Association for Information Systems
AIS Electronic Library (AISeL)

WHICEB 2014 Proceedings

Wuhan International Conference on e-Business

Summer 6-1-2014

The Factors Affecting Cross-border E-commerce Development of SMEs ---An Empirical Study

Jianzheng Yang
Business School, Shanghai University for Science and Technology, Shanghai, China

Nachuan Yang
Business School, Shanghai University for Science and Technology, Shanghai, China, nachuanyang135@gmail.com

Lifan Yang
Business School, East China University of Political Science and Law, Shanghai, China

Follow this and additional works at: http://aisel.aisnet.org/whiceb2014

The Factors Affecting Cross-border E-commerce Development of SMEs
---An Empirical Study

Yang Jian-zheng [1], *Yang Na-chuan* [2*], *Yang-Li-fan* [3]

[1] Business School, Shanghai University for Science and Technology, Shanghai, China
[2] Business School, Shanghai University for Science and Technology, Shanghai, China
[3] Business School, East China University of Political Science and Law, Shanghai, China

Abstract：Recently, there are two mainly methods for SMEs operating cross-border e-commerce in China. One is online store of firms via the cross-border third party platform. The other is the online store of firms built by themselves for export markets expansion. Based on the analysis of cross-border e-commerce process, we explore four factors which may affect the mode selection of cross-border e-commerce of SMEs, namely E-marketing, electronic payment, electronic customs and international logistics. For the methodology, we use Probit model of Logit modeling and then have the finding that the three factors E-marketing, electronic customs and international logistics are the impact of SMEs cross-border e-commerce mode selection, and further find that most of SMEs who are weak at cross-border e-commerce operation stay on third party cross-border e-commerce service platform. Based on the finding, we also have some conclusion. In order to assist SMEs development, the government should establish and improve the trade informational platform. Meanwhile, they should encourage the cross-border e-commerce third-party platform to become bigger and stronger and improve electronic customs clearance continuously to raise large scale cross-border logistic firms and third parties with good service, strong competition and high technologies. For the SMEs, they should adopt the third party cross-border e-commerce platform actively. Some firms should have their own cross-border websites for opening cross-border e-commerce channel actively.

Key words: cross-border e-commerce; SMEs; third party cross-border e-commerce service platform; cross-border e-commerce website

1. INTRODUCTION

By the end of 2012, China already have 325 thousand SMEs above designated size，which accounted for 97.36% of the total number of industrial enterprises above designated size, employing 6.129 million people accounted for 66.1% of the total employment, sales of 55.45 trillion yuan accounted for 61.34% of the total, profit of 3.39 trillion yuan accounted for 61.08%, play an important role in domestic demand stimulation and export stabilization. They not only created 60% of GDP, but also created a 60% import and export volume[2].

However, Chinese SMEs have some problems because of world economy depression, expectation of appreciation of the RMB exchange rate, single sales channel. Vigorous development of electronic commerce and emergence of cross-border e-commerce have provided a new marketing tool for SMEs which open up much broader prospects for trade business of SMEs.

Recently, there are two mainly methods for SMEs operating cross-border e-commerce in China. One kind is that the online store of firms is via the cross-border third party. The other kind is that the online store of firms is built by themselves for export markets expansion. As the cross-border e-commerce is a new thing in the field of foreign trade and most SMEs are not familiar with its operation mechanism and influence factors, therefore it

---

is important to identify the factors of cross-border e-commerce mode selection after a detailed analysis of export procedures. In order to help SMEs overseas market development, the government should analyze the influence factors of cross-border e-commerce and improve the application level of key factors.

For the methodology, we use Probit model of Logit modeling with the data of SME exhibitors from 113th Canton Fair and then have the finding that the three factors E- marketing, electronic customs and international electronic commerce logistics are the impact of SMEs cross-border e-commerce mode selection, and further find that the disadvantaged SMEs will rapidly improve the application standards of cross-border e-commerce therefore expand international market share if government make appropriate policy adjustments and the third-party platform make corresponding changes in management operation.

2.   LITERATURE REVIEW

How to guide enterprises to expand the international market in the new situation of world economy depression is not only a new problem of enterprises, but also a challenge that we have to face to get rid of the "middle income trap". Panagariya (2000) analyzed the impact of electronic commerce on international trade. She argues that in the short term, cross-border e-commerce revenue will be concentrated in developed countries, but in the long run, a leapfrog development will be achieved by developing countries through cross-border e-commerce as some development stages of information technology can be skipped [1]. Terzi (2011) proved cross-border e-commerce would reduce trade barriers and promote trade growth after comparison and analysis of the data provided by OECD [2]. Savrul and Kılıç (2011), through the study of 2007-2009 index data of the EU member states in economic recovery phase, discovered e-commerce could increase countries' market share and be more advantage in all aspects of the transaction than the traditional trade, so that enhance corporate competitiveness. Aydin (2011) and Kavaklioglu (2011) came to the same conclusion after content analysis [3] [4].

In the study of factors affecting cross-border e-commerce, Ramanathan (2012) empirical studied of the impact of marketing on the development of SMEs in Taiwan after questionnaires collection, factor analysis and regression analysis[5]. Yoo; Shin (2010) argued that electronic payment is also an important part of cross-border e-commerce can improve transaction convenience [6]. In addition, Urciuoli (2013) found that electronic customs clearance platform could facilitate business operations and save clearance costs by survey analysis of the World Customs Organization (WCO) annual meeting of the Council[7]. Raus (2009) and some researches also illustrate this point[8]. Samiee (2008), Zhongquan Zou (2008), Nguyen (2013) empirical studied and clarified the role of international logistics services throughout the cross-border e-commerce promotion with factor analysis[9] [10] [11].

Domestic Hang Yan-yong (2006) who studied the high vacancy rate of foreign trade rights of private enterprises in Zhejiang Province discussed the causation why self-operating foreign trade be abandoned was that most enterprises were not familiar with trade barriers such as customs, commodity inspection, transportation, banking, insurance and others[12]. Li Wen-feng (2002) argued global supply chain operation model had been core competency in international trade, further pointed that public service platform with international features and industry characteristics should be promoted by relevant industry organizations or trade associations[13].

Yang Jian-zheng (2013) summarized main factors from trading process perspective as follows: information acquisition, electronic customs, electronic payment, logistics and distribution[14]. Jiao Chun-feng (2006) emphasized that in order to promote e-commerce development, enterprises should improve informationization of international trade process containing multiple aspects of customs, banking, insurance, transportation, inspection, taxes, etc[15].

Liu Juan (2012)'s study found that foreign trade information collection and electronic payment could no longer constrain the development of cross-border e-commerce trade, but customs clearance, logistics remains an obstacle to cross-border e-commerce development[16]. Zhou Guo-hong (2007) analyzed the basic characteristics

of Yiwu China Commodity City international operations, and found there were many commodity traders selling out of the country through an online trading platform, but there were still 42% of the merchants did not carry out cross-border e-commerce marketing, 46.1% of businesses believed low logistics efficiency would compromise commodity export efficiency[17]. Zhang Hong-lan (2012) studied the general trade business e-commerce marketing strategy[18]. Huang Yong-jiang (2013), Wang Wen-jin (2013) and Chen Qu (2013) argued the problem involved in the process of third-party cross-border electronic payment of foreign exchange[19] [20] [21]. Wang Ling (2010) analyzed the relationship between foreign trade and modern logistics using Cointegration and Granger causality test with data from Shanghai[22]. Chen Fang (2011) studied the customs supervision of cross-border e-commerce issues[23]. Furthermore, 《China's E-commerce (2012)》from Ministry of Commerce of the People's Republic of China (2013), Li Ji-qi (2012), Cao Hong-feng (2007), Yang Jian-zheng (2008) put forward the corresponding countermeasures for cross-border e-commerce problem.

In summary, cross-border e-commerce has a profound impact on the country's progress and development of enterprises in the current international environment. Meanwhile, there are still some questions to be resolved. There are many steps in the process of cross-border e-commerce, if we can summarize these tedious steps into a clear link? Whether capabilities of a company's operation in all aspects of cross-border e-commerce impact SMEs' cross-border e-commerce mode selection? In addition, due to the different capabilities of SMEs in all aspects of cross-border e-commerce process, the development of enterprises may vary in the same policy environment and operational methods. Whether our enterprises can achieve the transformation and upgrading thereby getting out of the dilemma by analyzing how these who have different cross-border e-commerce ability should open up channel with cross-border e-commerce model selection methods as a starting point?

3.   METHODOLOGY

3.1   Cross-border E-commerce Transaction Process

After comparison and analysis, basic aspects of export are not change much under the conditions of cross-border e-commerce, but the formation and component have changed. We explore four factors which may affect the SMEs to select the modes of cross-border e-commerce, namely E-marketing(netm), international electronic payment(interep), electronic customs(ecus) and international logistics(eclogi) (Figure 1).
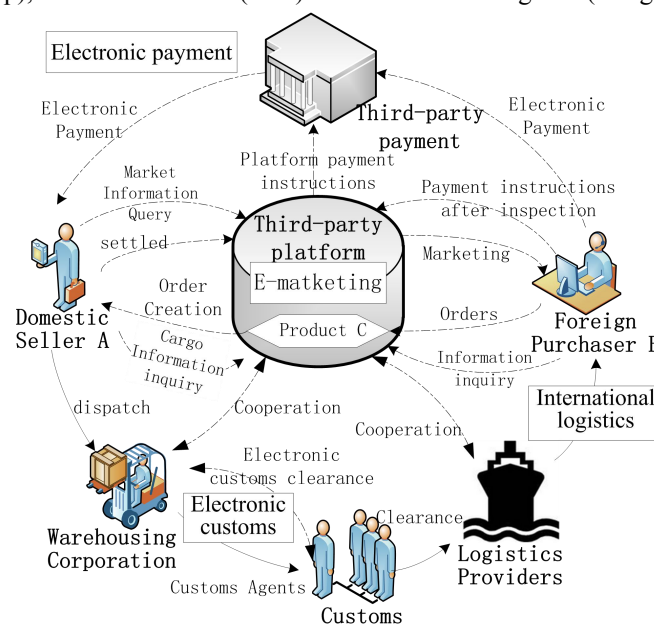
Figure.1 Cross-border E-commerce Transaction Process

(The solid line is the flow of goods, information flow is dashed)

3.2   Questionnaire Design

According to the different model of enterprises cross-border e-commerce, the questionnaire is divided into A，B two categories, of which Class A questionnaire filled by the enterprises using third-party platform，Class B questionnaire filled by the enterprises using their own platform. This paper analyzes the interplay between the four aspects of the process of cross-border e-commerce transactions and cross-border e-commerce SMEs' mode selections, the four aspects are designed as:

(1) E-marketing, containing 4 Two-class indicators and 10 Third-class indicators. Examine enterprises' ability on market prediction, marketing, customer relationship management.

(2) International Electronic Payment, containing 4 Two-class indicators and 12 Third-class indicators. Examine enterprises' understanding level of the electronic payment and the proficiency level using a variety of electronic payment methods.

(3) Electronic customs, containing 3 Two-class indicators and 6 Third-class indicators. Examine enterprises' understanding level and ability on utilizing China's electronic clearance systems, including electronic customs declaration, inspection and clearance.

(4) Electronic customs, containing 2 Two-class indicators and 5 Third-class indicators. Examine enterprises' patency of flow of goods, collaboration level between enterprises business and logistics providers.

The study adopts the Likert scale seven-point measure questionnaire, 7 means "strongly agree", 1 means "strongly disagree" ，to analyze various Two-class indicators applying the AHP comprehensively and multi-dimensionally, then calculate main indicators which are the composite score of four major aspects of cross-border e-commerce transaction process using mean method.

3.3   Model Description

For the methodology, we use Probit model of Logit modeling to analyzes the interplay between the four aspects of the process of cross-border e-commerce transactions and cross-border e-commerce SMEs' mode selections.

Probit model suppose that variable y^* is related with x. y^* takes the value when y^* beyond a critical value, otherwise 0. Meanwhile, in order to make quantitative analysis of general characteristics and the probability of the event occurrence, we Consider observations probabilistic model:

$$y^* = X\beta + \mu^*$$

$$P\left(y_i = 1 / x_i, \beta\right) = P\left(y_i^* > 0\right) = 1 - F\left(- x_i^{'}\beta\right)$$

$$P\left(y_i = 0 / x_i, \beta\right) = P\left(y_i^* \leq 0\right) = F\left(- x_i^{'}\beta\right)$$

F is the cumulative distribution function of μ^*. Next, estimate model parameters using Maximum Likelihood Estimation:

$$l(\beta) = \log L(\beta) = \sum_{i=0}^{n}\left[y_i\log\left(1 - F\left(- x_i^{'}\beta\right)\right) + \left(1 - y_i\right)\log F\left(- x_i^{'}\beta\right)\right]$$

If μ^* follows standard normal distribution, denote Y^* the Probit value of P, the Probit model can be expressed as:

$$P = \int_{-\infty}^{Y^*}\frac{1}{\sqrt{2\pi}}\exp\left\{- \frac{t^2}{2}\right\}dt$$

Based on the idea of Probit model, we can analyze the survey data, further study the interplay between the four aspects of the process of cross-border e-commerce transactions and cross-border e-commerce SMEs' mode selections. y represents the way of cross-border e-commerce that enterprises chosen, including the online store of firms is via the cross-border third party or online store of firms is built by themselves. In addition, the Main indicators of 4 process aspects were calculated by the arithmetic mean of corresponding Third-class indicators (Question 11, 12, 13 have been adjusted). Namely:

$$y = \begin{cases} 1; & \text{Third - Party Platform} \\ 0; & \text{Own Website} \end{cases}$$

$$\text{netm} = \frac{\sum_{i=1}^{10} X_{1i}}{10}; \quad \text{interep} = \frac{\sum_{i=1}^{12} X_{2i}}{12}; \quad \text{ecus} = \frac{\sum_{i=1}^{6} X_{3i}}{6}; \quad \text{eclogi} = \frac{\sum_{i=1}^{5} X_{4i}}{5}$$

3.4 Hypothesis

As SMEs mainly consider proficiency and accessibility of cross-border e-commerce transaction process when choosing cross-border e-commerce model, therefore, this paper carry out the key assumptions as:

H1. Third-party platform selection was negatively related to the standard of E-marketing.

H2. Third-party platform selection was negatively related to the standard of electronic payment.

H3. Third-party platform selection was negatively related to the standard of electronic customs.

H4. Third-party platform selection was negatively related to the standard of international logistics.

4.   DATA ANALYSIS

The survey questionnaires were distributed at 113th Spring Canton Fair (113th China Import and Export Fair), results 1069 questionnaire were recalled containing 1039 effective. In terms of enterprises scale, the questionnaire contains oversize, large, medium and small enterprises. In terms of industry, the questionnaire contains manufacturing, logistics, services and others. According to this survey questionnaires collected, selected SMEs 313 questionnaires reflecting the cross-border e-commerce application level of four trading links, of which Class A questionnaire with a volume of 212, 101 copies of Class B, forming a sample of four main trading process indicators data (Table 1).

Table.1 Main indicators data from part of SEMs

Main indicators y	netm	interep	ecus	eclogi
1	4.50	3.67	3.67	3.80
1	4.50	4.33	2.50	3.80
1	4.40	3.58	4.33	3.80
0	5.00	4.33	4.83	5.20
0	3.20	1.50	2.17	4.60

We use Probit model of Logit modeling and then have the statistic for the 4 main indicators, in which the constant term of the international electronic payment (interep) was not significant, which means the application level of international electronic payment of SMEs does not significantly affect the way enterprises conduct cross-border e-commerce. Therefore, establish Probit model again without interep, and this model pass the Goodness of fit test (Table 2).

Table.2 the influence coefficient of E-marketing, E-customs,

international logistics on cross-border e-commerce

Variable	Coefficient	Std.Error	z-Statistic	Prob.
C	4.317310	0.839331	5.143750	0.0000
NETM	-0.233595	0.091748	-2.546057	0.0109
ECUS	-0.240184	0.077004	-3.119120	0.0018
ECLOGI	-0.586162	0.184322	-3.180105	0.0015

According to Table 2, three aspects of E-marketing, electronic customs and international logistics have passed F-test, which means the three factors shows various degree of influence on SME model selection of cross-border e-commerce, the Probit model can be described as:

$$y^* = 4.32 - 0.23\text{netm} - 0.24\text{ecus} - 0.59\text{eclogi}$$

$$P(y = 1) = \Phi(4.32 - 0.23\text{netm} - 0.24\text{ecus} - 0.59\text{eclogi})$$

H1, H3, H4 hypothesis show that the application level of E-marketing, electronic customs, international logistics are the most influential factors on cross-border e-commerce model selection. The stronger application level of the three factors, the smaller probability SMEs choose third-party platform. Therefore, another conclusion can be found that most of SMEs who are weak at cross-border e-commerce operation stay on third party cross-border e-commerce service platform. H2 assumption does not hold, which means that electronic payment does not has a significant impact on SMEs cross-border e-commerce model selection:

(1) Electronic payment indicator has been removed from the model, indicating that electronic payment does not has a significant impact on SMEs cross-border e-commerce model selection. Generally, SMEs don't consider electronic payment too much when they choose cross-border e-commerce model. To a certain extent, this reflects that the electronic payment is relatively mature. Recently, with the rapid development of network information technology, more clear division of electronic payment and the introduction of government policies of electronic payment promotion, a variety of new payment methods, including credit card payments, electronic letter of credit, and third-party payment, etc, have been used for cross-border e-commerce so that effectively relieve the pressure of business services of financial institutions and improve the efficiency of cross-border payment. Professional third-party payment agencies can reduce the loss of exchange rate fluctuation by hedging currency risk and provide a good environment for cross-border trade payment.

(2) The regression coefficient of E-marketing indicator is -0.23, indicating that SMEs have more preferences for their own cross-border e-commerce platform as the SMEs' application level of E-marketing raise. Data analysis shows that the proportion of enterprises which disaffiliate the third-party cross-border e-commerce service platform is increasing as SMEs' application level of E-marketing raise, more and more enterprises conduct cross-border e-commerce on their own platform to expand overseas markets. This may be due to the enterprises with strong E-marketing capabilities have excellent trade marketing adviser and a perfect marketing team, who can play a very good publicity through their own website. But the weak enterprises have a great need for third-party platform marketing services, such as rush order, taking order, etc. For the cross-border e-commerce service platform, this case presents a new challenge that the third-party platforms have to provide more and better marketing value-added services, so that they can make progress at the same time develop customers' business.

(3) Electronic customs, as a vital indicator in cross-border e-commerce, its regression coefficient is -0.24. It can be concluded, enterprise electronic clearance proficiency of cross-border e-commerce has a major impact on enterprises' platform model selection. As the electronic customs operations can be completed all by the

enterprises themselves who are good at these operation, coupled with Customs "e-port" promotion and the encouragement of customs online for enterprises, so the stronger electronic customs clearance capacity the enterprise have, the more enterprises' preference to use their own cross-border e-commerce websites, meanwhile, third-party platform LCL and customs clearance services are needed by the companies who are weak at electronic customs to complete the customs declaration, so these weak companies generally stay on the third-party platform.

(4) The regression coefficient of cross-border logistics indicator is -0.59, indicating that the impact of cross-border logistics on SMEs cross-border e-commerce model selection is much greater than any other indictors. Logistics has been a bottleneck in the development of e-commerce, especially in cross-border trade. In the analysis, the enterprises who have more proficiency in international logistics will prefer their own websites to conduct cross-border e-commerce, and the enterprises who are stay on the third-party platform usually have poor understanding, little proficiency and low integration level with cross-border logistics. This is because with the development of cross-border business, enterprises are always looking for the most suitable logistics partner, and the enterprises that have perfect logistics partners are always the companies who have strong comprehensive abilities on cross-border e-commerce, and they can get better discounts from transportation logistics provider. The weaker companies will need LCL or other services provided by third-party platform to reduce the cost.

5.   SUGGESTIONS

The analysis of questionnaires shows that electronic payment does not has a significant impact on SMEs cross-border e-commerce model selection, and the major influent indicators are the proficiency and application level of E-marketing, electronic customs and international logistics. Among them, most of SMEs who are weak at cross-border e-commerce operation stay on third party cross-border e-commerce service platform. These conclusions have important reference value for third-party cross-border e-commerce service platform, SMEs and corresponding government departments.

(1) How to help the enterprises who are weak at foreign trade not to passively depend on foreign orders any more, but initiatively enter international markets to achieve the transformation and upgrading of its own channels is an issue that government departments should take into consideration. Based on the analysis, government should make full use of China (Shanghai) Pilot Free Trade Zone opportunities to improve cross-border e-commerce of the three weak aspects, including trade information platform establishment, timely accurate dynamic international market enquiries, improving the operation level of cross-border e-commerce of SMEs, encouraging the cross-border e-commerce third-party platform to become bigger and stronger and provide convenient efficient trade services for the weak SMEs including taxation and management simplification of small foreign trade goods, accelerating the construction of electronic port and related infrastructure, promoting electronic customs clearance facilitation, improving the efficiency of customs clearance, meanwhile, Customs should intensify SMEs training to encourage enterprises declare online. In the face of SMEs' strong demand for cross-border e-commerce logistics environment improvement, government should encourage cross-border logistics enterprises with high-quality service, strong international competition and large modern high-technology through various forms of asset restructuration.

(2) As the enterprises which are weak at cross-border e-commerce mostly stay on the third-party platform, third-party cross-border e-commerce service platform requires a comprehensive service capability. Third-party e-commerce platform plays a very important role in expanding foreign markets for SMEs. The third-party platform should actively optimize trade process, further expand cross-border e-commerce value-added services, and actively conduct cross-border e-commerce marketing and payment, coordinate relationship between international logistics provider and warehousing companies, to help SMEs on the platform win the advantage

industrial chain.

(3) SMEs should actively seize the opportunities of e-commerce, and they need to conduct cross-border e-commerce with rational selection, namely the promotion of "dual-channel method": In its infancy, the executive should expand foreign markets and conduct foreign trade business with third-party platform. When enterprises acquire enough ability of cross-border e-commerce, they should build their own website to continually improve the operation ability of cross-border e-commerce.

ACKNOWLEDGEMENT

REFERENCES

[1] Panagariya, A. E-Commerce, WTO, and Developing Countries. Policy issues in international trade and commodities study Series No.2 UN, New York and Geneva. 2000, pp 1-33.

[2] Nuray Terzi, The impact of e-commerce on international trade and employment, Procedia - Social and Behavioral Sciences, Volume 24, 2011, Pages 745-753.

[3] Mesut Savrul, Cüneyt Kılıç, E-Commerce As An Alternative Strategy In Recovery From The Recession, Procedia - Social and Behavioral Sciences, Volume 24, 2011, Pages 247-259.

[4] Erdal Aydin, Semih Kavaklioglu, A Study of Superiority of E-Trade Compared to Traditional Methods of Commerce in Overcoming Crises: Case Study of kitapix.com, Procedia - Social and Behavioral Sciences, Volume 24, 2011, Pages 123-137.

[5] Ramakrishnan Ramanathan, Usha Ramanathan, Hsieh-Ling Hsiao, The impact of e-commerce on Taiwanese SMEs: Marketing and operations effects, International Journal of Production Economics, Volume 140, Issue 2, December 2012, Pages 934-943.

[6] Soonduck Yoo; Seung-jung Shin; Dae-hyun Ryu, "The Supplier Management and Approval in Reverse Trade Card: An Electronic Payment System on the B2B," Ubiquitous Information Technologies and Applications (CUTE), 2010 Proceedings of the 5th International Conference on , vol., no., pp.1,6, 16-18 Dec. 2010.

[7] Luca Urciuoli, Juha Hintsa, Juha Ahokas, Drivers and barriers affecting usage of e-Customs — A global survey with customs administrations using multivariate analysis techniques, Government Information Quarterly, Available online 29 September 2013.

[8] Marta Raus, Barbara Flügge, Roman Boutellier, Electronic customs innovation: An improvement of governmental infrastructures, Government Information Quarterly, Volume 26, Issue 2, April 2009, Pages 246-256.

[9] Saeed Samiee, Global marketing effectiveness via alliances and electronic commerce in business-to-business markets, Industrial Marketing Management, Volume 37, Issue 1, January 2008, Pages 3-8.

[10] Zhongquan Zou, "The Study on Electronic Commerce and Development of International Logistics," Electronic Commerce and Security, 2008 International Symposium on , vol., no., pp.704,707, 3-5 Aug. 2008.

[11] Hong-Oanh Nguyen, Critical factors in e-business adoption: Evidence from Australian transport and logistics companies, International Journal of Production Economics, Volume 146, Issue 1, November 2013, Pages 300-312.

[12] Hang Yan-yong. Comparative Study on the Vacancy of the Right to Operate in Foreign Trade and the Export Methods of Private Companies in Zhe-jiang [J]. Journal of International Trade,2006,02:68-72.

[13] Li Wen-feng. Analysis on Today's Global Economy and Trade[J]. China Business Update,2002,07:8-9.

[14] Yang Jian-zheng, Yang Li-fan. Introduction to E-commerce(the second edition)[M]. Publishing House of Electronic Industry. 2013.

[15] Jiao Chun-feng, Gao Gong-bu. International competitiveness of foreign trade e-commerce Strategy [J]. Forum of World Economic ＆ Politics,2006,06:31-36.

[16] Li Juan. Exploration of the rise and development of small cross-border e-commerce trade -- E-commerce and logistics service innovation in the post-crisis era [J]. Practice in Foreign Economic Relations and Trade, 2012(2).

[17] Zhou Guo-hong, Lu Li-jun. On the International Operation of"Yi- wu Trading Area": Basic Status and Countermeasures [J]. Finance & Trade Economics,2007,03:106-111.

[18] Zhang Hong-lan. Analysis of Trade Enterprises'E-commerce Cybermarketing Tactics—based on case study of P Company[D].East China Normal University,2012.

[19] Hang Jiang-yong. Research on the Construction of cross-border e-commerce and payment of foreign exchange business management system [J]. Financial Accounting, 2013(7).

[20] Wang Wen-jin. Management Research on the Third-party Exchange Electronic Payment [J]. Huabei Finance, 2013(1).

[21] Chen Qu, Lin Kai-can. Preliminary cross-border development of third-party payment companies – example of Alipay [J]. Special Zone Economy,2013,09:208-210.

[22] Wang Ling. Empirical Study on Relationship between Foreign Trade and Modern Logistics: Based on Shanghai Data from 1978 to 2008 [J]. Journal of International Trade,2010,01:59-65.

[23] Chen Fang. Customs Supervision Research of Cross-border Online Purchase E-mail[D].Fudan University, 2011.

[24] Ministry of Commerce of the People's Republic of China. China's E-commerce(2012) [M]. Tsinghua University Press, 2013.

[25] Li Ji-qi. Chinese e-commerce development trend and policy orientation [J]. World Market, 2012(Z4).

[26] Cao Hong-feng. Study on Electronic Commerce Influencing Foreign Trade Companies in Our Country and Countermeasure[D]. Nanchang University, 2007.

[27] Yang Jian-zheng,Duan Yuan-ping. Research on International E-commerce Development Strategy of China [J]. World Economy Study,2008,10:37-41+88.

[28] Wang Bian,Peng Geng,Yang Xin,Han Shi-chun. A Prediction Study of Transactions Based on E-commerce Site Search Data [A]. Proceedings of Conference on Web Based Business Management(WBM 2012)[C]. 2012.