

# Online Cross-Border E-commerce Consumer Behavior: A Case Study of Sino-US Trade Conflicts

Li-Chun Liu, Wen-Bin Luo, Jian-Cheng Lin, and Yu-Chin Huang

**Abstract**—The current study aims to investigate how the Sino-US trade conflicts impact the online cross-border e-commerce consumer behavior, and the business strategies of the online cross-border e-commerce adopted to confront the Sino-US trade war. The findings are resulted from data analysis, and the study results showed that neither consumers' consumption willingness, consumption ability and consumer behavior patterns, nor the business strategies and commercial patterns are changed during this period of Sino-US trade conflict.

**Index Terms**—Sino-US trade, consumer behavior, cross-border e-commerce, e-commerce business model.

## I. INTRODUCTION

The Sino-US trade conflicts have significant impacts on global business. Most studies focused on the issues such as the impacts of tariff crashing, the impact of foreign trade barriers or the production cost increases caused by the pricing changeable of raw materials. Rare research discussed how this trade impact global consumer behavior. The industrial environment is organized by the interaction between supply and consumer demand. Therefore, in order to fully understand the impact of the Sino-US trade conflict on the consumer demand side, this study focus on the current online cross-border e-commerce consumer behavior, and analyze the impact on the online shopping behavior during the period of China-US trade conflict war, also in-depth discuss the online cross-border e-commerce their corresponding business model, and investigate their business strategies on how to confront the impacts of Sino-US trade conflicts. This study also finds out The Internet of Things increasing rapidly, trigger the cross-border e-commerce industry involving international trade tremendously, too. Thus, this study also discusses the consumer demand behavior caused by the Sino-US trade conflict, this managerial implication is helpful in international business management.

**Based on the above-mentioned research background, the purposes of this study are as follows.**

1. To analyze online cross-border e-commerce consumer behavior.
2. To understand the current business model of online cross-border e-commerce.
3. To explore the impact of Sino-US trade war on online cross-border e-commerce.

Manuscript received February 4, 2019; revised May 2, 2019.

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## II. SINO-US TRADE CONFLICT

In 2018, there were many big events occurred, such as the South and North Korea Leaders Meetings, the USA and South Korea Leaders Meeting, and the Football World Cup. Now, these activities have started and ended, but from the beginning of the year, there is news that has never been washed. There are always new developments that are continually emerging. That is the "China-US trade conflict."

We will set tariffs and sign next week. The US steel and aluminum industry will witness good things happen." US President Trump made his statement in March. In order to reduce the trade deficit with China, the United States has acted since April 2017. It began to float on the counter in March this year and imposed tariffs on steel and aluminum courses sold to the United States, including China and most countries. China also counterattacks, announced that the duty should be treated as a response. In April, the United States announced a list of US\$50 billion, 1,300 high-tech industrial products, and a list of 25% tariff proposals for Chinese goods; China replied to the US for soybeans, automobiles, chemicals, and other 106 items %tariff.

Overview of US Treasury Bills for China with US\$200 Billion

HS	Items	Sanctions against China (100 million US dollars)	Taxable products account for the proportion of imports of this product from China (%)	China's exports account for the world's total (%)	US imports from China (%)
84	Tool machinery	338.36	31.77	25.29	32.78
94	Furniture and lighting	291.46	89.83	39.43	51.81
85	Electronic equipment	209.27	15.06	36.10	41.78
87	Automotive components	105.78	72.47	4.43	5.29
39	Plastic Products	85.00	52.28	14.00	31.93
42	Leather	82.36	100	44.23	57.24
73	Steel products	79.25	67.82	22.66	31.70
83	Other metal products	33.73	65.83	29.78	43.60
29	Organic chemicals	31.46	44.04	15.05	17.49
82	Metal tools, utensils, tableware, etc.	30.17	80.09	25.52	38.01
48	Paper and cardboard, pulp, paper and cardboard products	30.06	85.68	11.18	20.99
40	Rubber and its products	29.14	70.96	12.07	13.41
70	Glass and glassware	25.21	74.44	24.60	40.67
90	Optical, photo, technology, medical equipment, etc.	23.17	19.31	14.01	14.09
68	Stone, plaster, cement, asbestos, mica, etc.	18.21	96.53	22.94	25.25
28	Inorganic chemicals, precious metal compounds, isotopes	12.83	94.44	14.99	12.65
33	Essential oils, perfumes, cosmetics, toiletries	12.06	93.17	5.66	11.10
44	Wood and wood products, charcoal	9.59	23.31	12.24	20.23
20	Food preparations such as vegetables, fruits, nuts, etc.	6.49	54.54	10.86	14.34
57	Carpet and other textile floor coverings	6.17	99.38	18.26	22.23

Source: Yuanda Baolun Comprehensive Economic Research Institute

Fig. 1. Overview of US treasury bills for China with US\$200 billion [1].

Then came the "ZTE" incident. The US Department of Commerce ordered US manufacturers to supply key components to ZTE (China Telecom) ZTE within seven years. However, the ban was lifted and the heat was released in July. The US Department of Commerce scheduled 1102 items from China and worth 50 billion US dollars of goods, added 25% punitive tariffs. Targeting "Made in China 2025"; followed by July 10, the US Trade Representative Office (USTR) published a list of 10% tariffs on Chinese imports worth US\$200 billion, covering a wide range of goods, including consumer goods, such as furniture, pet food,

handbags, baseball gloves, electronic products, etc., as well as chemical products, coal, steel, aluminum and other industrial products. As shown in Fig. 1.

Under this circumstance, if we look at the "panic index VIX" that measures market volatility, the index fell at around 10 points last year. However, after the February stock market crash and the trade war officially started, the index not only rushed back and forth to 30 points. However, for those who have no investment, what is the relationship between trade war and everyone?

First of all, the overall economy will be affected. "On both sides, Taiwan must be injured!"

**1. Because of the proportion of Taiwan's export sales, the information, communication, and machinery industries are the main players in Taiwan's industry.**

Taiwan and China have close trade links. Taiwan is an important electronic supply chain for China. After the export of intermediate materials such as components and components exported from Taiwan to the mainland, the United States will eventually export the market to the United States. If trade sanctions hinder China's exports to the United States, China may be reducing the procurement of components to Taiwan's factories, which is not conducive to the growth of Taiwanese companies, may also reduce the growth of GDP. As shown in Fig. 2.

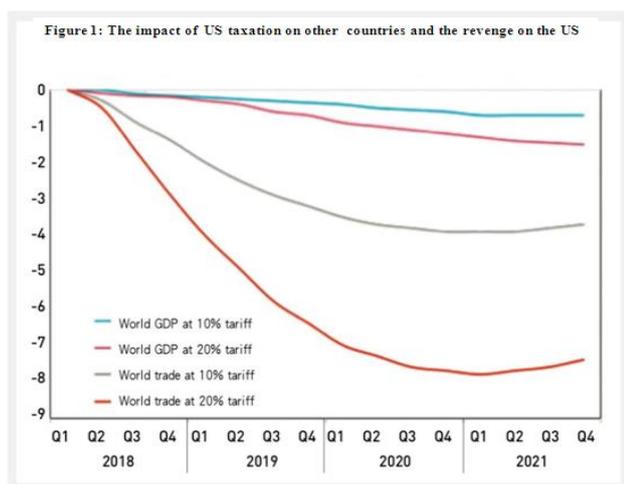


Fig. 2. The impact of US taxation on other countries and the revenue on the US [2] (Source: Bloomberg).

**2. The trade war may ignite the exchange rate war. Recently, the RMB exchange rate against the US dollar has rapidly depreciated rapidly, RMB 6.**

The month has fallen to a new low of 11 months. After the announcement of the 200 billion lists on the 11th, it fell below 6.72 again. The market is speculating that Beijing is using the depreciation of the renminbi (RMB) to deal with US tariff measures against China.

Once the currency depreciates, not only will the Chinese people's purchasing power decline, but it will also trigger foreign capital flight, which is not conducive to the development of the stock market. Once the stock market falls, and the inflation caused by the depreciation of the New Taiwan dollar against the US dollar, the public's pockets will shrink and the domestic consumption power will also decline. If inflationary pressures continue to rise, it may also trigger the central bank to respond to interest rate hikes, so it will

offset the decline in interest rates. Just because interest rates rise, investors will lower their willingness to invest in the stock market. The market may be in a sluggish phase. Affect the mass accumulation of the masses. As shown in Appendix I, the Sino-US trade war is closely related to everyone. Even if you do not invest, you should continue to pay attention to the signs of progress of trade wars [3].

**III. ANALYSIS OF THE FACTORS AFFECTING CROSS-BORDER E-COMMERCE IN SINO-US TRADE CONFLICTS**

This paper is divided into four sections. The first section explores the "original disputes and influence factors of Sino-US trade wars", which shows that the Sino-US trade war continues the current affairs report that is continuously in the analysis of this paper. The second section is "Cross-border e-commerce definition and characteristics and sales model" to explore the development and current situation of online shopping trends in online shopping extended to cross-border e-commerce. The third section is "Consumer Cross-border Shopping Definition and Behavior Model", which mainly organizes the overall behavior patterns of consumers when shopping across borders. The fourth section is "the overall analysis and impact of the three major issues." This study focuses on the three major issues of the impact of Sino-US trade conflicts on cross-border e-commerce, and conduct a holistic study and analysis.

*A. Sino-US Trade War Disputes and the Cause of Influence*

In early June 2018, after President Trump ended the Sichuan Gold Council, he immediately signed an agreement with the US Trade Representative Office to impose a tax on imports of about \$50 billion US dollars from mainland China. As this signing is determined to overturn the mid-May signing of the joint statement, the two sides promised not to fight the trade war consensus, in this case, the mainland is bound to propose a similar amount of US products, in order to increase tariffs, to retaliate against the United States. As a result, the trade war between the two sides is on the verge.

The United States will take such a big move on mainland China. There are two main reasons for this. One is, of course, the long-standing trade deficit between the United States and China. In 2016, the US trade deficit with the mainland was \$250.8 billion US dollars. In 2017, it expanded to 375.2 billion US dollars, accounting for 47% of the US trade deficit of 796.1 billion US dollars. Trump is a businessman, and he certainly cannot tolerate the long-term deficit of the United States against the mainland. Another critical factor is that in recent years, China's economy and national strength have increased substantially, and it has already caused a substantial threat to US power. Therefore, the United States has specifically criticized "Mainland Manufacturing 2025." When US Treasury Secretary Nuchin and trade representative Wright Heze visited the mainland in early May, they raised three most important issues, one of which was to require China to reduce its trade surplus with the US by 100 billion U.S. dollars by 2020; the other is to ask the Chinese mainland government to stop all subsidies for "Made in China 2025."

The possible impact of the Sino-US trade war on Taiwan is that because the United States is the world's largest economy,

they are worried that China's economic strength will grow bigger and bigger, which will ultimately affect the US's dominance in the world. In contrast, Taiwan is a small open economy and highly dependent on international trade. China and the United States are our two largest trading partners. Cross-strait trade accounts for about 30% of Taiwan's total foreign trade, while Taiwan-US trade accounts for about 11%. What position should Taiwan take when there are serious trade conflicts between these two major trading partners? In particular, Taiwan's exports to the mainland account for 40% of Taiwan's total exports, and a large part of them are components and semi-finished products. After processing in mainland factories, they will be sold to the United States and other countries. In other words, the trade relationship between the two sides of the strait is not only a simple trade relationship but also has a significant relationship between production chain and vertical integration.

In the future, the opportunity for cross-strait industrial development and cooperation, in 2017, Taiwan's total exports to the mainland is 130.2 billion US dollars, imports are 51.5 billion US dollars, and Taiwan enjoys a surplus of 78.7 billion US dollars. In 2016, China's exports totaled US\$2.1 trillion, with a surplus of US\$509.7 billion US dollars, of which Taiwanese businesspeople created at least 10% to 15% of mainland exports. In other words, the status quo between the two sides of the strait is that Taiwan earns money from the mainland, while the mainland earns global money. Therefore, the two sides of the strait are "mutual benefit and win-win." This is because the two governments have not blocked the economy and trade and the result of free trade between the two sides of the strait. Therefore, at this stage of the increasing uncertainty of global trade relations, we believe that the relationship between the two sides of the strait should not be reduced, but is more actively used in the mainland China market.

### B. Cross-Border E-commerce Definition and Characteristics and Sales Model

Cross-Border Electronic Commerce (also known as cross-border e-commerce), merely speaking, international trade plus e-commerce, refers to the transaction body belonging to different customs, through the e-commerce way to complete transactions, payment. International business activity for settlement and international logistics delivery (Multi-platform operation 1.1.1 / He Guanghui, GuFengxiang) [5], with the continuous breakthrough of Internet technology and applications, cross-border transactions are no longer limited to physical methods, and e-commerce is expected to become a new model for leading foreign trade. Although online shopping has grown rapidly in recent years, as long as it involves cross-border transactions, it will involve many problems such as logistics, financial flow and exchange taxation, which makes the convenience of cross-border e-commerce far less than domestic transactions. However, if it is just a simple cross-border transaction, it has long existed for a long time. However, because of the "internet" element, the so-called "cross-border e-commerce" has been formed, so that many of them often exist in the physical world and often need to be face to face or the transactional behavior of written documents has become more complicated.

However, with the revision of laws and regulations, as well as the breakthrough of commercial logistics technology, and the emergence of payment tools such as third-party payment, the growth rate of cross-border e-commerce has been quite amazing in recent years. Wang Zhiren, vice president of Yahoo's Taiwanese and Hong Kong e-commerce business group, said that the global cross-border transaction volume in 2014 was about \$230 billion. In 2020, it is expected to see 1 trillion US dollars (about NT\$32.8 trillion). Cross-border consumers account for the whole 44.6% of the online shopping market. Among the significant e-commerce markets in the world, the development speed of the Asian region is the most amazing, which shows the power of cross-border e-commerce. The growth of cross-border e-commerce will be so rapid, and the continuous development of Internet technology and application will provide cross-border e-commerce with much technical support to reduce transaction costs. In fact, compared with traditional international trading behaviors, cross-border e-commerce can release commodity information, transactions and payments through the Internet, which can not only effectively break through the monopolistic behavior of channels or agents, but also reduce the barriers to entry and save transactions time, the variety of online marketing models, and the relatively low marketing costs of traditional media advertising, cross-border e-commerce marketing methods are not only more flexible, especially suitable for the expansion of SMEs [6].

In this study, we analyze the cross-border transactions of goods and services for cross-border e-commerce through Internet technology. Because of its advantages of openness, efficiency, convenience, and low barriers to entry, SMEs can also be introduced into the international market. Borderless trade in today's Internet generation, companies in virtual business transactions are not in the process of launching new plans to become a new model for leading foreign trade,

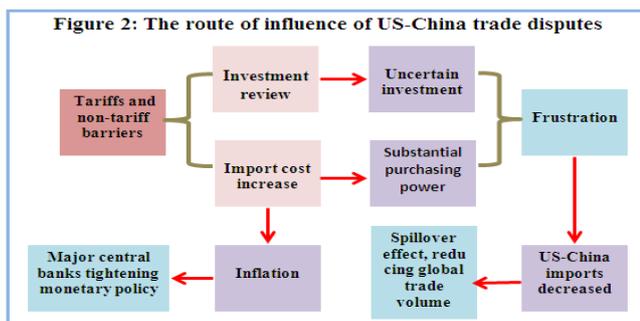


Fig. 3. The route of the influence of US-China trade disputes [1].  
(Source: Yuanda Baohua Comprehensive Economic Research Institute).

All in all, the possibility of a trade war between the international communities has increased recently, and Taiwan will undoubtedly be affected during its stay. As shown in Appendix II, Taiwan government should be careful to minimize the negative impact and react to the economic changes with appropriate strategies. On the other hand, when the United States imposes various sanctions or boycotts on mainland China, shall we have to adopt the same boycott strategy? Alternatively, should we use this opportunity more actively to expand business opportunities across the Taiwan Strait? This is what our government should think carefully [4]. As shown in Fig. 3.

providing new impetus for economic development.

### *C. Consumer Cross-Border Shopping Definition and Behavior Model*

In consumer shopping behavior, consumers can choose how to understand a product (such as online search and shopping). Product creation is no longer only in the business; today consumers can also obtain products through various channels and not subject to the limit. Relatively through online shopping and even across the shopping pipeline to buy products, even online shopping also offers an evaluation of the store and product, whether in domestic or cross-border e-commerce (such as Amazon website).

After the consumer online shopping behavior will be accompanied by a series of activities, including use, evaluation, and in some cases, consumer satisfaction and the resulting consumer responses, such as repurchase intentions, positive word of mouth, and customers loyalty, consumers still pay attention to the quality of after-sales service of regional products in cross-border e-commerce. Relative to the choice of cross-border e-commerce, it is necessary to satisfy the consumer's desire to purchase and use the service evaluation to understand consumer preferences, memory, and consumer spending in big data. There are unique rules and cultures to influence consumer behavior [7].

Based on factors such as "increasing sales channels", "reducing marketing costs" and "expanding the network population market", it is expected that there will be more traditional enterprises in the future to speed up the pace of laying out network channels. Traditional enterprises will also become the key factor driving the growth of the e-commerce market in the next five years. How traditional enterprises position e-commerce value, segmentation or differentiation, network access, and physical channel sales will be the traditional online shopping strategy. The key to success is the critical factor driving the growth of the e-commerce market in the next five years [7].

It is expected that more online shoppers will gradually develop from "vertical" to "horizontal" in the future, such as Taiwan blogs to online stores, momo shopping networks, China's Jingdong Mall, Dangdang, Amazon, Vanke Eslite and other operators. In the past, the "low unit price" and "standardized" products suitable for the online shopping environment will also develop toward the trend of "high unit price" and "personalization". The product items will no longer be limited to books, clothes, shoes, and consumer electronics. Luxury goods such as large household appliances or diamonds will become online shopping products, a new trend of online shopping products - high unit price, personalized. The e-commerce environment is becoming more and more mature. The trend of cross-border online shopping has arisen. Regardless of the e-commerce industry in Taiwan or mainland China and Japan, the layout of cross-border online shopping is regarded as an essential development strategy. According to the MIC survey, mainland China is the most preferred multinational sales area for Taiwan's e-shops in the future, 81.8% of e-stores express high interest, followed by Japan (38.4%).

In the future, the online shopping market will show a polarized development as the trend. The major B2B2C platform operators and large B2C online shoppers will

gradually develop into a comprehensive online shopping mall by substantial capital, gold flow logistics, brand reputation, and clustering effects. A large number of small and medium-sized B2C operators will fully grasp the niche market, lock in the minority groups, and seize the online shopping market with distinctive features and positioning. With the continuous growth of the number of "online population" and "popular population penetration rate" in various countries, it will simultaneously drive the global economic system from the traditional to the new era of network economy and derive online shopping, financial logistics, online advertising, and internet. The music industry will show a significant growth trend. Taiwan online shopping vendors can develop in three directions: segmentation of product market positioning, activation of user interaction mechanisms and seizure of overseas business opportunities [8].

In this study, it is analyzed that the sales of Taiwanese consumers in cross-border e-commerce shopping are increasing year by year, but there are still some areas for improvement, such as the most basic financial flow, logistics infrastructure, such as "lack of logistics management and distribution return. The cargo mechanism, the "international credit card theft problem and the difficulty of credit reporting", "the problem of online shopping fakes and fraud on various online platforms" will become two significant obstacles to the transnational operation of Taiwan's electronic stores.

### *D. The Overall Analysis and Impact of the Three Major Issues*

Since the Sino-US trade has ushered in punitive tariffs on goods worth up to 50 billion US dollars (about 316.5 billion yuan), and restrict Chinese companies from investing in the United States, the Ministry of Commerce of China issued a counterattack on Trump's tariff policy, issued a list of suspension concessions for the US import of steel and aluminum 232 measures and sought public opinions, and proposed to impose tariffs on some products imported from the United States. A far-reaching trade war is brewing. As an important part of China's import and export trade, in the face of the US tariffs, will cross-border e-commerce be compromised? How do sellers and buyers in cross-border e-commerce industry look at it?

For this study, the following analysis is proposed:

**1. Commodity tariffs: For online shopping products, cross-border e-commerce sellers, small orders are almost unaffected, tariffs only account for a small portion of the cost of small cross-border e-commerce orders; and buyers may increase shopping costs. The seller will absorb the cost to close the deal. Cross-border e-commerce sales such as Wal-Mart will increase the purchase cost, and consumers will choose to purchase online. From the analysis of cost structure, the advantage of cross-border market is always there.**

**2. Cross-border trade: the Sino-US trade war started, foreign trade B2B impact, cross-border e-commerce B2C has new opportunities, new markets emerge in Australia, India, the Middle East, etc., B2C share will continue to rise! Traditional enterprises and cross-border e-commerce companies must make adjustments**

### **according to policies.**

Cross-border exports to the United States are very diverse, and the range of products on the list is extensive, and it is the most lethal to the large-scale layout of US overseas warehouses and American Amazon. The increase in tariffs has a significant impact on general trade.

Only 1% of the 1,102 product categories in the final list of tax-increasing products are consumer goods. The relative seller's goods will be strictly investigated by the US Customs, and the US government will further tighten the cross-border e-commerce policy, from entry to listing to intellectual property management. Therefore, under the trade war, cross-border e-commerce must comply with the relevant local laws and regulations and sellers' compliance rules, as well as the added value of strengthening the competitiveness of their products [9].

This study comprehensively analyzes the impact of consumers on the use of cross-border e-commerce platform online shoppers under the overall Sino-US trade war. Under the overall analysis data, it can be clearly pointed out that the increase of tariffs will increase the cost of a small number of commodities, including consumer goods which are less than relative influence. Under the cross-border e-commerce triangle online shopping relationship, Taiwanese consumers are mainly online shopping or mainland China. It is also pointed out that cross-border e-commerce is bound by the US e-commerce platform, and can also be replaced by sellers under the Sino-US trade war. Sellers can also increase product premium space through product design.

## **IV. THE RESEARCH RESULTS**

The purpose of this study is to: **first, analyze the online shopping methods of consumers using cross-border e-commerce; second, understand the current business model of cross-border e-commerce online shopping platform, and third, explore the Sino-US trade war for consumers cross-border shopping Impact. After the above analysis, the study obtained the following results:**

### *A. The Way Consumers Use Cross-Border E-Commerce Online Shopping*

According to an extensive survey conducted by the Institute of Industrial Intelligence Research (MIC) on consumer online shopping behavior, it was found that there was no significant increase in the proportion of cross-border online shopping in the past two years, but in 2017, users who had cross-border online shopping had an average annual consumption of 16,378 yuan. Compared with 2016, 15,535 yuan grew by 5.4%, of which 26 to 35 years old is the most critical age group. The most popular online shopping platform for cross-border online shopping is Taobao/Tmall Mall (69.5%), followed by Japan Lotte (19.3%), Japan Amazon (17.9%), US Amazon (14.2%) and eBay (7.2%). Therefore, there has been no significant increase in the proportion of cross-border online shopping in the past two years. However, from the growth of cross-border amounts, Taiwanese netizens still have a potential for cross-border shopping.

Among all cross-border online shopping channels, the maximum number of people are accustomed to ordering

themselves (71.1%), while the proportion of domestic personal purchasing sellers has increased to 37.4% compared with 2016 (31.8%), of which the proportion of women (44.5%) is significantly higher than males (31.3%); the proportion of websites that have been booked through the domestic market has dropped from 25.8% to 20.3%. It is speculated that the reason for the increase in the proportion of personal purchasing and the decrease in the proportion of purchasing websites is related to the increase in the sales channels of individual sellers such as shrimp skin, store street personal stores, and Facebook in recent years. It is estimated that the platform of future flat and agency nature will also be affected.

According to the five major categories of cross-border online shopping, clothing accessories (39.3%), daily necessities (36.9%), 3C products (35.6%), boutique shoes (20.9%) and furniture appliances (11.8%). The largest purchase of male items was 3C (53.7%), which was significantly higher than that of females (14.5%); the largest purchase of women was clothing accessories (52.6%). Among them, male cross-border online shoppers have higher purchasing power than women, with an average annual consumption of 18,279 yuan and a female group of 14,171 yuan. The five main reasons for cross-border online shoppers to choose cross-border online shopping are price (59.1%), cannot buy in Taiwan (56.1%), variety (24.6%), discounts (24.1%) and quality (11.2%). Different genders are also different, the first motivation for men is not bought in Taiwan (66.7%), far higher than the proportion of women (43.9%), as the first significant motivation for women is affordable (60.7%), followed by It is not available in China. The acceptance and popularization of cross-border online shopping behavior take longer than domestic online shopping. Therefore, the proportion of cross-border online shopping has not increased significantly in recent years. However, from the cross-border growth, Taiwanese netizens still have a potential for cross-border shopping.

### *B. The Current Business Model of Cross-Border E-Commerce Online Shopping Platform*

According to the survey results, the top five main reasons for reducing the willingness to cross-border shopping are inconvenient return (45.2%), international freight is too expensive (44.2%), consumer disputes helpless (41.4%), and distrust overseas websites. (21.1%) and not directly sent to Taiwan, need to be transshipped through a third party (19.3%). Besides, compared to the "word of mouth," the acquisition of cross-border online shopping information is more important than domestic online shopping. Cross-international management has gradually become a development trend. Nearly 60.4% of e-shops plan to expand into the mainland China market, and the number of companies planning to expand directly into the market is the largest. At present, the proportion of Taiwanese electronic stores that have engaged in cross-international operations is 18.2%. The number of companies invested in painting in the next two years accounted for 28.1%. The overseas market, which is planned to be developed, has the highest proportion in mainland China (60.4%), followed by regional markets such as Japan (13.2%), the United States (11.9%) and Europe (7.9%). Most of the operators plan to sell by direct sales on

the website and can expand their cross-span international business opportunities by strengthening their product features and segmenting market positioning. It is generally believed that the supporting mechanism of logistics management and gold flow trading is the most critical sales across international networks.

The proportion of online shopping in Taiwan has been as high as 43%, and the proportion of direct online purchases to foreign websites is only 16.3%. There is 80% of netizens still purchase online through international auction websites or shopping websites. The reason for the increase in the proportion and the decrease in the proportion of purchasing websites is related to the increase in the sales channels of individual sellers such as shrimp skin, store street personal stores, and Facebook in recent years. It is estimated that the platform of future flat and agency nature will also be affected. As for the cross-border online shopping family to choose cross-border online shopping, the five main reasons are: affordable (59.1%), cannot buy in Taiwan (56.1%), variety (24.6%), promotional discounts (24.1%) and sound quality (11.2%). There are two kinds of interpretations for cross-border purchases of "affordable" products. One is to buy products with a meager unit price; the other is to buy products that are cheaper than domestic ones, to estimate the manufacturers that do not have scale advantages in the future or to trade the spreads. Businesses will be affected by the rise of cross-border e-commerce. While Chinese people are becoming more and more familiar with cross-border shopping, as many as 84.3% of consumers expressed their willingness to try or continue cross-border shopping in the future, and it is expected that cross-border shopping will be more active in the future.

### *C. The Impact of the Sino-US Trade War on Consumers' Cross-Border Shopping*

Since the US government has announced a final list of tariffs worth about \$16 billion US dollars, involving 279 tariff lines, including electronic parts, chemicals, batteries, rail locomotives, etc., which imposes a 25% tariff, which will increase the US The number of Chinese products taxed reached \$50 billion US dollars.

Many sellers are more concerned about the impact of trade wars on cross-border e-commerce sellers. How should small and medium-sized sellers respond? Judging from the tax collection list, some of the products involved in taxation are mostly high-end products, and most sellers sell some of the daily necessities that are not so big. Regardless of cross-border import and export, if, unfortunately, increase the tariff list between China and the United States, the cost will be significantly improved, and it will be the most lethal for the large-scale layout of US overseas warehouses and Amazon and other e-commerce companies.

The increase in tariffs has a significant impact on general trade, but for duty-free online shopping and cross-border e-commerce, small orders are almost unaffected, and tariffs only account for a small portion of the cost of small cross-border e-commerce orders. As a cross-border seller, what we can do is to improve our product advantages and control costs to minimize losses. To improve the competitive advantage of products, nothing more than to do the following:

**1. Grasp the quality of the products, improve the service, and reduce the return rate.**

**2. Control costs, in the case of quality assurance, try to control costs, such as the original excellent packaging products, can be considered to be a simple package, after all, how good you package, Amazon will do a second package installment.**

**3. Reduce logistics costs; sellers can consider a variety of transportation methods to reduce costs.**

While controlling costs, sellers must also pay attention to intellectual property rights. The US restrictions on trade measures have repeatedly raised the issue of infringement of intellectual property rights. Some sellers have repeatedly received small red flags on platforms such as Wish and Amazon. The products are removed and the stores are closed.

The US government's policy of imposing tariffs on Chinese goods is sure to have a substantial impact on cross-border retail e-commerce. This is the basic view. For many export cross-border e-commerce sellers, for example, Amazon's FBA naturally puts much pressure on Chinese sellers. Because for cross-border e-commerce retailing, branding is a significant trend this year, and for low-profit sellers and industry chains that do not have much core competitiveness, those small and micro enterprises will be eliminated. The year of 2018 should be cross-border retail e-commerce is a real year of a reshuffle, coupled with this taxation policy, so that the industry's reshuffle speed, small and micro enterprises, low-end industries will inevitably be eliminated.

## V. CONCLUSIONS AND RECOMMENDATIONS

### *A. Research Findings*

In the scope of this study, consumers are concerned about cross-border e-commerce online shopping in recent years. The main controversy is that since March 2018, the world's two major economies, China and the United States, have declared war. It has repeatedly announced that it will impose tariffs of up to 25% on each other's exports. Since July 6, 2018, China and the United States have officially launched the largest economic and trade war in economic history.

In response to this study, we analyze the impact of consumers on cross-border online shopping in the Sino-US trade war, and the following points of view and recommendations for subsequent development:

1. Impact on Taiwan-funded enterprises: Taiwan-funded enterprises have economic and trade relations with mainland China, such as their products involved in the Sino-US trade war plus tariffs will be directly or indirectly affected by the Sino-US trade war. Influence layer regardless of the increase or impact of production or import costs (tariffs) in China, mainly from triangular trade of the willingness to sell products to the United States and importers are bound to cause an impact on corporate profits.

2. Impact on cross-border export e-commerce: The impact of this Sino-US trade war on cross-border export e-commerce, especially large-scale stocking of bulk B2B trade and overseas warehouse models may be affected. Currently, 3C electricity Zi, textile and garment industry chain to build advantages for cross-border e-commerce exports, the US

e-commerce market is the second only to the country's second largest e-commerce market in the world. The industry has to move production capacity to other production lines to move the manufacturing. The problem of cost and the increasing formalization of the cross-border retail e-commerce market, the threshold are getting higher and higher.

3. Impact on consumers' online shopping behavior: The consumer purchased on the cross-border e-commerce platform online shopping, the consumer goods account for a minimal amount of tax, and the part of the company that sells to the United States is bound to be produced on the mainland. Hence, costs will be increased. In general, cross-border online shopping by consumers under the Sino-US trade war has not had a significant impact.

**B. Research Limitations and Future Research Recommendations**

This study is limited to the fact that the tariffs on trade in all countries of the world already exist. The main factor is that the Sino-US trade war has not increased, and the tariffs have been increased. The limitations of the research data will make the content objective and accurate. Therefore, the research results are affected.

Based on the above research limitations, this study suggests that follow-up researchers can continue to raise awareness of the crisis of trade tariffs among countries in the Sino-US trade war. It also conducts research and discussion on the regional transfer of cross-border e-commerce platforms and the start of the blue ocean in the e-commerce industry in emerging markets.

**APPENDIX**

Appendix I: Sino-US trade war timeline  
(Source: Financial M square 2018.12.15) [10]

Sino-US trade war timeline	
<b>2017</b>	
<b>Apr.</b>	<b>04/01</b> • Launched "232 investigation" for steel and aluminum products • Publish "Special 301 Report" to list China as a priority
<b>Aug.</b>	<b>08/18</b> • Start "Special 301 Report"
<b>Nov.</b>	<b>11/01</b> • USTR Initiated investigation of Chinese aluminum alloy panels
<b>2018</b>	
<b>Jan.</b>	<b>01/01</b> • USTR Issued the "232 Investigation" report and found that imported steel and aluminum damaged US security <b>/23</b> • Trump issued a presidential declaration to impose tariffs on residential washing machines, solar cells, and components
<b>Mar.</b>	<b>03/01</b> • Trump's announcement on the 232 investigation 25% for steel and 15% for aluminum <b>/22</b> • USTR Issued the "301 Investigation" report, Trump signed the "China Economic Aggression" Memorandum
<b>Apr.</b>	<b>04/03</b> • USTR Issue a list of proposed punitive tariffs for China, totaling 1,333 items, approximately \$50 billion <b>/04</b> • China's Ministry of Commerce counterattacks, a total of 106 taxation lists for soybeans, planes, etc. <b>/16</b> • The US Department of Commerce announced that within seven years, US companies and individuals banned the sale of components to China.
<b>May.</b>	<b>05/03</b> • The US trade delegation negotiated with China to reduce the trade deficit by 200 billion in 2020 and stop the Chinese-made 2025 subsidies involving specific industries. <b>/15-17</b> • USTR Public hearing on China's punitive tariff list <b>/15-19</b> • The Chinese trade delegation visited the United States. On the 19th, the White House issued a joint statement between China and the United States. The two sides agreed to take effective measures to reduce the US trade deficit with China. China also promised to increase agricultural products and energy imports. <b>/29</b> • The White House once again issued a three-point statement: (1) In response to China's technology transfer, technology property rights and innovation, the United States will still implement specific investment restrictions and export control measures to protect national security. The details will be announced on 6/30, and the implementation period is not fixed.

	<b>/31</b> • The White House confirms the implementation of steel and aluminum tariffs on the EU, Canada and Mexico
<b>Jun.</b>	<b>06/15</b> • USTR Publish a list of tariffs on Chinese goods The implementation of tariffs will be divided into two phases. First, a 25% tariff was imposed on 818 items at 7/6. After that, we will conduct a public hearing discussion on 284 items of "China 2025 Manufacturing" and further set the final tariff range. <b>/16</b> • The Ministry of Commerce of China announced the same size and the same two-stage tariff list. In the first phase, a 25% tariff will be imposed on US\$34 billion of key commodities such as US soybeans and automobiles, which will take effect on 7/6. In the second phase, the project will enroll 25% of the 16 billion products such as chemicals and energy, and the effective date will be announced separately. The results reached by both parties have also failed. <b>/27</b> • The White House issued a statement stating that the Foreign Investment Risk Review Act will strengthen the power of existing foreign investment committees to prevent important technology from shifting • Trump instructs the Commerce Minister to assess export control measures against the United States
<b>Jul.</b>	<b>07/6</b> • US first-stage tariff list is in force • China's first phase tariff list is in force • China sues US tariff measures at the WTO • USTR Announce details of China tariff list exemption application
<b>Aug.</b>	<b>/10</b> • USTR Announced a list of 200 billion tariffs <b>08/01</b> • The United States lists 44 Chinese entities on the export control list based on national security • USTR Developed to raise the 10% tariff on the previous 200 billion goods to 25% <b>/03</b> • China will counterattack the US's previous list of 200 billion tariffs and tariff escalation actions, and will impose a 5%-25% tariff on US\$60 billion in commodities.
<b>Sep.</b>	<b>/23</b> • The United States officially entered into a 25% tariff on China's second-stage commodity list (16 billion). At the same time, China's 25% tariff on the second phase of the US is also in effect. <b>/18</b> • The United States will formally impose a 10% tariff on China's 200 billion commodities on 9/24. 2019/1/1 tariff will be raised to 25% • China announced that it will levy a 5-10% tariff on US 60 billion commodities on 9/24.
<b>Oct.</b>	<b>/1</b> • The United States, Canada, and Mexico reached a three-point agreement on trade issues, and North American Free Trade (NAFTA) entered a history. The new agreement is called the US-Canada Trade Agreement (USMCA) and has not yet passed Congress. • For automotive projects, the regional value is adjusted to 75% and the labor value is regulated. 40% of the manufacturing needs to be high-wage labor. In addition, the duty tax allowance for Canadian and Indian cars is granted. • USMCA Chapter 32 gives Member States the right to decide to conclude a free trade agreement with a non-market mechanism country when other member states decide to terminate the USMCA agreement after six months and replace it with a new bilateral trade agreement.
<b>Dec.</b>	<b>/1</b> • The G20 "Chuan Xi Hui" US agreed to suspend the 1/1 billion tax increase to 25% next year, but the two sides must reach an agreement on issues such as technology transfer and intellectual property protection in the next 90 days, otherwise the US will re-establish tariffs. 10% up to 25% • China agrees to expand procurement of US agricultural products, energy, industry and other products has reduced the trade deficit between the two sides

Appendix II: Taiwan's response strategy for the Sino-US trade war  
(Source: Yuedan Accounting Network 2018.12.31) [11]

Possible response strategy	Description
<b>Supply chain adjustment</b>	1 · Moderate transfer of production to countries flying in mainland China or the United States to change the origin of goods, thereby avoiding the impact of punitive tariffs. 2 · If the supply chain is distributed in mainland China or other countries, Taiwanese companies may consider redistributing production ratios, reducing the production of native goods in mainland China, and increasing production in other countries.
<b>Merchandise tax inspection</b>	According to PwC's past experience, it is possible for multinational companies to classify product tariffs by an average of 20-30%. It is recommended that companies can re-examine the affected products and whether they can avoid the impact of punitive tariffs by tax classification.
<b>Use of free trade agreements and country of origin documents</b>	Since the tariffs imposed on the goods are determined by the origin of the imported goods, Taiwanese businessmen can: 1 · Using the principle of "substantial transformation" in the free trade agreement, if the finished product is produced by two or more countries, the processing level of the remaining countries can be appropriately adjusted to conform to the origin conversion; or 2 · Provide non-Chinese mainland or US certificate of origin at the time of import.
<b>Prepare a statement of changes in profit margins</b>	When the change in the profit rate determined by the transfer pricing is caused by the increase in import costs, and then caused by the local tax bureau to question, the relevant explanatory documents for the reduction of the company's profit rate may be prepared in advance.
<b>Utilize the "first sale" model</b>	If it meets the specifications set by the US first-time sales, for example, Taiwanese companies are intermediaries between mainland China suppliers and US traders, and they must advocate the transaction price of mainland Chinese suppliers to Taiwanese companies as the basis for the valuation of duty-paid prices when importing the United States. And calculating tariffs can reduce the impact of trade
<b>Apply for a punitive tariff exemption</b>	In addition to the countermeasures adopted by the above-mentioned manufacturers, if the company imports into the US products and involves the items in the list and meets the conditions set by the USTR, it can apply to the USTR for exemption from customs duties before October 9, 2018.

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