 Business Canvas

1.5.1 Key Partners

Our project aims to provide high-quality services for online buyers and sellers. They are the core of our business model. At the same time, in addition to B2C business, we

have another part of business, which aims to improve the efficiency of physical distribution of goods. Therefore, logistics companies are also our main partners.

1.5.2 Value Propositions

Our corporate culture is "weak publicity, strong word of mouth". In the future, most of the funds for our digital startup project will be used to improve efficiency and optimize user experience, and we will not invest too much money in publicity. We believe that efficient shopping experience and fast logistics will build a good reputation for us, and through word of mouth our project and Tie-in APP will gradually attract more users.

1.5.3 Key Activities

The platform is designed to connect local stores in China and Thailand through an app. There are cultural differences between Thai businesses and Chinese consumers, as well as language differences that can cause communication difficulties. Therefore, our trade platform will provide bilingual services, allowing Thai merchants to share their products with Chinese customers, thereby promoting Sino-Thai trade.

We will build a lifestyle platform that is convenient for Chinese customers to communicate with Thai companies. Therefore, we will share the business information of Thailand for Chinese tourists from a Chinese perspective, including eating, buying, beautifying (massage), traveling, and staying.

1.5.4 Customer Relationship

To strengthen the relationship between the corporate brand and consumers, we will conduct precise positioning and personalized marketing for consumers on the basis of understanding the needs of Chinese and Thailand consumers, analyzing their development and establishing a consumer database.

1.5.5 Customer Segments

Our target customer group is people of all ages aged 18-65. Due to the universality of cross-border e-commerce, for different types of people, their differences are mainly reflected in the types of consumption and the amount of consumption, and there is no

difference in whether to consume people of different age groups. This requires us to match the most suitable products for people of different age groups through technical means. Therefore, our target customer groups will be segmented based on age groups.

1.5.6 Channels

In order to expand the scope of use of users and merchants, we will often carry out joint promotion activities with merchants, supply chain partners and other participants to help them effectively reach customers and generate interaction.

1.5.7 Cost Structure

Our main costs include maintenance cost for our company, the marketing cost, technology infrastructure building cost, and daily operation cost.

1.5.8 Revenue Streams

Our income mainly comes from the transaction service fee charged to merchants according to a certain percentage of the transaction amount in e-commerce transactions. In addition, the company generates revenue from marketing services provided to merchants.

CHAPTER 2

LITERATURE REVIEW

2.1 E-commerce

With global economic integration and the digital economy's development, e-commerce as an emerging industry has developed rapidly. At the present time, the research on e-commerce in the existing literature mainly focuses on three aspects: e-commerce's importance, the factors that affected the development of electronic business, and the policy recommendations for future e-commerce development.

In the field of the importance of e-commerce, scholars (Samiee , 1998) believe that using the Internet to develop international trade will greatly affect international marketing. Meanwhile, in the Internet epoch, network effects provide a strong influence on international trade (Lee, 2012). In addition, (Terzi , 2016) pointed out that the advancement of cross-border e-commerce has a long-term impact on developed countries, and the impact of developed countries is greater than that of developing countries in cross-border e-commerce. In the meantime, the research found that the growth direction is the same between cross-border e-commerce and import and export trade. Cross-border e-commerce could be upgraded into professional foreign trade services, promoting the change of the way of foreign trade and the improvement of foreign trade companies towards brand and product innovations.

According to the existing literature, scholars agree that traditional international trade has had a significant and innovative impact because of the birth and advancement of cross-border e-commerce. This kind of impact had almost completely changed the form and content of traditional cross-border trade. It is the form and content of these changes that promote the rapid growth of global trade

As far as the factors affecting the development of e-commerce are concerned, (Liu and Arnett, 2000) found that the success of e-commerce in the Internet environment is mainly related to four factors, which are the quality of information and services, system use, entertainment and system design quality . Therefore, in order to develop e-commerce business, first of all, enterprises should improve the quality of information and services delivered by the website. Enterprises should establish service-oriented high-quality services and provide high-quality information in the pre-sale and after-sale stages respectively. For example, e-commerce sites should recommend product information according to customers' preferences, and customers should be able to use the Internet to reduce search costs and get a better shopping experience. Secondly, e-commerce companies should design their websites so that consumers can operate according to their personal wishes throughout the shopping process. Finally, e-commerce platforms should learn to increase consumer stickiness and retain consumers through attractive services.

As far as proposals for future e-commerce development are concerned, scholars believe that globalization and economic integration are irreversible trends. In order to seize opportunities in the process of globalization, we should develop electronic business vigorously. In the meantime, cross-border e-commerce is more complex than traditional e-commerce, and we should continue to optimize the development of e-commerce.

In the meantime, as for the issue of e-commerce, compared with the offline market, e-commerce mainly needs to solve the following problems.

Firstly, there were many complicated procedures in e-commerce, especially international cross-border e-commerce. For cross-border e-commerce, the characteristics of e-commerce itself are intangible, which has a very negative impact. Therefore, cross-border e-commerce companies need to try their best to localize product descriptions and shopping experience, starting from the preferences of destination consumers, and try our best to make the products meet the needs of consumers.

Secondly, the development of e-commerce should further improve the timeliness. On the basis of the existing timeliness, we should explore the use of new logistics equipment and new supply chain management mode to increase the promptness of commodities, thereby enhancing the competitiveness of online shopping.

Thirdly, on the basis of the existing B2B and B2C, e-commerce can explore new C2C platforms to realize the innovation of consumers and merchants at the same time. Take China's Alibaba as an example. Its Xianyu APP provides a platform for individual consumers to sell idle goods. At present, the development momentum of Xianyu APP is very good. This innovative online transaction model can also be added to the business scope of e-commerce, and this new online transaction model could even carry out the exploration of cross border C2C business.

2.2 Cross-Border E-Commerce

For cross-border e-commerce, the expansion and development of related markets has become an irresistible trend. According to the research of "e-Conomy SEA 2019", Thailand is an important country in the Internet economy in Southeast Asia. In 2019, Thailand's e-commerce GMV is expected to be US$5 billion, tied for second place with Vietnam; although the e-commerce GMV in 2025 is expected to be US$18 billion, lower than Indonesia and Vietnam, falling into the third place; But its Internet economy GMV is expected to be From the current US$16 billion to US$50 billion in 2025, it will remain the second largest in Southeast Asia as a whole.

Although the improvement of cross-border e-commerce in Thailand is keep in the growth stage, the Thai government has begun to make arrangements. In the past few years, the Thai government has launched a series of policies to promote the improvement of e-commerce and cross-border e-commerce. In order to support Thai companies to develop B2C e-commerce, Thailand has formulated four policy priorities.

First, the development of Thai enterprises has been supported. Through training and other methods, Thai enterprises can better understand B2C e-commerce and improve their competitiveness. For example, in early October, the Thailand-China Strategic Research Center, the Small and Medium Enterprises Bureau of Thailand, Ebang Power Research Institute, Carrot Village, Proluton, and Zhuozhi Supply Chain launched the GMS Thailand E-commerce Economic Corridor Seminar to allow more Thai enterprises Know the new model of B2C e-commerce.

Second, create an e-commerce environment in Thailand. In the e-business environment, it was necessary to change the minds of people in Thailand and follow the rhythm of B2C. For example, the infrastructure of e-commerce in Thailand is to develop electronic payment, electronic logistics, etc

Third, reduce the operational obstacles of the B2C model. Provide legal support and technical support. In order to provide more convenience for Thai enterprises, the Thai government will take the lead in providing technical support to these enterprises, solving their technical difficulties, and making it easier for these enterprises to join B2C e-commerce.

Fourth, build trust between businesses and consumers. If consumers don't trust sellers, B2C e-commerce cannot do well. Therefore, the government needs to ensure that the sellers who sell products on the e-commerce platform are good enterprises. Therefore, when a Thai company registers an e-commerce store, the government will first check the company's qualifications and then approve the company's registration. It is not that anyone who wants to open a store can open a store, but there will be a legal control process.

CHAPTER 3

LAW AND REGULATION ISSUES

3.1 Cross-Border E-Commerce Regulations

There are different laws and regulations in China and Thailand on cross-border e-commerce.

Before that, cross-border e-commerce is poorly legislated in Thailand, so this gave birth to many fraudulent activities. However, the requirements for adopting new technologies in online intellectual property infringement cases are increasing. The reason for the increase is that the number of online stores operating on e-commerce platforms is increasing.

With regard to the protection of intellectual property rights, the Ministry of Intellectual Property (DIP) of Thailand issued a new memorandum of understanding on the protection of Internet intellectual property rights. The Memorandum of Understanding(MOU) does not create additional rights for intellectual property owners, but rather serves as a mechanism to bring all stakeholders together to address online intellectual property infringements in a uniform and mutually agreed manner.

Although the memo of understanding had no legal binding force on the signing party, it showed the intention of the government to cooperate with the electronic business platform to prevent and strike the intellectual property right infringement. It was expected that it would greatly improve the network infringement situation of the electronic business platform.

At the same time, in February 2022, the Thai cabinet approved a draft revision of the tax law. When the sales of an e-commerce platform exceed the VAT payment limit, the platform must pay VAT to the Thai Revenue Agency at 7% of the price of the product.

It is worth noting that foreign operators cannot charge VAT to Thai customers, nor can they claim refunds for input tax credits. Therefore, for overseas enterprises, they can only lower their own value-added tax costs when consumers consume them by increasing the selling price of their products.

On the whole, China's legislation in the field of cross-border e-commerce is generally worth encouraging.

In April 2020, the State Council of China decided to establish 46 comprehensive pilot zones in China on the basis of the 59 cross-border e-commerce comprehensive pilot zones that China now has. And the cross-border e-commerce retail import pilot will be expanded to 86 cities in China and the whole island of Hainan, China. As of September 2021, 105 cities in China have established general cross-border e-commerce pilot areas.

On March 18, 2021, the State Administration of Market Supervision and Administration jointly issued a notice, which is the Notice on Expanding the Pilot of Cross border E-commerce Retail Import and Strictly Implementing the Regulatory Requirements. This notice explains and indicates that China has continuously improved its cross-border e-commerce retail import policy system after several years of pilot exploration. Because of this, China has achieved fruitful stage victories in enriching Chinese market supply and driving the development of related industries, and the published results of these victories have complied with the growing demand of the Chinese people for a better life in the new era.

On July 9, 2021, the General Office of the State Council issued the Notice on Accelerating the Development of New Business Forms and Models of China's Foreign Trade, proposing to implement the cross-border e-commerce B2B direct export and cross-border e-commerce export overseas warehouse supervision mode nationwide, promote the cross-border e-commerce import and export return and exchange management, and optimize the cross-border e-commerce retail import list; Expand the pilot scope of cross-border e-commerce comprehensive pilot zone; By 2025, China will strive to cultivate more than 100 excellent overseas enterprises and build a new type of foreign trade logistics network covering the world and developing together relying on overseas warehouses.

3.2 Block Chain Regulations

For block chain technology, both China and Thailand need to further strengthen supervision.

China has promulgated the "Data Security Law of the People's Republic of China", which specifically makes clear legal provisions on data security issues in the digital economy era. However, China still has many problems to consider seriously, such as how to implement this law, how to effectively protect the national and public interests, and how to protect the legitimate rights and interests of consumers. The formulation of the law and the implementation of the law are two completely different concepts. The law enforcement authority in China urgently needed to seriously solve the realistic problem, which was how to ensure that the interests of consumers would be truly protected during the implementation of the data security law.

Thailand as a whole embraces and welcomes block chain technology. In the first half of 2018, Thailand has created a more predictable investment environment for investors by improving legislation in the fields of virtual currency and ICO. The Minister of Finance of Thailand has said that it is necessary to formulate new laws to supervise cryptocurrencies and digital tokens. The new law does not prohibit cryptocurrency, ICO and other virtual currency transactions, but to prevent money laundering, tax avoidance and criminal activities, and to export them, for the protection of investors.

On May 13, 2018, Thailand launched the "Royal Decree on Digital Asset Businesses B.E. 2561, 2018" covering digital currency for the first time. It marks one of the countries where Thailand has become the world's largest regulator of long-term digital assets. The decree consists of 100 parts and came into effect on May 14. Less than a month after the law came into effect, Thailand’s SEC passed detailed rules on the regulatory framework for cryptocurrencies and ICOs on June 7, and released regulatory details for digital asset transactions the next day. The new regulations set strict conditions for ICOs, with specific requirements for market operators, ICOs and approved cryptocurrency exchanges, and came into effect on July 16, 2018.

In contrasting manner, Thailand's cross-border logistics industry has no detailed code for block chain technology application. Therefore, what information to encrypt and how to store private information are all regulatory issues that should be further regulated.

CHAPTER 4

DATA ANALYTIC

4.1 Data Collection

Generally speaking, the way to collect data was to look for and read all kinds of statistics and reports, and then use some investigation method to obtain relevant data that wanted to study the problem.

In this independent study, so as to understand the user needs of cross-border e-commerce, the following data needs to be collected for analysis. For instance, the number of cross-border e-commerce in China (the data in this independent study are mainly from various known literature data).

The following graph lists the proportion of cross-border e-commerce transactions in e-commerce in 2016 and 2022 (E-Commerce | Statista, 2019).

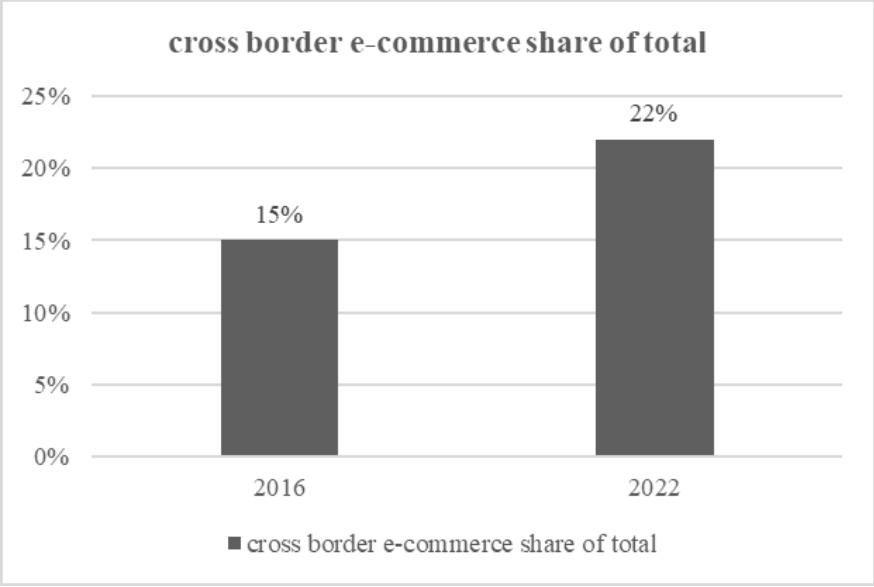

Figure 4.1 Cross Border E-Commerce Share of Total E-Commerce Transactions

As can be seen from the above figure, in the six years from 2016 to 2022, the proportion of cross-border e-commerce transactions increased by 7%, and has now reached the level of one-fifth. With the development of time, I believe that cross-border e-commerce will have greater development in the future, which also means that our digital startup project will have a better development.

Based on the share of cross-border e-commerce business and the global trend of e-commerce business, we make the following forecasts for the improvement of cross-border e-commerce businesses from 2023 to 2026 based on statista data (E-Commerce | Statista, 2019).

4.2 Data Analysis

To fully understand the level and potential of cross-border e-commerce development prior to the formal launch of our digital entrepreneurship project, and the enthusiasm and acceptance of Chinese and Thai merchants for cross-border e-commerce, we analyzed macro level data related. We used the data of global e-commerce transaction

volume to calculate and predict the development level of cross-border e-commerce from 2022 to 2026 based on the proportion of cross-border e-commerce in the e-commerce business. First, we analyze the global e-commerce business development trend. The following figure is a trend chart of global e-commerce business transaction volume

from 2014 to 2026, including historical data from 2014-2022 and forecast data from 2023-2026 (E-Commerce | Statista, 2019).

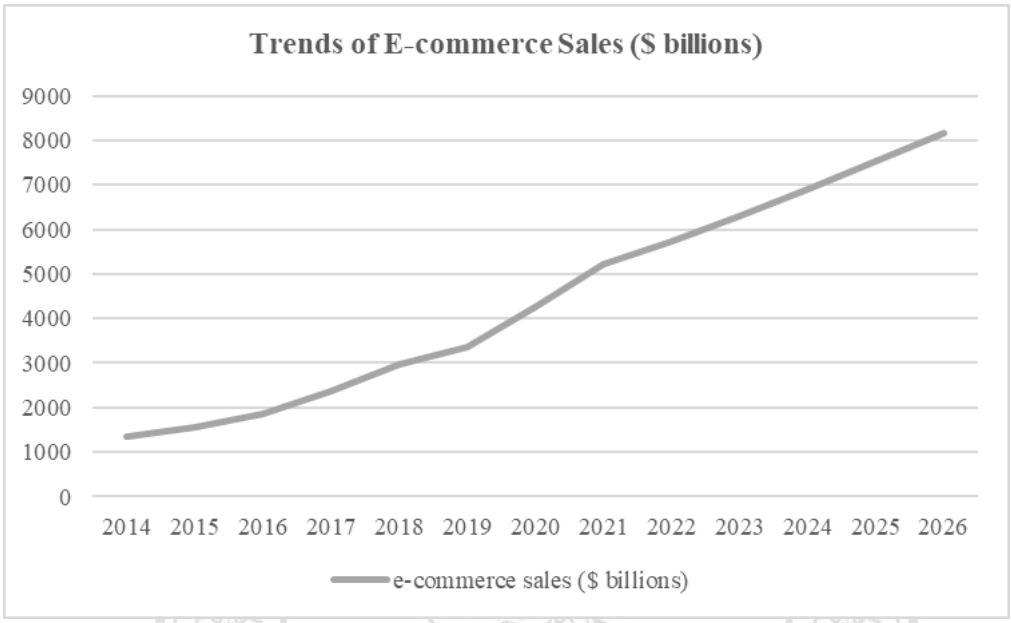

Figure 4.2 The Trend of Cross-Border E-Commerce Sales

As can be seen from Figure 4.2, the development of e-commerce is on the rise. The average annual growth rate was 16.26%, which indicated that this field was in the growth period and had great potential.

Table 4.1 The Cross-Border E-Commerce Sales

Year	**Cross-Border E-Commerce Sales ($ billions)**
2023	**1167.35**
2024	**1278.91**
2025	**1392.68**
2026	**1507.38**

Since our cross-border e-commerce business is mainly concentrated in China and Thailand, which can be said to be the world's largest consumer market, we need to analyze the growth of China's cross-border e-commerce to ensure that our project plans can be better formulated.

The figure below lists the number of cross-border e-commerce consumers in China from 2017 to 2022 (Shreya, 2022).

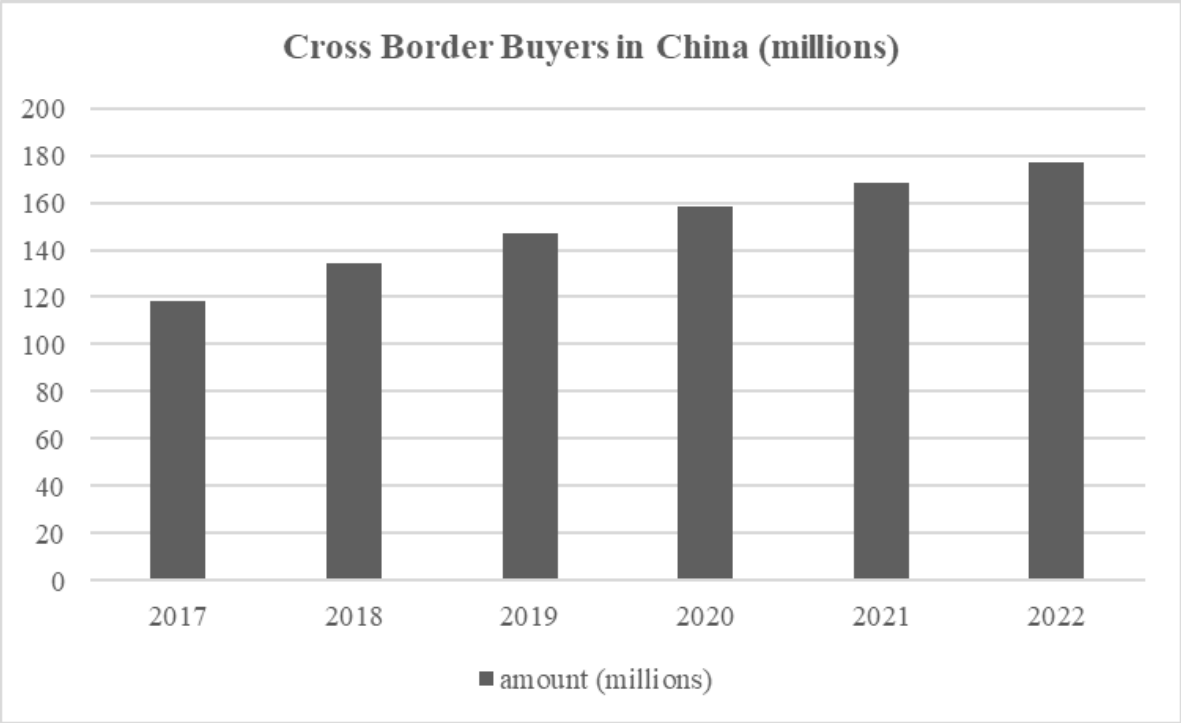

Figure 4.3 Cross Border Buyers in China (millions)

From figure 4.3, we can find that the buyers in China of cross border accounts for almost 10% of the total population in China. Although the portion is not very large, considering the base of Chinese population, it remains an enormous market for cross-border e-commerce. Hence, it is optimistic that we will have a prosperous development of our digital startup project.

However, we should concern about the pressure from the competitors. Despite the boom of cross-border e-commerce, lots of traditional e-commerce companies still enter the Chinese market and occupy a large share in China's cross-border business. The figure below shows the structure of cross border e-commerce in China (Shreya, 2022).

From figure 4.4, we can see that Tmall Global has an absolute advantage in China, and its market share exceeds 35%. It was followed by Kaola and JD Worldwide with 25% and 18% market share respectively. The top three cross-border e-commerce companies occupied 78% of the market share.

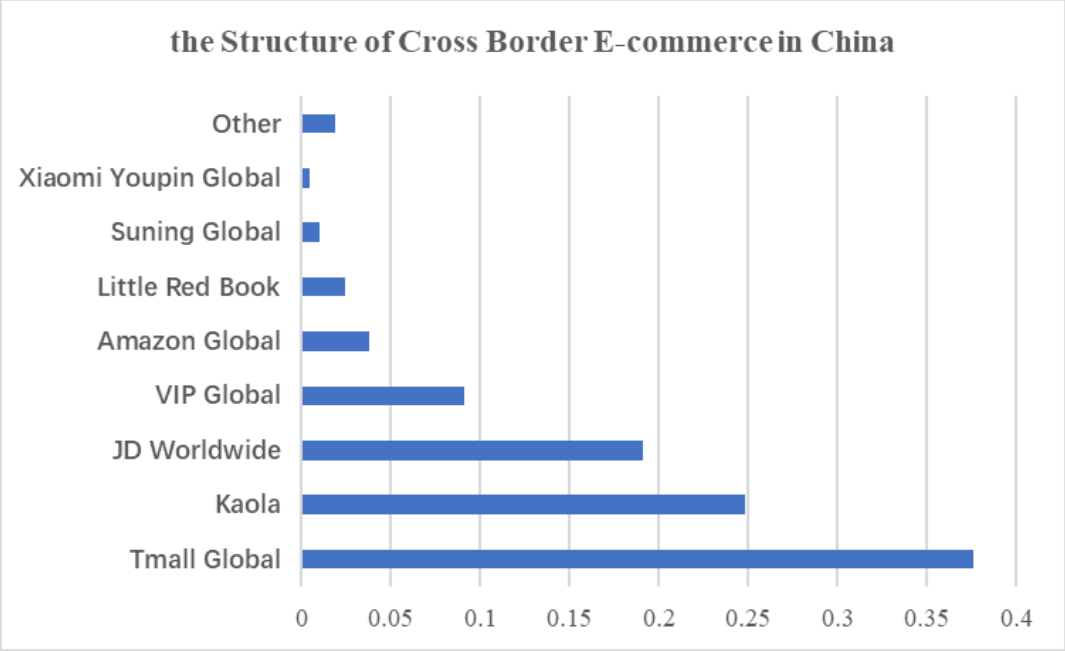

Figure 4.4 The Structure of Cross-Border E-Commerce in China

Therefore, through the above analysis, we can draw a conclusion that cross-border e-commerce business is indeed a sunrise industry, so the business development of cross-border e-commerce in the future will certainly show an upward trend. However, If we want to develop cross-border e-commerce business well, we must take a differentiated approach, so the two concerns we put forward in the digital startup project are desirable.

We must first solve the issue that cross-border e-commerce does not adapt to the environment. Cross-border e-commerce has information differences when competing with local e-commerce, and local e-commerce can better understand the consumption habits of local consumers. Consequently， cross-border e-commerce has high localization adaptation time and adaptation cost. This is the first problem to be solved in this article. We combined product review mechanisms and customized push mechanisms to increase the accuracy of product information push and thus sales from cross-border electrical merchants.

Secondly, we need to solve the issues of low timeliness and difficult after-sales of cross-border logistics. To this end, we use block chain technology to encrypt transaction information and logistics information to prevent tampering. At the same time, we share platform data with the customs, and quickly encrypt the information and send it to the customs when placing an order, improving customs clearance efficiency. In the meantime, block chain technology can be used to achieve traceability of information and solve cross-border after-sales difficulties.

Finally, we focus on cross-border transactions between China and Thailand, and take a differentiated path to focus on improving consumer experience and transaction efficiency between China and Thailand. Therefore, our digital startup project is feasible and very promising.

CHAPTER 5

FINANCIAL PLAN AND POTENTIAL RISK

5.1 Financial Plan

For every industry, there are mainly five different periods, which are the development stage, the growth stage, the maturity stage, the saturation stage, and the decline stage. In our financial plan, the industry already experiences the development stage. We don't need to make customers familiar with e-commerce, e-commerce has been deeply rooted in the hearts of the people. What we need to do is to use differentiation to find our own growth point in the e-commerce industry.

We regard the first five years of the digital startup project as the growth stage and the years after the fifth year will be regarded as the maturity stage. According to the Digital Economy Promotion Agency, the 2023's annual growth rate in Thailand is estimated to be 9.2%. Based on this forecast, for our digital startup project, we suppose that the annual growth rate from 2023 to 2028 is 5%, and 2% for the rest of years.

5.1.1 Revenue Forecast

The revenue forecast is shown in the following table.

Table 5.1 Revenue Forecast

($ thou)	2023	2024	2025	2026	2027
China	1000	1050	1102.5	1157.6	1215.5
Thailand	500	525	551.3	578.8	607.8

Our income mainly comes from the transaction service fee charged to merchants according to a certain percentage of the transaction amount in e-commerce transactions. In addition, the company generates revenue from marketing services provided to merchants.

Because China has a bigger consumption market than Thailand, we estimate that 67% share of revenue will come from China and 33% share of revenue will come from Thailand.

5.1.2 Cost Estimation

The following table shows the cost estimation of our digital startup project. Due to our business model, we are an asset-light enterprise, and we finally provide a convenient transaction platform for merchants and customers. Therefore, our cost of goods sold is relatively small. Our depreciation mainly comes from the aging and renewal of equipment.

Table 5.2 Cost Forecast

($ thousand)	**2023**	**2024**	**2025**	**2026**	**2027**
COGS	50	52.5	55.13	57.88	60.78
Depreciation	55	5.25	5.51	5.79	6.08

5.1.3 Gross Profit

Based on revenue estimation and cost estimation, the estimation of gross profit is shown as follows. In this part, the share of profit follows the shares in revenue estimation, which are 67% for Chinese market and 33% for Thailand market.

Table 5.3 Gross Profit Forecast

($ thou)	2023	2024	2025	2026	2027
China	963.33	1011.50	1062.08	1115.15	1170.93
Thailand	481.67	505.75	531.09	557.58	585.52
Total	1445.00	1517.25	1593.16	1672.73	1756.45

5.1.4 Expenditure Budgeting

In this part, we estimate the capital expenditure and the forecast is shown as follows. Because of our commercial structure, we do not directly buy materials and produce products.

What we need to expense is mainly the cost of acquiring, upgrading, and maintaining physical assets such as technology, digital platforms, and so on. Hence, our cost structure includes mainly two parts, which are CAPEX and interest expense.

Table 5.4 Expenditure Forecast

($ thousand)	2023	2024	2025	2026	2027
CAPEX	450	472.5	496.13	520.93	546.98
After-tax Interest expense	155	162.75	170.89	179.43	188.4

5.1.5 Net Profit

Based on the estimation before, the net profit in the next five years are shown as follows.

Table 5.5 Net Profit Forecast

($ thousand)	2023	2024	2025	2026	2027
China	560	588	617.4	648.245	680.67725
Thailand	280	294	308.75	324.1225	340.38863
Total	840	882	926.15	972.3675	1021.0659

5.2 Forecast and Valuation

The WACC is the weighted average cost of capital, which is a weighted value of cost of equity and cost of debt. The cost of equity is derived based on CAPM and the cost of debt is gotten from bank lending rate. The cost of equity can be measured by the CAPM because it reflects the expected return of shareholders. If we cannot achieve the corresponding expected return, the investors will quit and we will get a loss. For our digital startup project, we will 100% raise our money from the ICO, before the ICO, we will announce that our "Tiecoin" will bring an annual return of 4.5%. Hence, our estimated WACC can be set to 4.5%.

5.2.1 NPV Valuation

Using NPV, suppose the input in 2022 is $2,000,000. Then, the project will have a net cash inflow at the 5% growth rate in the first five year, and we suppose that we will not hold this project after the fifth year.

Although the digital startup project will be operated by forming a firm, we will not hold the firm after the fifth year. Because the digital industry develops sharply and it is wise to quit one project and use the profit earned to find another new digital startup project. Hence, we will sell this project and the residual value of it will be $500,000.

Then, the NPV is calculate as follows. Considering the

$$\text{NPV} = -2000 + \frac{840}{1.045} + \frac{882}{1.045^2} + \frac{926.15}{1.045^3} + \frac{972.37}{1.045^4} + \frac{1021.07+41659.12}{1.045^5} = 2459.06$$

We can find that the NPV is $ 2,459,060. Hence, the Project is worth to invest.

Then, the IRR for this project is 38%. Hence, we can invest in this project when the cost of borrowing is lower than 38%.

5.2.2 FCFF Valuation

For our digital startup project, our projected cash flow from the project and the company's valuation forecast are as follows.

Table 5.6 Forecast of FCF

Year	Forecast in 2023 ($)
Cash flow from operations	1,500,000
COGS	50,000
Depreciation	5000
CAPEX	450,000
Interest expense	193750
Marginal tax rate	20%
After-tax interest	155,000
Free cash flow	840,000

Our income mainly comes from the transaction service fee charged to merchants according to a certain percentage of the transaction amount in e-commerce transactions. In addition, the company generates revenue from marketing services provided to merchants.

The first full year of operation of our project is 2023. Our projected 2023 cash flow is $1 million. Because capital expenditures such as warehousing plants are required at the beginning of the project, our estimated capital expenditure is $500,000. Since we will be financing through bonds, our interest expenditure is expected to be $200,000 in the first year. Combining the corporate income tax of China and Thailand, we set the tax rate at 20%, and our final estimated FCF in 2023 is $840,000.

The WACC is the weighted average cost of capital, which is a weighted value of cost of equity and cost of debt. The cost of equity is derived based on CAPM and the cost of debt is gotten from bank lending rate. The cost of equity can be measured by the CAPM because it reflects the expected return of shareholders. If we cannot achieve the corresponding expected return, the investors will quit and we will get a loss. For our digital startup project, we will 100% raise our money from the ICO, before the ICO, we will announce that our "Tiecoin" will bring an annual return of 4.5%. Hence, our estimated WACC can be set to 4.5%.

At the same time, we assume that the short-term growth rate of the project is 10%, and in the long-term as the market develops, we expect the growth rate to decline, on average, it will be at the level of 2% in the long-term. Accordingly, we estimate the market value of this digital startup project as follows.

Table 5.7 Valuation of the Digital Startup Project

Year	2023	2024	2025	2026	2027
FCF($)	840,000	882,000	926,100	972,405	1,021,025
Terminal Value					41,657,830
Total		882,000	926,100	972,405	42,678,855

Table 5.7 (Continued)

Valuation (current year, 2022)					
EV (PV of FCFs +Terminal value)	38,333,030				
Add year 2022 (current year) cash	-2,0000,00				
Firm value	36,333,030				

Therefore, we believe our project is currently worth close to $36 million. In the future, when the project is mature, we will choose to reorganize the company to operate the cross-border e-commerce business.

5.3 Fund-raising Plan

We plan to conduct three rounds of financing, namely ICO round, A/B rounds, and C/D rounds.

In the initial stage of the project, we will look for money from the ICO. According to our valuation of the project, we will issue 1 million Tiecoins at a price of $1.2 in the initial stage. 70% of the tokens will be put into the market, which will bring us $840,000 and it equals to the estimated cash flow in 2023. If traders need to pay with tokens, they can exchange other tokens in their hands.

When the project matures, we will have a mature market-proven business model. It is expected that our cross-border e-commerce APP will have stable users and sustained profit growth at this stage. We will further obtain financing from the traditional capital market based on our users, including daily active users, monthly active users, business models, mature products, and a certain market position and scale.

When our business model and products already have a large enough market share and position, we will conduct C/D rounds financing. The financing at this stage is mainly for us to expand our business territory and develop new products.

5.4 Potential Risks and Problems in the Future

Table 5.8 Potential Risks

Risks	
1	**Risks Related to Cross-Border Business Environment**
2	**Risks of Existing E-Commerce Retailers**
3	**Risks of Tax Policy Changes**
4	**Risks of Sorage Management**

5.4.1 Risks Related to Cross-Border Business Environment

The company's overseas business covers China and Thailand, and will set up a number of domestic subsidiaries in both countries to be responsible for sales and after-sales service in overseas markets. Therefore, the company will face more risks of changes in the overseas business environment. Such risks include, but are not limited to:

1) Political unrest, war, unrest, hostility and policy changes in the countries and regions in which the business operates.

2) The laws and policies of the state and territory in which the enterprise resides, the social value and cultural differences, and the adverse effects of overseas management and operations caused by the economic downturn.

3) The product access standards of the countries and regions where the enterprises are located are different. To meet the market access standards of different countries, the company needs to invest in professionals and improve production management capabilities to obtain the corresponding quality system certification and product registration certificate. In the future, if the access standards for these products undergo major adjustments or changes, and the company cannot adjust and adapt in time

and obtain relevant access qualifications, it may lead to a decline in sales in the region, which will adversely affect the company's business.

5.4.2 Risks of Existing E-commerce Retailers

At present, online B2C platforms such as Amazon, eBay, Rakuten, and domestic Tmall have gradually developed into mature open e-commerce platforms on a global scale, which are important driving factors for the growth of social consumer goods worldwide. If these large e-commerce platforms start to conduct business segmentation and focus on cross-border localization and customized e-commerce, this would have a greater impact on the company's business.

5.4.3 Risks of Tax Policy Changes

The company's operations are subject to the tax jurisdictions of China and Thailand. Although the company will file tax returns and pay taxes according to the tax policies in the relevant jurisdictions, and will establish relatively complete internal control measures, in the future, if the company has different tax jurisdictions significant changes in the tax policies of the region; or because the company is not properly or timely aware of the changes in tax policies, and is subject to review by the tax administrative authorities in the tax jurisdiction, the company's operations may be materially and adversely affected.

5.4.4 Risks of Storage Management

In order to quickly respond to market demand, ensure the adequacy of inventory supply and the timeliness of logistics and transportation under the block chain technology, and improve the consumption experience of overseas end customers, the company needs to purchase a certain scale of inventory. With the expansion of sales scale and the rapid growth of offline business, the company's inventory for sale is on the rise. If the company's stocks were not properly managed, any loss or damage would lead to the direct loss of the company's property, which would have a negative effect on the business performance. On the other hand, if the company's overall sales stagnation leads to poor inventory turnover, and the company fails to respond effectively, there may be a risk of inventory depreciation.

5.5 Risk Management

5.5.1 Risk Management Related to Cross-Border Business Environment

Transferring risk refers to transferring possible losses that we may have to bear to a third party in a certain way.

1) One is contract transfer, that is to transfer risks to the other party by signing contracts with relevant parties, including joint and several risks, with the help of contract law.

2) The second is to adopt the insurance method. For those types of insurance that belong to the insurance company, the risk can be transferred to the insurance company in whole or in part through insurance.

3) Third, use various risk trading tools to pass on risks.

5.5.2 Risk Management of Existing E-Commerce Retailers

The establishment and improvement of enterprise competitive strategy planning and the "first mover advantage" .

1) Establish a strong industrial brand influence and use the industrial brand strategy to drive the enterprise's new business planning reform.

2) It can have the leading power of the first mover industry development, use the industrial brand marketing planning to drive the enterprise's new business evolution, and use the industrial brand planning communication to boost the enterprise's high premium profits.

5.5.3 Risk Management of Tax Policy Changes

1) Financial personnel shall strengthen their learning and carry out internal and external training.

2) Because the tax policy changes quickly, the training of tax talents is a long-term process. Therefore, our enterprise should make tax posts full-time and train its own tax personnel.

3) External support is needed to purchase a professional legal library and hire a professional tax consultant.

5.5.4 Risk Management of Storage Management

1) Establish strict and meticulous warehouse management system and responsible person system.

2) Formulate warehouse cargo flow procedures, improve the original records of logistics links, and strictly carry out measurement acceptance and inventory.

3) In case of any discrepancy between accounts and materials or safety accident, the responsible person and the party concerned shall be investigated for administrative responsibility after investigation; If the quantity and amount of goods lost are large and the law is involved, they shall be handed over to the judicial department for investigation of criminal responsibility according to law.

CHAPTER 6

FINTECH

6.1 Introduction to Block Chain

The first time block chain technology entered people's field of vision was the birth of Bitcoin. In 2008, a new kind of peer-to-peer electronic currency "Bitcoin" appeared, which was a new technology not seen before. It is a cryptocurrency based on peer-to-peer technology, hashing algorithms, time stamping, etc. At first it was just a concept, and then in January 2009, the first bitcoin was mined on a server in Finland. Since then, the first popular application under the block chain technology has been born.

The birth of Bitcoin can be regarded as the prototype of block chain technology. Bitcoin is a kind of central and distributed currency. There is no central counterparty in the Bitcoin transaction network, and the currencies we use in real life are legally endorsed by governments or regional economic organizations. And with Bitcoin, it doesn't have a central bank and an endorsed government. This prominent feature makes Bitcoin a symbol of monetary security and monetary freedom.

In addition to the biggest feature of decentralization, Bitcoin also has the following features. First of all, Bitcoin breaks the restrictions of national borders and can be circulated all over the world. No matter where they were, anyone could dig, buy, and trade Bitcoin. Second, The transaction of bitcoins required a private key. The private key could be saved in any kind of memory medium, and no one could access it except the user. Finally, Bitcoin is also characterized by low transaction costs. Bitcoin transactions

are not limited by cumbersome quotas and procedures. The Bitcoin transaction process is as follows.

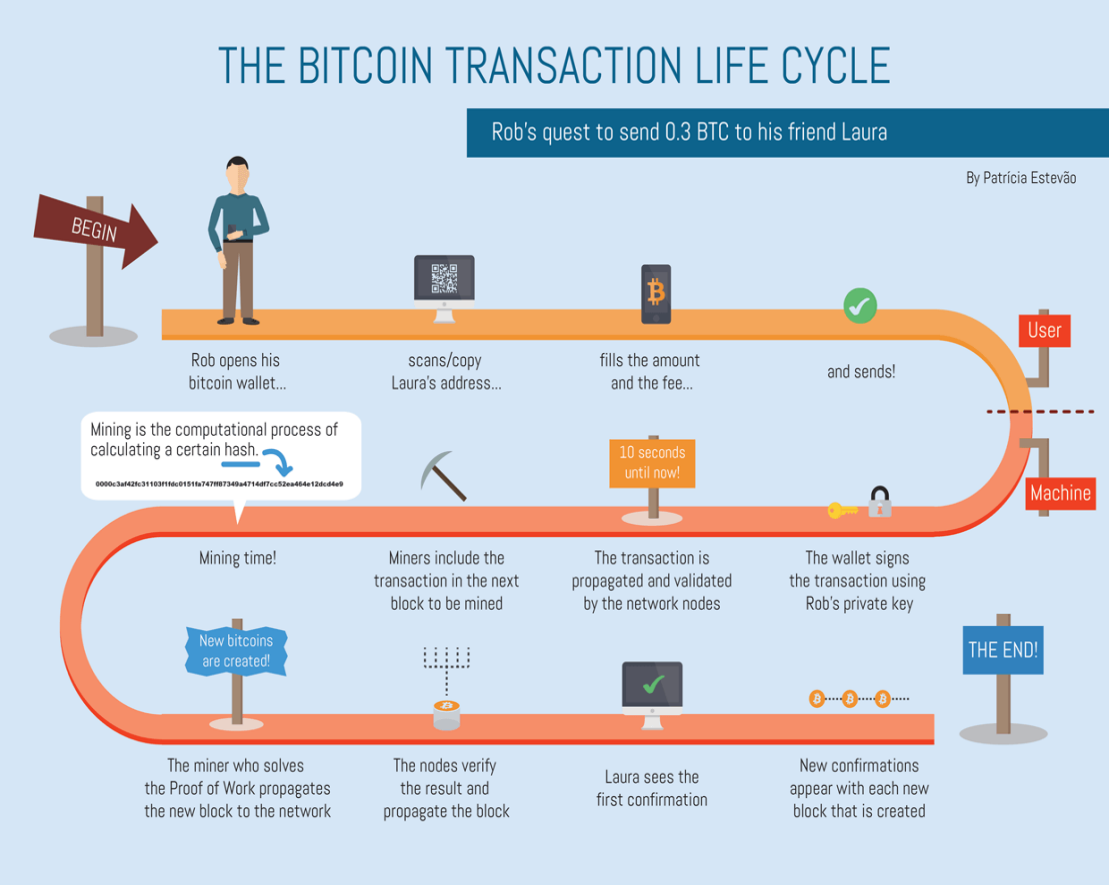

Figure 6.1 The Bitcoin Transaction Life Cycle

As you can see from the above figure, the operation of Bitcoin transactions is extremely simple. The user only needs to obtain the address of the counterparty, send a transaction request, and then all operations are performed by a computer. The computer uses the user's secret key to select the node, the node sends the transaction request to the miner, and then the miner digs out the bitcoin and hands it to the node for verification. After the verification is passed, the bitcoin will be transferred to the counterparty's account.

It is precise because of the convenience and high degree of freedom of Bitcoin that it is still sought after by people since its inception. Along with the prosperity of Bitcoin, block chain technology has become more and more familiar to people. The technology of the block chain was similar to the distributed classification of the database, but it was not controlled by the central authority.

The core techniques used in the block chain included the distributed network, the unequal encrypted, the consensus mechanism, and the smart contract.

The comparison between the P2P distributed network structure of the block chain and the traditional network structure is as follows.

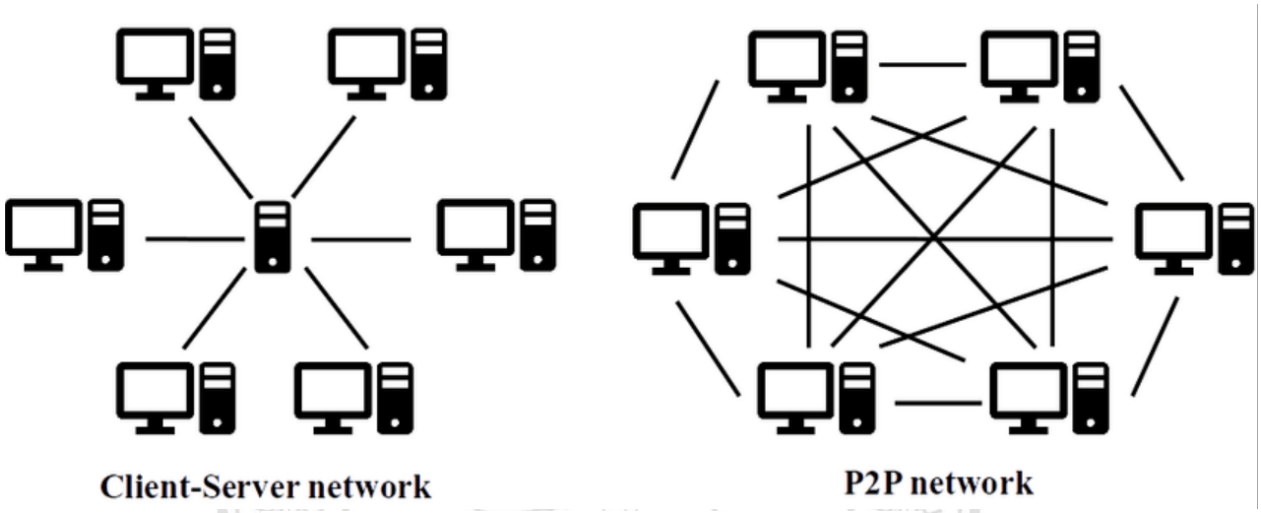

Figure 6.2 P2P Network VS Client-Server Network

In the traditional transaction process, there is a central counterparty responsible for determining the information of the ledger. In the P2P distributed network structure based on block chain technology, each node stores complete data in the light of the block chain structure. Generally speaking, it is traditional distributed storage to divide data into multiple parts for storage according to certain rules. Under block chain technology, none of the nodes can record ledger data individually, thus avoiding the possibility that individual bookkeepers are controlled or bribed to keep spurious accounts. In addition, because there were enough accounts keeping node, Theoretically speaking, unless all the accounts were destroyed, the account would not be lost, so as to ensure the safety of the account data.

Asymmetric key encryption, also known as public key encryption, uses different keys for encryption and decryption. For the encrypted technique of the non identical key, the transaction information stored on the block chain was transparent and public, but the identity information corresponded to the account was absolutely encrypted. Only with the authorization of the data owner could he access and use relevant information to ensure the safety of the data and personal privacy.

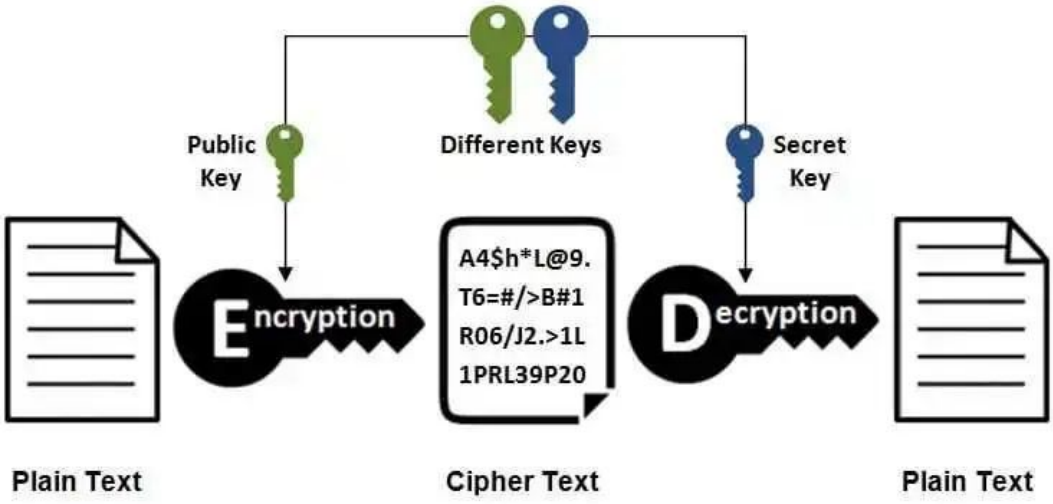

Figure 6.3 Asymmetric Encryption

To be specific, Asymmetric encryption requires two keys, one as a public key and the other as a private key. Encryption and decryption of data requires the use of both keys. Asymmetric encryption algorithms performs better in the use of two aspects instead of one: one key value is used to secure the information and the other key aspect is used to decrypt the message.

For consensus mechanisms, consensus mechanisms allow distributed systems to work together and remain secure. Since decentralized block chain design is adopted by most of the cryptocurrencies, the specific nodes are spread everywhere, therefore, for the reason that maintain the order and fairness of the system, a system of unified block chains must be designed, and provide rewards to maintains users of the block chain, and punishes destroyers. This system must rely on some way to prove that who has obtained the packaging right of a block chain or intends to do harm. Those who harm the system will receive a certain punishment, which is the rationale of consensus mechanism (Gramoli, 2020).

For smart contracts, smart contracts automatically implement rules and terms based on the immutable data generated by the above technologies. Smart contract technology is built on other foundations. Other techniques ensure data security and reliability, while standardizing data. Therefore, for enterprises such as banks and securities companies, they can adopt smart contract technology to improve efficiency.

At the present time, the application of block chain technology is mainly concentrated in the fields of large amount of data and high data security requirements, such as the financial field, the logistics field and the judicial field.

In the financial sector, the application of finance can eliminate the need for third-party intermediaries and enable direct point-to-point connectivity, resulting in significantly lower costs and more efficient transaction completion. At the same time, block chain technology is believed to have the ability to radically transform the banking industry. Taking China as an example, China's banking industry needs new growth points to reverse the current downward trend.

Block chain technology is an underlying technology that can connect multiple scenarios. In this way, it could realize the digital assets transfer and the point to point value transfer, and then rebuild the financial foundation. This has greatly improved the efficiency of post transaction settlement and settlement of financial assets and reduced costs. Therefore, it solves the problems existing in the banking industry.

In the judicial field, taking China as an example, the "Opinions of the Supreme People's Court on Strengthening the Judicial Application of Block chain" released in May 2022 promoted the application of block chain in the judicial field in China.

According to the document, the security of judicial data should be ensured by promoting the on-link storage of judicial data such as people's courts' electronic files, electronic archives, judicial statistical statements and case closure status, so as to ensure that judicial data is tamper-proof and improve data security. To ensure the credibility of electronic evidence, improve the evidence verification function of the block chain platform, support parties and judges to verify the electronic evidence stored through the block chain online, promote the improvement of the block chain storage standards and rules, and improve the efficiency and quality of electronic evidence identification.

It is necessary to ensure the compliance of enforcement operations, and promote data such as enforcement case information, party information, organizational information, enforcement notices, property investigation and control, property disposal, case payment sending and receiving, credit punishment, law enforcement evidence collection,

enforcement interaction, case settlement, and dossier filing. And operation on-chain storage certificate, normalize the implementation of the whole business process operation security audit, further standardize the execution operation behavior, To explore and carry out online closed loop verification of inspection, control and other sensitive operations, to ensure reliability and correctness. To obstruct the authority of judicial documents. Promote the unified storage of litigation documents and service receipts served by the people's courts on the judicial blockchain platform, support the inspection of service documents on the Internet, to ensure the safety and reliability of the full service process and maintain the judicial authority.

6.2 Block Chain Design

Judging from the development history of the above-mentioned block chain, there is still a lot of room for expansion in the application of the block chain. For the two major pain points of cross-border e-commerce pointed out by our digital startup project, the application of block chain technology can improve operational efficiency and help solve the two major pain points to the greatest extent.

For the pain points of cross-border logistics on the supply side, our digital startup project will use block chain technology to setter a matter of commodity transportation and traceability.

First of all, in the chain of commodity transportation, we plan to use the block chain technique to upload the data of the commodities at each key node to the distributed system of the block chain. In this way, the real-time tracking of commodity paths can be realized, and problems such as false shipments and difficulties in returning goods can be solved. Secondly, at the entry and exit stage, we plan to connect with the customs of China and Thailand to connect our commodity information with the customs platform in a cooperative manner, and synchronize the data to the customs platform at the beginning of commodity transportation, thereby improving the efficiency of commodity clearance.

6.3 Tokenization

Due to the fact that token ICOs under block chain technology are strictly regulated in China. In order to avoid legal risks, we choose to use traditional financing methods to raise funds during the project financing process.

For the above reasons, we have chosen to abandon the ICO. But we will still design our token, our token will be mainly used to satisfy the settlement method. Virtual currency holders can pay through our tokens, and our tokens will also circulate in the secondary market.

Before we introduce our token, we first introduce the ICO. ICO is the main financing method for block chain projects, and investors can invest in projects by purchasing project tokens. The entire process of investing and trading is carried out with the support of block chain technology. The whole process still conforms to the decentralized characteristics of block chain technology. However, the current regulatory attitudes towards ICOs vary from country to country. Taking China as an example, ICO is clearly defined as "an unapproved illegal public financing behavior" and is suspected of illegal fundraising. Given that our cross-border e-commerce APP "tie in" is mainly engaged in e-commerce business in China and Thailand. We only use block chain technology as the foundation of our innovation, and we choose to avoid financing activities such as ICOs.

But in order to facilitate the payment of cross-border e-commerce traders, we have launched our exclusive token, which is "Tiecoin". Our tokens can be exchanged with traditional tokens such as Bitcoin, Ethereum, etc. According to our valuation of the project, we will issue 1 million Tiecoins at a price of $1.5 in the initial stage. 70% of the tokens will be put into the market. If traders need to pay with tokens, they can exchange other tokens in their hands.

60% of the remaining 30% will be provided to related parties of the project such as the founder of the project, the operation team, etc. 40% will be reserved for release to the market at a suitable time in the future. Traders can exchange Tiecoin for the actual consideration of the purchased goods for payment. We will also always pay attention to

the relevant regulatory laws in China and Thailand. Once there is a greater regulatory risk, we will adjust the arrangement at any time, and formulate the exit mechanism and management regulations related to token payment.

CONCLUSION

Technology continues to change people's lives. Our digital startup project starts from the two major pain points of the current cross-border e-commerce, aiming at the pain points of the supply side, using block chain technology to improve the existing drawbacks. For the pain points on the sales side, a brand-new application is designed to help cross-border e-commerce realize a new B2B2C business model based on consumer demand by using location-based service technology and management information system.

We have a major focus on the supply side, which is the system upgrade and the application of block chain technology. At present， technology integration has formed a comprehensive set of services. Therefore, the main model we adopt on the supply side is the purchase of technology and ancillary services. For our digital startup project, we mainly focus on innovation on the demand side.

On the demand side, we plan to build a "Tie-in" APP between China and Thailand, which has two sub-applications. The platform is designed to connect local stores in China and Thailand through an app. There are cultural differences between Thai businesses and Chinese consumers, as well as language differences that can cause communication difficulties. Therefore, our trade platform will provide bilingual services, allowing Thai merchants to share their products with Chinese customers, thereby promoting Sino-Thai trade.

In this independent study, I cited the literature of the past few years as the theoretical basis of this study. In the process of research, relevant literature is my main analysis object. However, due to the different scope of research topics, even the role of completely consistent literature is limited, so this independent study inevitably has some shortcomings. In data analysis, most of them use hypothesis analysis, so different factors will cause different data. Because the technology in this study is location-based service technology, management information system, block chain and other technologies, there are still some practical problems to be discussed in this new cross-border e-commerce application. In addition, there are many challenges in all aspects of the market, which

need to accumulate experience and improve in practical applications. However, we can still maintain a more positive attitude towards the project, because the project still has a lot of market growth space and has the potential to form new economic growth points.

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APPENDICES

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