Impact of the Electronic Payment Environment of the Importing Country on China's Export Trade

Based on Panel Data of the Five ASEAN Countries

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Abstract—**The Internet economy has brought prosperity to cross-border e-commerce, and the cross-border electronic payment industry has also developed along the way, improving the efficiency of cross-border trade. This paper uses the panel data of five ASEAN countries from 1999 to 2017 to empirically test the promotion effect of a country's electronic payment environment on China's export trade. The research results show that the cash payment degree, per capita income and electronic payment environment of the importing countries have a significant impact on China's export trade. What's more, in China's export commodity trade structure to ASEAN countries, bulk commodity transactions relying on traditional payment methods still occupy a dominant position. Therefore, the impact of electronic payment levels on export trade volume is weaker than traditional payment methods. In addition, the higher the degree of economic development, the better the electronic payment environment and the smaller the promotion of China's export trade. Finally, this paper gives relevant suggestions for China's e-commerce enterprises to enter the Southeast Asian e-commerce market.**

Keywords—electronic payment environment; export trade; cross-border e-commerce

I. INTRODUCTION

A. Research Background

Electronic Payment is an important part of the Internet consumer economy. It has an important impact on personal consumption and the national economy. This is gradually confirmed by many domestic and foreign scholars. For individuals, electronic payment not only changes the consumer's consumption habits, but also gradually shifts from offline to online consumption, from "going out of cash" to "just one mobile phone" and guiding consumer spending. The change of concept has changed from "domestic product consumer" to "international product consumer". According to the statistics of the National Bureau of Statistics, Figure 1-1 shows that between 2012 and 2017, the scale of cross-border e-commerce transactions in China increased from 2.1 trillion yuan to 8.06 trillion yuan, with an average annual growth rate of 30.86%. Although the growth rate of China's total import and export trade is relatively slow and shows a trend of declining volatility, the scale of cross-border e-commerce transactions in China has increased year by year,

and the proportion of total import and export trade has been increasing year by year.

All along, China and ASEAN countries have frequent economic exchanges and cooperation, and the scale of trade is large. The two sides have complementary advantages in trade. According to the country trade report, the main products exported to ASEAN countries are electromechanical, base metals, electronic products, textiles and household products. The main products imported from ASEAN countries are agricultural products and mechanical and electrical products. According to the statistics of the National Bureau of Statistics, the trade volume between China and ASEAN countries in 2016 was 455.44 billion US dollars, accounting for 47.8% of the total trade volume between China and the countries along the Belt and Road. In terms of export trade, China's exports to ASEAN countries are the largest, reaching US$259.16 billion, accounting for 44.1%. ASEAN countries have become the main cooperation areas for China's export trade.

B. Research Significance

The purpose of this paper is to empirically analyze the relationship between foreign electronic payment environment and China's export trade, and to study which factors of foreign electronic payment will affect China's export trade, and whether these effects are significant. Based on the empirical analysis, this paper puts forward relevant suggestions based on the differences in economic development of different countries. It has important practical and theoretical significance for China's e-commerce enterprises to enter the Southeast Asian market in the future.

There are two main points of practical significance: First, according to the characteristics of electronic payment in major Southeast Asian countries, it provides suggestions for China's third-party payment companies to enter the Southeast Asian market in the future; Second, it combines Southeast Asian e-commerce environment to settle in China's foreign trade enterprises and small and medium-sized e-commerce sellers. Southeast Asia e-commerce market provides advice.

The theoretical significance lies in the empirical analysis of the relationship between the electronic payment environment and export trade, exploring the role of e-commerce in cross-border trade in the future, and making up for the lack of literature research in this field at this stage.

II. LITERATURE REVIEW

A. Concept Definition

Kalakota and Whinston (1997) define electronic payment as an activity that takes place between a buyer and a seller and completes the exchange of funds through the network interaction of electronic products, generally supported by a specialized payment system as a technical environment. Ribbers and Heck (2004) studied the operation mechanism of online auctions and believed that electronic payment was developed along with the prosperity of the Internet economy. Internet-based economic trading activities gave birth to electronic payments, and believed that electronic payment was the completion of Internet economic transactions. Laudon and Traver (2002) found that the relationship between mobile phones and mobile payment found that electronic products as the carrier of electronic payment, the speed of electronic product replacement and the development of electronic payment industry has a close positive relationship. Guttmann (2003) found through research that the more perfect the conditions for consumers to purchase online, the weaker the consumer's preference for traditional offline payment methods such as debit cards and checks.

Based on the results of previous studies, the electronic payment referred to in this paper refers to the use of intelligent electronic products such as computers, mobile devices, and wearable payments, and the transfer of funds through the Internet environment.

Compared with the traditional cross-border payment methods such as remittance and transfer, the e-payment industry driven by the Internet economy has gradually shown advantages, such as short time-consuming, convenient, fast, low-cost and relatively safe, which attracts consumers to generate electronic payment. Dependence, and gradually user habit education for consumers.

B. Related Research of Cross-border Electronic Payment

O'Mahony et al. (1997) found through research that payment-related management systems and infrastructure are the main limiting factors affecting the development of e-commerce and electronic payment industries. Bill Maure (2012) proposes that electronic payments will change consumers' wealth traits and stimulate people's use of innovative currency use values, and believe that the development of electronic payments will reduce barriers to cross-border trade, thus promoting the realization of global trade. However, Gomez-Herrera et al. (2014) found through empirical analysis that there are still no barriers to cross-border e-commerce, and the efficiency of electronic payment is one of the important factors affecting cross-border transactions.

The development of cross-border electronic payment industry in importing countries is affected by many factors, including the financial environment of importing countries and consumer payment habits. Zhang Xiaheng (2017) believes that the penetration rate and coverage of cross-border payment methods are the basis and premise for selecting cross-border electronic payment methods. The

more mature the financial environment, the higher the acceptance of cross-border electronic payments. Consumer preferences, payment habits, and overall macroeconomic factors are important factors influencing cross-border payments. Especially for emerging e-commerce markets such as Southeast Asia, where financial environment development is generally lagging behind, consumers prefer cash on delivery, to electronics. The security of payment is a wait-and-see attitude. In addition, the cost of using cross-border payment methods, including time cost and capital cost, is an important factor that cross-border e-commerce sellers must consider when expanding overseas e-commerce.

Secondly, the restrictions and perfection of cross-border electronic payment management systems have an impact on consumers and merchants in making payment choices. Laiwei, Wang Kaiqian (2014) believes that the regulation of a country's foreign exchange management system in cross-border foreign exchange settlement and sales will have an important impact on national taxation. If the restrictions are large, it will lead to tax evasion in informal channels. It is also recommended to allow pilot payment companies to handle overseas collection and payment and foreign exchange settlement and sales. Yang Yang (2016) believes that the degree of perfection of cross-border electronic payment service legal system and supervision is an important guarantee for the development of cross-border transactions. It involves issues such as the foreign exchange management legal system, anti-money laundering laws and enforcement issues, coordination of relevant regulatory policies, and protection of cross-border consumer rights. These aspects need to be further established and improved, as well as cross-regional cooperation and coordination.

Finally, the types of services offered by the cross-border electronic payment industry can influence the choice of consumers and businesses for cross-border payment methods. Yan Shengyang (2014) analyzed the business model of Pay Pal in the world and considered that the payment service provided "one-stop" cross-border payment comprehensive services, such as collection and payment, cross-border e-commerce, fund collection, and consulting services. Services such as O2O services and credit financial services are necessary for cross-border e-commerce, especially B2C. Zhang Hongbo (2018), through the analysis of two world-renowned cross-border payment companies, Pay Pal and World First, believes that the rate of return and the speed of payment are crucial for cross-border sellers, and found that the risk control ability of the payment platform is across The security of environmental transactions plays an important role. The risk control capability is mainly represented by the trade-off between the platform's trading system in "protecting the buyer" and "protecting the seller".

C. Export Trade Related Research

There are many factors affecting export trade, including per capita GDP, spatial distance, and exchange rate. Gao Jian and Deng Maojie (2016) established a gravity model based on bilateral trade flow data between China and the 20 largest trading partners in 2005-2011. The study found that spatial distance, GDP, and whether it is an APEC member are the

main factors affecting bilateral trade. Tang Chunling et al. (2018) used the data of China and the "One Belt and One Road" 61 countries along the line from 2005 to 2016 to establish a gravity model to study the export trade potential. The research shows that in addition to per capita GDP and spatial distance, the population of the countries along the line and the degree of freedom of trade and whether or not to use common language and other factors have a significant impact on China's export trade to other countries. Yang Kui (2018) calculated the export value of China and Japan based on the world input-output table, calculated the trade dependence and used the GMM model for empirical analysis. The study found that the ratio of dependency ratio to FDI significantly affected the value-added export trade dependence.

Exchange rate changes will also affect export trade. Zhang Huiqing and Yan Xiaoqiang (2019) found that the asymmetric change of exchange rate helps to expand the scale of China's total export volume by establishing a theoretical model of exchange rate fluctuations affecting export trade, but it is not conducive to optimizing and adjusting the export structure.

Customs clearance costs and trade facilitation also have a significant impact on export trade. Wu Xiaokang and Yu Jinping (2016) established a gravity model based on the World Bank's 2013 business environment survey data to study the impact of import customs clearance costs (including customs clearance time, customs clearance fees, and the number of documents required) on Chinese exports. . Studies have shown that the higher the customs clearance cost of importing countries, the less China exports to it; the customs clearance costs have a negative impact on the export expansion margin and have a positive impact on export unit prices. Li Cunxin et al. (2018) used panel data from nine countries in China and Southeast Asia from 1998 to 2016 to establish a gravity model and a trade inefficiency model to study China's export trade potential to Southeast Asian countries. Studies have shown that air transport volume, currency freedom, financial freedom, commercial freedom and whether it is a member of the World Trade Organization have a significant impact on China's export trade to Southeast Asian countries.

D. Research on the Impact of Electronic Payment Environment on Export Trade

The Hicks-Hanson Model, the IS-LM model, is an important tool for macroeconomic analysis. It describes the relationship between the money market and the product market based on market interest rates. In the money market, liquidity preference and the amount of money will determine the balance of supply and demand in the money market, thus determining the market interest rate; in the product market, interest rates will affect the balance of supply and demand between investment and savings, and savings are closely related to consumption. In the macro economy, consumption, investment, net exports, and government spending constitute the gross national income. Therefore, changes in money supply and demand will have an important chain reaction to the national economy.

Yang Yufan (2013) believes that electronic payment will directly affect the money supply by affecting the liquidity of electronic money, as well as affecting changes in the base currency such as cash, deposits and deposit reserves, resulting in a currency multiplier effect and thus affecting the money supply. On the other hand, Zhou Guangyou and Shi Yibo (2015) found through empirical analysis that electronic money has a significant substitution effect on preventive money demand, and has a negative correlation with preventive cash demand, which theoretically leads to a decrease in market interest rates.

In the product market, changes in market interest rates will affect investment-saving behavior and directly affect household consumption. Lowr EXP et al. (2006) conducted an empirical study on electronic payment, suggesting that electronic payment can reduce the transaction cost of consumers and raise the awareness of risk management of consumers. In addition, Shuai Qinghong et al. (2018) conducted a multiple linear regression analysis on the relationship between electronic payment and economic growth in China, and found that electronic payment has a significant role in promoting economic growth in the short term, and then gradually decreases and tends to be relatively stable. Therefore, in the product market, electronic payments will directly affect consumption.

Based on the review of existing literature and the interpretation of relevant data, cross-border electronic payment is an important part of cross-border e-commerce. Its development degree is of great significance to China's export trade to other countries. The current literature research mainly focuses on qualitative analysis of the influencing factors of cross-border electronic payment levels, including exchange rate, legal supervision, payment habits, etc., but there is relatively little research on the impact of the electronic payment environment of importing countries on China's export trade. In particular, the literature on the relationship between the two models through the establishment of relevant models is still relatively lacking. Now, all countries are actively developing 5G communication technology and vigorously promoting the development of the Internet economy. At that time, the significance of electronic payment to consumption and economic development and import and export trade will be highlighted. Therefore, this paper hopes to use empirical analysis to study specifically. The impact of the electronic payment environment of the importing country on China's export trade, and attempts to provide relevant recommendations for enterprises to carry out overseas e-commerce business.

III. MODEL CONSTRUCTION AND DATA SOURCES

A. Model Construction

According to the previous literature research, on the one hand, the optimization of the electronic payment link will have a substitution effect on the preventive cash demand, which will lead to the reduction of consumer demand savings and stimulate consumption; on the other hand, the increase in consumer income will also stimulate consumption; In the

WTO system, international trade has become more frequent and deeper, and as a manufacturing power in China, many foreign consumers have become dependent on Chinese products and their demand for export trade has increased. Therefore, this paper intends to use the following variables to express influence. The factors of export trade are electronic payment environment, per capita GDP and "whether it is a WTO member", and multiple linear regression models are used to express the mechanism of action of explanatory variables on the interpreted variables.

This paper mainly selects the panel data of the five countries of ASEAN, namely Indonesia, Malaysia, Singapore, Thailand and Vietnam, from 1999 to 2017 to quantitatively analyze the relationship between foreign electronic payment levels and China's export trade. Therefore, the specific measurement model is constructed as follows:

$$Y_{it} = \alpha_i + \gamma_t + X'_{it}\beta + \varepsilon_{it}$$

Among them, Y_{it} is the explanatory variable; α_i is the individual intercept, which indicates the influence of the difference between the individuals on the interpreted variable; γ_t is the time intercept, indicating the influence of the time variation on the interpreted variable; X'_{it} is an explanatory variable, which is a vector of k $\times$ 1, β is a slope, which is a vector of k $\times$ 1; i = 1, 2, ..., 5, representing five individuals, namely, Indonesia, Malaysia, Singapore, Thailand, and Vietnam; t=1,2,...,19,t denotes time; ε_{it} is a random disturbance term, obeys classical assumption, the mean is 0, the variance is σ^2, and ε_{it} is not related to X'_{it}. Next, this paper conducts an empirical study by establishing a quantitative relationship between explanatory variables and interpreted variables.

1) Interpreted variables

The explanatory variable here is China's export trade volume to the five ASEAN countries in the past 19 years. Y_{1t}, Y_{2t}, Y_{3t}, Y_{4t}, Y_{5t} respectively represent China's trade exports to Indonesia, Malaysia, Singapore, Thailand and Vietnam.

2) Explanatory variables

According to the previous literature research, there are many factors affecting China's export trade, but mainly the per capita GDP of the importing country, whether it is a member of the World Trade Organization (WTO), and the electronic payment environment. Since the focus of this paper is to study the impact of foreign electronic payment levels on cross-border trade, the main explanatory variables should be the influencing factors that reflect the level of electronic payments, and other influencing factors mentioned in the literature review will be classified as control variables.

Combined with the views of Portugal-Perez and Wilson (2012) and Zhang Xiaheng (2017), there are two main factors that reflect the level of electronic payment, namely, hard and soft, which is mainly reflected in the level of

communication technology infrastructure, and soft. It is reflected in the consumer's acceptance of electronic payment, and can be further understood as the degree of preference of residents for cash payment and the dependence on the Internet. Therefore, this paper selects "Internet security server ownership/per million people" to express hard conditions. "ATM ownership/every 100,000 people" and "Netizens account for the total population ratio" are used to indicate soft conditions. In order to facilitate the processing and analysis of data, the three influencing factors are represented by IT, ATM and USER respectively.

In order to ensure the availability of data and the reliability of the source, this paper mainly chooses the two factors of "per capita GDP" and "whether it is a member of WTO" as other control variables, which are expressed by GDP and WTO respectively.

Finally, in order to reduce the analysis difficulties caused by data volatility between different variables, this paper takes the logarithm of the original data as an absolute number to smooth the data. Therefore, taking Singapore as an example, according to the above analysis, the variables used in this model are: Ln(EX), Ln(ATM), Ln(GDP), Ln(IT), USER, WTO.

B. Data Sources and Characteristics

1) Data source

The data in this paper mainly comes from three websites, that is, the export trade volume comes from the National Bureau of Statistics of China, and the annual export trade volume of China's five ASEAN countries from 1999 to 2017 is selected as the explanatory variable; "Millions per million", "ATM ownership/per 100,000 people", "The proportion of netizens in the total population", and "Per capita GDP" are from the official website of the World Bank; "Whether it is a WTO member" data comes from WTO official website, and it is represented by dummy variables, "1" means "is a member of the WTO", and "0" means "not a member of the WTO".

Because this paper mainly studies the influence of the electronic payment environment of importing countries on China's export trade, and the rapid development of electronic payment is mainly after the 2008 financial crisis, this paper mainly selects 95 statistics from 1999 to 2017 of five ASEAN countries. Conduct research analysis.

2) Data characteristics

A simple descriptive statistical analysis of the obtained variable data yields the results of "Table I". The standard deviation of all variables is relatively small, so this paper initially guesses that each sequence data is relatively stable.

TABLE I. DESCRIPTIVE STATISTICS

	Ln(EX)	Ln(ATM)	Ln(GDP)	Ln(IT)	USER	WTO
Mean	4.923591	3.092541	9.468880	7.221521	33.87168	0.915789
Median	5.147087	3.571221	9.409303	7.144407	28.94000	1.000000
Maximum	6.573918	4.764564	11.45004	13.07668	84.45000	1.000000
Minimum	2.156403	-3.218876	7.539213	2.397895	0.130000	0.000000
Std. Dev.	1.110185	1.368071	1.006716	2.298114	25.44248	0.279177
Skewness	-0.561084	-1.792903	0.268715	0.451849	0.379011	-2.994487
Kurtosis	2.181342	7.163957	2.325008	2.973248	1.905969	9.966954

IV. REGRESSION ANALYSIS

Since the time span of the data selected in this paper is large, the regression analysis of the panel data should first test the stability of the data, and then the regression results can be obtained by establishing a fixed effect model and model test.

A. Data Stationarity Test

According to the characteristics of the panel data, the stationarity test has two main steps, namely panel unit root test and panel cointegration test, to determine whether the variable is stable and whether there is a long-term stable relationship.

1) Panel unit root test

The panel data selected in this paper has a time series length of 19 years and a selected number of variables of 6, so the panel data is of a narrow and long type. In order to avoid the occurrence of pseudo-regression due to direct regression analysis of the data, the panel data unit root test should be performed on the sequence data from the beginning to lay a foundation for judging whether there is a stable correlation in the long-term. There are 6 kinds of inspection methods for panel data unit inspection in EViews8.0. Only the commonly used inspection method - LLC (Common root - Levin, Lin, Chu) is selected here. The null hypothesis of the LLC test is that "sequences are unit root processes", while alternative hypotheses are "sequences are stationary sequences" and progressively follow a normal distribution. Among them, the LLC test has three types of test forms: "none test",

"individual intercept term test only" and "individual intercept term and trend term test". The test method is:

If all the test forms do not reject the null hypothesis, then the sequence is considered to be the unit root process, combined with its individual sequence graph, to determine whether the unit root process with the individual intercept term.

If there is a rejection of the null hypothesis and no rejection of the null hypothesis, combined with its individual sequence graph, choose a situation that is closer to the graph in the case of rejecting the null hypothesis.

If there is only one case to reject the null hypothesis, it is considered to be stable in this case (including the trend is stable).

Taking the "LN(EX)" test for its stationarity process as an example, according to the LLC test procedure, "Table II" is obtained, that is, "none test", and "individual intercept term and trend term test" are not significant. Only the "Individual Intercept Only Item Test" test form is significant, so the "LN(EX)" sequence data is considered to be stable according to the above rules.

TABLE II. LN (EX) PANEL UNIT ROOT TEST

Method	Statistic	Prob.**
Levin, Lin & Chu t*	-3.70332	0.0001

Performing the LLC test on other variables in the same way and summarizing the results are shown in "Table III".

TABLE III. LLC TEST RESULTS

Variable name	P Value	Stationary form
Ln (EX)	0.0000	Contains only individual intercept items
Ln (ATM)	0.0000	Contains only individual intercept items
Ln (GDP)	0.0236	Contains only individual intercept items
Ln (IT)	1.0000	Not obvious
USER	0.0004	Contains only individual intercept items
WTO	0.4369	Not obvious

From the results of the unit root test of the upper surface plate data, it is known that "export trade volume", "ATM ownership", "per capita GDP" and "internet user share" are all stable sequences, while "security server ownership" and "whether it is WTO" Member states" are not stable. If the unit root test is performed on this basis and the unit root test cannot explain its economic meaning, this paper chooses to screen out these two variables. In the subsequent regression analysis, it mainly focuses on "export trade amount" and

"ATM ownership". Four variables were studied for GDP and the proportion of netizens.

2) Panel cointegration test

The panel data co-integration test mainly performs co-integration test on the smooth panel sequence data, and judges whether there is a stable correlation between various variables in the long-term. If it exists, the next regression study can be carried out.

There are two main methods for co-integration testing of data panels: Kao test (Gao Zhihua test) and Pedroni test. This paper selects the commonly used Kao test (Gao Zhihua test) and obtains "Table IV".

TABLE IV.   KAO TEST RESULTS

	t-Statistic	Prob.
ADF	-2.335391	0.0098
Residual variance	0.016852	
HAC variance	0.021939	

B. Regression Model Selection

Passing the panel data cointegration test means that there is a long-term stable correlation between the variables, so regression analysis can be performed.

TABLE V.   FIXED EFFECT TEST

Effects Test	Statistic	d.f.	Prob.
Cross-section F	18.267345	(4,67)	0.0000
Cross-section Chi-square	70.057300	4	0.0000
Period F	4.805770	(18,67)	0.0000
Period Chi-square	78.758148	18	0.0000
Cross-Section/Period F	54.285837	(22,67)	0.0000
Cross-Section/Period Chi-square	278.843659	22	0.0000

The original hypothesis is "the original model is a mixed model", and the alternative hypothesis is "the original model is a non-hybrid model." In the F-test, the null hypothesis should be rejected given a 5% significance level, and it is still necessary to continue testing whether it is a fixed effect or a random effect. In general, the Hausen test should be used for fixed effects and random effects tests, provided that the number of individuals is greater than the number of variables. Since the number of individuals (5) selected in this paper is less than the number of variables (6), there is no need to perform Hausman test, and the measurement results show a fixed effect model.

This is consistent with the original conjecture. The main reason may be that some secondary influence factors that affect export trade but are not included in the model may be related to the explanatory variables in the model, so it is more appropriate to establish a fixed effect model.

2) Model selection

Because the fixed effect model can be divided into three categories: individual fixation, time-point random effect; individual random, time-point fixed effect; double fixed effect. This paper separately analyzes the above three cases.

According to the data comparison, the fixed effect model with fixed time and random time has better regression effect. Therefore, the measurement model finally selected in this paper is as follows. The analysis of the following paper mainly focuses on the results obtained by the model.

$$Y_{it} = \alpha_i + X'_{it}\beta + \varepsilon_{it}$$

The above regression results are obtained from the logarithmically transformed new sequence data, so the

following can be directly analyzed based on the data characteristics of the explanatory variables and the interpreted variables.

1) Model setting test

This article will use the static panel data model because it does not contain hysteresis for the interpreted variables. There are usually three types of static panel data models: hybrid models, fixed effects models, and random effects models. This paper selects the panel data of the five ASEAN countries from 1999 to 2017 for empirical analysis. According to the qualitative analysis, the economic development degree of different countries is different. Therefore, different countries in the model should have different constant items, and the mixed model is not selected. The verification is carried out by empirical test results below. First, use EViews8.0 to perform F test using the double fixed model, and obtain "Table V":

C. Analysis on Regression Results

1) Variable significance analysis

Overall, "ATM ownership per 100,000 people", "per capita GDP", and "% of netizens" have a significant impact on cross-border trade, and the interpretation is strong; and "Internet security server ownership/per hundred "Who is a WTO member" has an unstable feature in the initial panel data unit root test, and cannot pass the cointegration test together with other variables. Therefore, it is selected to be screened out, and finally the main research is "ATM possession". The impact of "per capita GDP" and "the proportion of netizens" on export trade.

In Singapore, for example, the number of secure servers (per million people) has grown rapidly since 2009, and the growth rate is much higher than that of export trade, so it is impossible to pass the cointegration test. The main reason is that the Internet economy has experienced a spurt of growth after the 2008 financial crisis, communications infrastructure has been greatly improved and improved, and the impact of Internet hardware infrastructure improvements on Internet consumption has become increasingly weak.

Secondly, the coefficients obtained after the OLS regression of the variables selected in the paper are all positive, indicating that the increase of "ATM possession", "per capita GDP" and "the proportion of netizens" are positive for China's export trade. The impact of the cash payment level, per capita income, and electronic payment environment of the importing countries will stimulate the

growth of China's export trade. In the existing literature research, the positive promotion effect of per capita income on cross-border consumption has been confirmed by many scholars. Therefore, this paper focuses on the impact of electronic payment environment on cross-border consumption.

The regression results of this paper show that the impact of changes in ATM ownership on export trade is much higher than the impact of changes in the number of netizens on export trade. This is mainly because in the national economy, economic business with cash payment as the main payment method still dominates, and electronic payment, as an emerging payment method in the last decade, can only improve payment efficiency in small-frequency high-frequency transactions. Commodity transactions are still not comparable to traditional cash payments in terms of security.

The 2017 Country Trade Report shows that mechanical and electrical products have always been the main products of China's exports to ASEAN countries. Take Singapore as an example. In 2017, China's trade in mechanical and electrical products exported to Singapore accounted for 63.7% of China's total export trade to Singapore, followed by base metals and products, textiles and furniture toys. Because of its virtuality and payment limit, electronic payment cannot meet the security and reliability required by commodity exchanges, resulting in traditional payment methods (such as bank transfer, Western Union, etc.) in cross-border transactions. For small-scale high-frequency cross-border e-commerce transactions, electronic payment methods are favored by consumers because of their convenience and speed.

2) Analysis of individual differences

According to the selected model, the intercept size corresponding to each country in the fixed-time random effect model can be further obtained.

TABLE VI.   INDIVIDUAL INTERCEPTS CORRESPONDING TO THE MODEL

Country	Individual intercept
Indonesia	1.590631
Malaysia	-1.101483
Singapore	-4.219173
Thailand	-0.033241
Vietnam	3.763266

The data in the table reflect countries with different levels of economic development, and the models used are not the same. Countries with more developed economies have smaller or even smaller intercepts. It shows that under the condition that other control variables are unchanged, the influence of the change of the main explanatory variables on the explained variables will eventually differ due to the size of the intercept, and the intercept size under the model mainly indicates the economic development between different countries.

As a developed country, Singapore's cash payment and online payment are relatively developed and improved. Compared with Vietnam's domestic economy, Singapore's domestic Internet economy has developed earlier. By the end of 2017, the number of Internet users in Singapore has accounted for more than 80% of the total population, and the number of Internet users has stabilized at a high level of around 85%. Development has matured. The number of Vietnamese netizens is only half of that in Singapore in 2017. Therefore, the Internet economy is still in the early stage of rapid development. The Internet economy such as electronic payment and e-commerce consumption is still a blue ocean. The number of Internet users is increasing, that is, consumers. The increase in Internet dependence is more effective in promoting the economy. Therefore, this paper believes that when the Internet economy is in a period of rapid development, the level of electronic payment is low, but the stimulating effect on consumption is more obvious. When the Internet economy is at a high level and stable development stage, the level of electronic payment will also rise, but at this time, the stimulating effect is weak.

V.   CONCLUSION AND RECOMMENDATIONS

A. Conclusion

Through empirical research, this paper finds that the level of cross-border electronic payment industry in Southeast Asia is relatively complete, and the positive impact of the development of domestic electronic payment industry on China's export trade is gradually weakening. The electronic payment industry in other economically underdeveloped countries is still a blue ocean. User habits have not been fully cultivated and are in the early stage of the industry. Therefore, changes in the domestic electronics industry and financial environment factors in underdeveloped regions have a significant impact on China's export trade.

Secondly, due to China's commodity export trade structure to Southeast Asian countries, bulk commodities still occupy a dominant position. Cross-border e-commerce consumption has only developed in recent years, and its development momentum is fierce, but its proportion is still small. Therefore, on the whole, the positive promotion effect of electronic payment on cross-border consumption is weaker than the traditional cash payment method.

In addition, the degree of economic development in Southeast Asian countries and the consumption habits of local residents are quite different. Therefore, the development level of electronic payment industry in different countries also differs, and further affects China's export trade.

As a developed country, Singapore's economic development level has already been comparable to that of European and American countries. In particular, the electronic payment and e-commerce consumer industries have achieved considerable development. The consumption habits of residents' online shopping have long been cultivated and educated, and the electronic payment industry has raised the economy. The vibration effect is gradually weakened, so the degree of Internet dependence expressed by the "% of netizens" has less impact on the volume of export trade. In particular, domestic consumers in Singapore prefer to use credit cards for online consumption. Therefore,

it is difficult for third-party payment institutions in China to rapidly expand their local user base.

Less developed countries such as Thailand, Vietnam, Indonesia and Malaysia are in the initial stage of rapid development of e-commerce industry, and their trade links with China are increasingly close. The impact of changes in domestic Internet economy related factors on China's export trade. However, consumers in these countries mostly prefer cash payment methods, especially in online shopping, and they choose "payment on delivery". Therefore, if third-party payment institutions in China want to seize the local market share, they must step by step and rely on promotion.

B. Recommendations

At present, there are great differences in politics, economy, culture, religion, and language among Southeast Asian countries. Most countries have insufficient infrastructure, e-commerce practitioners are insufficient, and online payment penetration rate is very low. When Chinese companies enter the Southeast Asian market, they should consider these factors comprehensively.

According to the research results of this paper, there are two main paths for Chinese enterprises to enter the Southeast Asian market. First, in countries with more developed e-commerce and electronic payment industries (such as Singapore), they use their ready-made and relatively complete resources to cultivate their own overseas brands and choose local payment methods to pay. This environment is suitable for e-commerce sellers who focus on cultivating unique brands to maintain customers and increase customer loyalty.

Second, in countries where e-commerce development is still at an early stage of rapid development (such as Thailand, Indonesia, etc.), the government has a strong support for emerging industries such as e-commerce and electronic payment, so qualified and resourceful Chinese companies can consider We will invest in the well-known local e-commerce platform and payment companies, and at the same time, we can also send out the excellent experience of the development of China's domestic e-commerce industry. However, it is necessary to take into account the investment risks brought about by changes in local policies and the inability to copy the domestic e-commerce management model, and it is necessary to effectively combine local consumption habits and management concepts.

In addition, when Chinese enterprises invest in shares in the local electronic payment industry or establish overseas subsidiaries, obtaining the payment license issued by the local government is the first step for Chinese enterprises to carry out legal operations in ASEAN countries, not only complying with relevant laws and regulations. Accepting the supervision of the local government departments, we should also strengthen the cooperation between government and enterprises, and actively participate in the implementation of relevant policies of the local government. For example, the Thai government is pursuing various services to "de-cash", and competitive enterprises in China can try Participate in relevant fields and increase your local influence.

Finally, in the future, when China and ASEAN countries conduct bilateral trade cooperation, they should also establish a customs clearance information sharing mechanism at the macro level, allowing third-party payment companies holding cross-border payment licenses to carry out "paperless" small-scale foreign exchange settlement and sales transactions. Activities and real-time reporting to the customs department to reduce the time and other costs required for customs clearance.

REFERENCES

[1] Kalakota, R. & Whinston, A. (2015). Electronic commerce: a manager's guide. AddisonWesley.

[2] Ribbers, P. M. A. & Heck, E. v. (2014). Introducing electronic auction systems in the Dutch flower industry - a comparison of two initiatives. Wirtschaftsinformatik, 40 (3), 223-231.

[3] Guttmann, R. (2013). Cybercash: the coming era of electronic money. Basingstoke: Palgrave.

[4] Laudon, K. C. & Traver, C. G. (2011). E-commerce: business, technology, society. London: Addison Wesley.

[5] LowrEXP, P. B., Walls, T.M., MoodEXP, G., HumpherEXPs, S., & Kettles, D. Online paEXPment gatewaEXPs used to facilitate e-commerce transactions and improve risk management [J]. Communications of the Association for Information SEXPstems，2009，17(1):6-7.

[6] Bill Maurer. Mobile MoneEXP: Communication, Consumption and Change in the PaEXPments Space[J]. Journal of Development Studies，2012，48(5).

[7] Gomez-Herrera E, Martens B, Turlea G. The drivers and impediments for cross-border E-commerce in the eu [M]. Information Economics and PolicEXP, 2014.