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JOURNAL OF FINANCE RESEARCH

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The Analysis of Asda-Sainsbury's Merger/Acquisition

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ABSTRACT

The merger of Sainsbury's and Asda caused huge impacts on Britain retail industry. Since the announcement that J Sainsbury plc would acquire Asda for £ 7.5 billion was published in April, 2018, the changes in the UK grocery market have been discussed and questioned. And the grocery market in UK will be reordered without doubt. This essay firstly introduces Sainsbury by using Pestle model, then aims to figure out the type and the benefits of this M&A, analyze the market response and how investors react to this event in the first two parts. In the third and the last part, we aim to explain why the CMA blocked the merge.

1. Pestle of Sainsbury

Sainsbury's is the second largest supermarket chain in the UK which was established in London 150 years ago. However, the supermarket has long been in fierce competition with other brands, such as market-leading Tesco or close competitor Asda. In such a difficult environment, it is vital that Sainsbury's pay close attention to its immediate business environment and how this may affect internal operations. Recalling affect the political, economic, social, cultural, technological, legal and environmental factors and that's what we have to do in this article is a method of identifying potential factors that could affect Sainsbury's is the PESTLE analysis.

1.1 Political——Brexit

In 2016, the UK voted to leave the European Union.

The move called "Brexit" has not yet happened. However, this might be Sainsbury's (Sainsbury's) and other British supermarket chains have serious consequences. The EU may make it difficult to leave the supermarket affordable products imported from abroad. Rising cost of foreign products may eventually be passed on to consumers, but this means that Sainsbury will have to strive to ensure that customers continue to consume as much as possible, in order to maximize profits.

1.2 Sociocultural

(1) Fierce competition

Sainsbury's faces fierce competition. There are many popular supermarket chains in the UK, including Tesco, Morisons, Waitrose, Lidl, Aldi, Asda, etc. Moreover, the country also has a large number of independent corner shops and other more specialized food stores, such as

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butchers and bakeries. The game showed no signs of regression, forcing Sainsbury's to innovate while minimizing the ability to make unreasonable profits.

(2) Healthy diet

The 21st century shows a clear socio-cultural trend of healthy eating. Unhealthy "junk" food is no longer popular, and salads, milkshakes and snacks are being replaced. The trend of constantly changing eating habits is an extremely important trend for supermarket chains like Sainsbury's, because adapting to consumer needs is essential for long-term success.

(3) Fair trade movement

Consumers are also becoming more aware of where their food comes from, so they are also paying attention to the fair-trade movement. This social initiative involves paying extra for food and beverages so that farmers can be assured of buying products at fairer prices. The fair trade movement is particularly popular in the context of coffee and chocolate, but it has a wide range of influence, affecting all products in the aisle.

1.3 Technical

(1) New Technology

Advances in analytical technology, such as the use of Big Data and Artificial Intelligence Principles, have enabled companies around the world to learn more about their operations. In the case of supermarkets such as Sainsbury's, advances in analysis can be used to build highly accurate models that describe the expected sale and prices of a given product.

(2) Online Shopping

Like most other supermarkets in the UK, Sainsbury's also offers online shopping options. More than ever, customers want to order groceries from the comfort of their homes. The emergence of e-commerce and its use in the food industry is still in its early stages. It will be very interesting to see how supermarkets make the most of this evolving technology.

1.4 Environmental—Carbon Footprint

Supermarket chain responsible for a large carbon footprint. Whether it is the transport of goods from one side to the other side of the country, or around the clock to make large supermarkets and warehouse lighting, Sainsbury's (Sainsbury's) will certainly create their share of carbon dioxide due. As concerns about environmental issues increase, companies around the world are expected to reduce their carbon footprints. Sainsbury (Sainsbury's) will need to find new ways to become more environmentally friendly, and seriously consider how to minimize the eco-

logical damage caused by the operations.

1.5 Final Thoughts

Sainsbury has a place in British supermarkets. However, the brand must deal with fierce competition, political uncertainty, rising fuel costs and salaries, and consumers' higher expectations for healthy eating choices, supplier benefits and environmental awareness. On the positive side, Sainsbury's has multiple ways to differentiate itself from other chains, and it can do this with the help of advanced analytics. It is also because of these challenges faced by Sainsbury's, it decided to adopt the method of mergers and acquisitions to enhance their size and strength.

2. Introduction of the Merger and acquisition between Sainsbury and Asda

On April 30, 2018, Sainsbury and Asda confirmed to the media that they had decided to invest more than £12 billion in a super-merger plan. Asda was founded in 1949 and was acquired by Wal-Mart in 1999. It is the first shopping mall in the UK. It clearly prohibits the use of artificial melanin and spices in foods and tea beverages produced by itself, and focuses on "zero pollution" food. It is one of the British retail giants. Asda is undoubtedly one of the key and reasonable layouts of Wal-Mart in the UK, but the development trend of this well-known shopping mall in recent years is not satisfactory. Strong competitors have released a lot of pressure on it, and Wal-Mart is also considering the next step, about Asda. Sainsbury is the second largest supermarket chain in the UK, accounting for approximately 16.9% of the market share. The company's stock is listed and traded on the London Stock Exchange and is a component of the FTSE 100 Index. Sainsbury's was founded in 1869 by John James Sainsbury as a store in Drury Lane, London, England. The company became the largest grocery retailer in the UK in 1922 and was an early adopter of the self-service retail industry in the UK. Meanwhile, they launched a price war to combat German low-cost supermarkets Aldi, Lidl and emerging threats from "super e-commerce" Amazon. Based on the market share of Sainsbury's and ASD the UK food retail industry (15.8% and 15.6% respectively), the combined new company would have 2,800 stores in the industry and nearly one third of the UK market share. According to The Guardian (2018), the new transaction meant the merger would become Britain's biggest supermarket chain, overtaking Tesco that was the 1st giant in the grocery market before. The M&A (M&A) mentioned in this paper mainly focus on the outcome, with all assets and liabilities of two

or more companies combined together, rather than the way how it be done, merging or purchasing. In this case, three different types can be adopted to help analyze most of real-world company cases: strategic M&A, financial M&A, and conglomerate M&A, among which, strategic M&A is normally subdivided into horizontal acquisition, vertical acquisition and tax motivated acquisition. Considering the situation of Sainsbury and Asda, it should belong to the horizontal type of strategic M&A. The synergy effect produced by this merger is a dominant reason to be deemed as the strategic type, because the two working together generate more value than the sum of the individual parts. In the meantime, as they produce and sell similar products in the same business sector, their merger action belongs to horizontal M&A. It means that synergy can be obtained through many forms such as cost savings, increased market share and exploring new market opportunities.

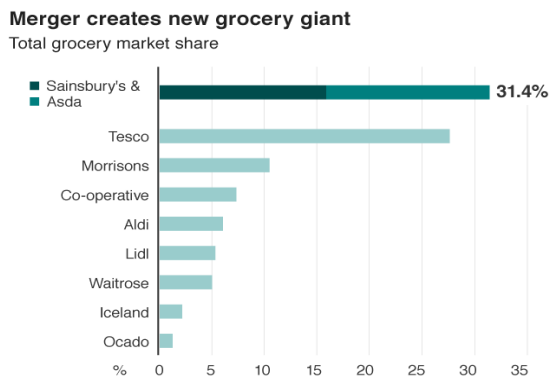


Figure 1. Merger creates new grocery giant (Source: Kantar Worldpanel. Market share 1)

The expected benefits of supermarket leading companies' transactions can be easily noticed in many ways. It is apparent that one of the most significant signs, stock price of Sainsbury, soared 20% on the second day of the media's affirmation, rising to its highest level since 2014, while the shares of its main competitors Tesco and Morrisons had fallen back. The super company said that due to its superior market control capabilities, it is preparing to reduce the price of the two branded supermarkets by 10%. This benefited not only optical investors, but also the ordinary shoppers, resulting from a supermarket price war caused by the £12 billion large-scale merger. Besides, there are possible benefits from reduced competition resulting from the acquisition of a competitive competitor, through the cooperation of ready-made production lines, rapidly formed production capacity, and enlarged market share, thereby enhancing their competitiveness. In addition, achieving economies of scale, they can reduce costs, increase the economic benefit and risk resistance of enterprises, to improve the industry concentration. Horizontal

mergers can also bring about an increase in industry risks and the use of monopoly power to increase corporate profits. As what Sainsbury's said on Twitter (Digital spy, 2018), "We plan to operate a dual-brand strategy in grocery, with the scale to invest in the areas that matter most to customers: price, quality and more flexible ways to shop." On the one hand, ASDA will be used to compete with German low-priced supermarket brands Lidl and Aldi; on the other hand, Sainsbury's price cuts are weakening the market competitiveness of high-end food retailers such as M&S and Waitrose. Through the combined sales of up to 500,000 online payments per week from the two supermarkets, the new company also hopes to put pressure on online food retailer Amazon.

3. Market Response and investors' views on this M&A

According to Financial Times, before declaring the super-merger plan with Asda, Sainsbury's has experienced a slump in stock for at least a year, just as nearly all of the UK retailers were facing such an issue. (2018) However, the deal between Asda and Sainsbury's gave rise to a significant increase in share price of Sainsbury's, which was bought to the highest level ever since 2015 and are still reaming at a high level as compared to the share price in last 3 years. While the share prices of rival retailers of Sainsbury's, such as Tesco and Morris's, fell after the declaration. In addition, till December 2018, share prices of Sainsbury's is still the highest.



As at 04-Dec-2018 12:31:20 - All data delayed by at least 15 minutes.

Figure 2. Market Response and investors' views on this M&A

source: «London stock Exchange»

There are two methods for empirical research on the performance of listed companies' M&A. The two methods based on stock price which is called event study methodology (Fama, Fisher, Jensen and Roll, 1969) and another one is financial indicator method. The event study methodology is based on the stock price changes before

and after the merger, based on the stock price, and tests the responses of the securities market before and after the company's M&A. The price of a stock is related to the company's behavior. If the event has a significant impact, the company's stock price will change a lot. (Fama, Fisher, Jensen 1969). This approach generally represents the expected future earnings of the business. If the market expects M&A to improve the profitability of the company, then the company's stock will generally rise. If the M&A cannot benefit the company, even it will damage the profitability of the company, then in general, the company's stock will fall.

Stock price is a threshold indicator that reflect how the investors view the operating activities of a company. In this M&A case, the premium price of the stock price of Sainsbury's can be deemed to be the value that the synergy effect will generate in the future. Since the stock price increased dramatically, it is rational to infer that investors anticipate the synergy effect of M/A could bring about future gains to the company and to the investors. Besides, the financial option can signal company's attitude to the merge and acquisition. In terms of the M/A deal between Asda and Salisbury's, Walmart, the US parent company of Asda, will obtain 42% share capital after corporate combination with the addition of GBP 2.98 billion in cash. (Financial Times, 2018) But that no debt involves in this M/A activities cannot be thought as the gist of that the involved companies in the M/A might not have as strong confidence of successful combination as investors expected, since leveraged buyouts are generally not considered in strategic acquisitions. Instead, that many major shareholders of Salisbury's supported the deal could be a sign of strong confidence in achieving the M/A. (Financial Times, 2018)

Based on the rise in stock price of Salisbury's, it is reasonable to make a point that investors have confidence in that the M&A will be achieved and that the stock of Salisbury's is currently undervalued. Moreover, because the stock prices of its competitors decreased and are by far lower than the price of its stock, after the M/A, the combined organization of Asda and Salisbury's will be more competitive in the retailer market and able to generate great value by taking advantages of synergy.

At the beginning of essay, the M&A of Asda and Sainsbury's companies have been introduced as horizontal mergers and acquisitions. Horizontal mergers and acquisitions refer to mergers and acquisitions between enterprises in the same industry or in the same production sector. The purpose is to expand the scale of business operations, generate economies of scale, increase production efficiency, and reduce production costs, and increase market share

and competitiveness. It is obviously that after the merger, the market reaction indicates that the stock price has risen, the suppression of other competitors and the increase in competitiveness in this industry. All the indicators show that the merger has achieved the expected goals. This response of this merger is typical for horizontal mergers.

4. Anti-Trust and Blocking the Takeover

Trust is one of the advanced forms of monopoly organization, which is composed of many enterprises that produce similar commodities or products closely related to the merger of enterprises. (Dwight, Theodore 1888.) From the overall point of view of social and economic development, mergers and acquisition of enterprises can optimize the allocation of resources, enhance the productive efficiency of society, and promote the consumer welfare. However, when mergers and acquisition reach a certain scale, leading to a sharp increase of market power of a market subject, monopoly may emerge as a result of a distorted market competition structure (Li, Rita Yi Man; Li, Yi Lutz, 2013). Anti-trust bodies refer to those administrative agencies which specialize in anti-trust law enforcement or whose main duties are anti-monopoly law enforcement. Anti-trust law can be simply defined as the general term of legal norms that regulate business behavior and maintain market competition. Its content mainly includes: Control the anti-competitive behavior of negotiation between two or more operators; Control the abuse of market dominance by a single dominant enterprise in a certain market; Control the excessive concentration of industrial structure caused by mergers and acquisitions. Since the basic means and mode of allocating social resources in market economy countries are market competition, and market competition order is the basic economic order, anti-trust bodies have great independence and high status in market economy. (Taylor, Martyn D., 2006).

Salisbury's ranked second in Britain among super-market chains, followed by Asda, the third largest super-market. As Salisbury's merged with Asda, the combined enterprise would have a total valuation of £15 billion, and their market share would exceed Tesco, the currently largest supermarket in UK. David Taylor, the chairman of the J Sainsbury plc board who is going to retire, said that the main purpose of this merge is to save costs and reduce selling prices for customers. However, when analyzing the impacts of this merger, we should consider various aspects. Since the combined enterprise could be the largest grocer in UK with significantly lower selling prices of goods than other stores, customers would only choose to go to Salisbury-Asda supermarkets rather than others. This trend will be harmful for those other supermarkets,

as well as for the entire market competition. What's more, it should be noticed that as the new company occupies the market at lower prices, the wholesale prices that suppliers have to face will be reduced too. It is easy to understand this trend. After the integration of resources, the amount of goods purchased from suppliers will increase. Even if the profit space for suppliers is compressed significantly, they just have to accept the orders with low prices, leading to vicious competitions among suppliers ultimately. Therefore, in order to assess the negative effects that the merger could have on the markets, the Competition and Markets Authority should scrutinize the proposed merger carefully.

5. Effects and Risks this M&A Could Have on Various Stakeholders

The announcement of Merge has had a certain impact on different stakeholders, including British Retail industry, Shareholders and the two company themselves.

The M&A of Sainsbury's and Asda can have huge impacts on British retail industry. Lots of various stakeholders will be affected in this event more or less. As the benefits mentioned before, the share price experienced longstanding influence. On 30 April, after Salisbury's announced that it would acquire Asda Group Ltd, the share price of J Salisbury's plc was stimulated by the trading news, rising nearly 20% on that day. The share price opened at 322.00 pence, up 19.3% from last Friday's closing price of 269.80 pence. And afterwards, investors' sentiment pushed the share price up to 327.10 pence. (Financial Times, 2018). For the shareholders of both acquirer firm and target firm, the positive returns of share prices are what they expect to happen and they will be satisfied with their rising share prices. In fact, customers will also benefit from the M&A of the two supermarkets. As J Sainsbury plc committed, the combined supermarkets will cut the selling prices by 10% in order to strengthen the price competitiveness. Therefore, the Sainsbury's-Asda enterprises can attract much more customers to go shopping than before, and customers will regard the newly combined supermarket as their priority in order to save costs when determining which stores to go shopping. Thus, from the customers' perspectives, the merger could bring convenience for them. In addition, from the perspectives of Sainsbury's and Asda, the M&A can help them to gain much competitiveness against Germany low-priced supermarket brands Lidl and Aldi. David Taylor once talked about the fact that German rivals Aldi and Lidl had been grabbing shares in the UK market in recent years. He believed that the two grocery retailers got succeed be-

cause of significant cost-effectiveness. Sainsbury's hoped to merge with Asda to reach economy of scale in order to reduce their purchase costs to the same level as those of the two grocery retailers mentioned above.

6. Result of this Merge and Acquisition

At first, a merger between Sainsbury's and Asda was initially rebuffed by British regulators, who did not stop the deal altogether, but panicked investors dumped their shares. The Competition and Markets Authority, the Competition and Markets Authority, said on Wednesday it was concerned that a monopoly created by the merger would drive up prices while reducing the quality of products sold, in addition to concerns about higher oil prices and a poor consumer experience. The CMA survey found that the merger would not only affect in-store customers, but also lead to higher prices and lower quality of service, such as fewer delivery methods for online shopping. In addition, it will cause motorists to pay more at 125 locations close to Sainsbury's and Asda petrol stations. CMA independent investigation group Chairman Stuart McIntosh said in a statement that it was the agency's responsibility to conduct a thorough review of transactions to ensure that the industry remained competitive and that consumers did not suffer as a result. In a statement, CMA proposed an alternative solution to its immediate concerns -- the sale of a number of combined stores and other assets, including Sainsbury's or one of Asda's brands. In response to the CMA statement, Sainsbury's and Asda said the CMA investigation had "completely misread" the intense competition in the UK grocery market, adding that a merger between Sainsbury's and Asda would "streamline a lot of costs and reduce prices". "We are surprised that the CMA has chosen to reject the opportunity to put money directly into customers' pockets, especially at a time of economic uncertainty. "In a trading statement last year, Sainsbury's and Asda said synergies and joint sourcing could cut the combined company's commodity prices by 10 percent. Shares of J Sainsbury PLC (SBRY.L) tumbled 18.55 percent to close at 234.50 pence Wednesday, more than six times volume, while SHARES of Asda Group Ltd. Asda parent Walmart Inc. (NYSE: WMT) closed down 2.27 percent at \$99.88 on Wednesday, giving up a gain of more than 2 percent after Posting its best quarterly results in nine years on Tuesday.

April 25, 2019, The Competition and Markets Authority (CMA) finally rejected the merger of British supermarket giant Sainsbury's-Asda, believing that the transaction will make the experience of British consumers and car users worse. Reasons it is the merger that will push up price increases and lower quality, making the overall shopping

experience worse.

Stuart McIntosh, the head of the investigation team, said in the CMA's decision statement that a wide range of issues have been examined in detail, including increased competition from discount stores such as Lidl and Aldi, and the potential impact of new or expanding competitors on the retail market. And after the impact of the online retail market, although the review committee carefully considered the development of the industry, the committee did not alleviate the concerns that the merger would seriously hinder competition.

7. Conclusion

In this essay, we analyzed the type of and the market response to this merger, and what influence the CMA may have on this event, including the measurement that CMA may ask the newly combined enterprise to do in order to prevent the distortion of market competition. Finally, we find out the possible effects this merger could have on various stakeholders. In conclusion, this unusual merger has both positive effects (soaring share prices, lower selling prices, economy of scale...) and negative effects (layoffs of many staff, possible distort market competition...). However, CMA has chosen to reject the opportunity, we are not able to make more prediction about the future development about Sainsbury and Asda now, Sainsbury may take new measures to increase their strengths.

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Thinking and Practice of Rural Tourism Design in the Context of Experience Economy

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ABSTRACT

With the continuous development of our national economy, the living standard of the people has been improved significantly, the needs of the people are not limited to material needs, but pay more attention to spiritual enjoyment. As a result, tourism has been greatly developed, and more and more families will make annual family tourism plans, especially those living in cities. They are more willing to go to some rural tourism life, such as farmhouses and farm homes. Gradually appeared in recent years, and particularly popular. From this point of view, this paper expounds the importance of regional culture in rural landscape planning and design, analyzes the problems existing in rural tourism landscape design, and puts forward the application strategy of regional culture in rural landscape design, hoping to provide reference and help for relevant personnel, jointly promote the construction of rural tourism, play the greatest role of regional culture.

1. Introduction

In the process of continuous development of tourism in China, rural tourism construction has become more and more important, which can not only play a key role in the construction of local culture, but also play a vital role in the development of people's livelihood projects. In the process of application of augmented reality construction technology, it can promote the cost control of rural tourism construction and transformation, and increase the development of rural informatization on this basis. It can effectively solve the problems existing in the traditional rural tourism construction and make rational use of rural local resources to lay a good foundation for the development of rural tourism industry in China.

1.1 Restoration of Indigenous Culture and Rational Use of Resources

With the development of tourism economy in recent years, more leaders and people in rural areas realize that tourism can promote the development of local economy and bring huge income to villagers. However, contrary to the local landscape planning and design, the unreasonable use and excessive development in the construction process, many beautiful original natural environment has been destroyed one by one, seriously and even threatened the safety of villagers. Therefore, in the process of rural tourism landscape design, our first task is to ensure that the local ecological environment is not affected or destroyed^[1].

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1.2 Single Form, Without Rural Characteristics

In the current society with a large population, rural tourism construction in China has a good development trend. More and more people choose rural tourism, which can not only get spiritual washing, return to natural life, but also bring inner peace. However, although the construction of rural tourism has made periodic progress, there are still many problems in the actual development. In the early stage of development without adding more development elements, it still stays at the traditional old design level, lacks innovation, does not fully reflect the unique rural appearance, rural nature, and can not reflect the characteristics of rural tourism. In recent years, many people choose to start from Nongjiale experience. But after a period of development, there are more and more repeated farm entertainment activities, people feel that they have lost their freshness and pastoral characteristics. The form is too simple, without any innovation, it makes people feel boring. Therefore, the bottleneck of the development of Nongjiale appeared^[2].

1.3 Emphasis on Human Planning and Design

In the process of rural tourism landscape planning and design, we should pay attention to the following two points: first, actively listen to the opinions of local villagers. Because in the actual planning process, designers often lack communication with local villagers, so they can not understand the local villagers' lifestyle and folklore research. In the process of design, it is difficult to maximize the best effect of the design drawings, and the design that is out of touch with the real rural life will not really show the local landscape characteristics. Therefore, in the process of design, we should actively listen to the opinions of local folk literature experts, collect a large number of ordinary villagers' design opinions, and reasonably integrate into rural planning and design. Combined with local folklore, the concept of national participation in design is realized, so that villagers can understand landscape design and accept design, which is helpful to better protect folklore; second, it is guided by local design. Humanized landscape design means that landscape design can bring comfortable viewing experience to tourists. The design landscape can be combined with the surrounding natural environment to meet the viewing needs of most people. The essence of rural tourism landscape design is to meet people's different tourism needs. Therefore, designers in the design process need to fully consider the needs of different levels of space landscape design^[3].

1.4 Pursuing Sustainable Development

Local culture, economic benefits and cultural customs are natural carriers. Therefore, the planning and design of local buildings should strictly follow the local architectural model, highlight the architectural elements with regional characteristics, carry out architectural design from the aspects of architectural layout, materials, components, color matching, and make effective use of the surrounding terrain and form. Reduce more peacekeeping buildings and increase freshness and speed with minimal use. For example, in mountain areas, architectural styles are mostly freestyle, but also can add some creative patterns; in relatively flat plain areas, most of the fence open. These benefits of the use of local layout model, can reflect the atmosphere of harmonious coexistence. Some places in the rural tourism construction to the original village natural architecture style changes too much, causes it to lose the original characteristic and the authenticity. Excessive commercial development makes tourists in the countryside but can not feel the original local flavor, so that tourists' tourism experience is greatly reduced. At the same time, excessive development also caused ecological damage, and green water Qingshan is the development concept of Jinshan Yinshan contrary to the ecological sustainable construction of beautiful villages.

2. Planning Design Concept

2.1 Comfortable and Pleasant Living Environment

Due to the lack of rural development and relatively backward economy, some public facilities are naturally imperfect. For example, roads in rural areas are blocked, difficult to pass, or unreasonable in layout. Therefore, in the rural tourism landscape planning and design, we should fully consider this point, combined with some characteristics of the village itself, to build some necessary public facilities, such as public toilets, supermarket shopping centers, tourism information centers, medical stations and so on. In addition, because it is a tourist village, some necessary signs are also essential. These things can be made in combination with local characteristics, not only to play a guiding role, but also to show themselves to tourists from the side. In short, rural landscape planning and design is to create a suitable living environment with its own characteristics of rural environment^[4].

2.2 Highlighting Local Characteristics

On the basis of not changing the appearance of rural areas, we strive to create a beautiful and harmonious rural

environment. Our country has a vast territory and rich resources, and rural areas account for most of the country. In the continuous development of the past few years, each country has formed its own style and characteristics, what we need to do is not to completely change it. On the contrary, we should try our best to maintain this characteristic and protect their original cultural characteristics or original ecological environment, however, this does not mean that this will remain the same. We should respect the local rural areas, for some of the original ecology based on East and West, we should use appropriate means and measures to plan the local tourism landscape, and strive to create a beautiful environment, suitable living conditions and a leisurely and warm living atmosphere. Minimize new buildings, transform existing buildings into tourist leisure resorts, and combine these resorts with green agriculture, mountain woods or riverside fishing villages to create comfortable and slow living resorts, making them new business cards for tourism. This is the focus of tourism planning, in the design of leisure resorts, we must pay attention to the design of details. Adhere to the tourist-oriented, so that tourists can have a better tourism experience, but also for the scenic area to establish a good image.

2.4 Design Theme Image

The design of tourism theme image can help tourists to form a correct understanding of tourism destination and make objective evaluation. The distinctive tourism theme image is beneficial to the promotion of tourism destination. It is also the accumulation of tourism landscape and local excellent traditional culture, which can effectively improve the market competitiveness of rural tourism. Therefore, the design of theme image is very necessary. In

fact, combined with local tourism resources, local culture and tourism market, accurately locate the image of rural tourism, improve the attraction of rural tourism.

3. Conclusion

To sum up, with the rapid development of economy and the continuous improvement of people's quality of life, more and more people are keen to relax themselves through tourism, especially to some characteristic villages. Therefore, tourism has developed rapidly in recent years, and rural tourism is favored and loved by people. Therefore, in the rural tourism landscape design and planning, we should highlight their own characteristics and adhere to the principle of sustainable development. Only in this way can we promote the healthy and long-term development of local tourism and pave the way for the development of local economy.

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Exploration of Community Image Construction Based on CIS—— Take Taizhou Open University as an Example

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ABSTRACT

CIS strategy has been widely used in enterprise management, which brings economic and social benefits to enterprises. Based on the introduction of CIS strategic connotation, implementation effect and shaping cases, the purpose of this paper is to improve the image of adult education community, strengthen the construction and management level of community, enhance the attraction of community, and promote the high quality development of adult open education.

1. Introduction

Taizhou TV University has carried out various kinds of community activities in the process of adult out-of-production education, but in the process of open amateur education and teaching, the association was established late. The initial purpose of the establishment is to cultivate the centripetal force and cohesion of the team according to the characteristics of active thinking, fast receiving information and strong plasticity. Students participate in the community, in the formation of solidarity, equality and friendship, common progress of interpersonal relations. According to the construction of campus culture, we should pay attention to excavating the characteristics and bright spots of the community, according to the spirit

of “music creation” culture, and promote the construction of the community in a down-to-earth manner by “online + offline” mixed learning mode.

The CIS consists of three parts: enterprise idea identification (mind identity), behavior recognition (behavior identity) and visual recognition (visual identity). It is composed of three parts.^[1] The successful application of CIS in enterprises is introduced into the construction of community image of Taizhou RTVU open education, so as to establish a good community image, attract more students to join the community, and cultivate students’ sense of belonging to the school. CIS strategy is a kind of differentiation strategy, through the concept, behavior, perspective three aspects of standardization and standardization, so as to establish a good image of enterprises and associations.

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2. Literature Review

As to the relationship between CIS system and university community management, there are two main viewpoints.

2.1 Management of University Associations

At present, for the study of the image construction of university associations, it is considered that the associations of colleges and universities are voluntary based on common interests, ideals and beliefs, approved and established by the relevant departments of the school, and organized according to certain articles of association to carry out activities independently. Zhou Qiuxu (2003)^[2] and other researches on university associations are mainly focused on analyzing the present situation and countermeasures of university associations. The most representative is the current situation and countermeasures of the development of theoretical learning societies in colleges and universities, Ji Weibing (2014), who thinks that the current situation of the development of theoretical learning student associations in colleges and universities in China has been gradually expanded and its influence is weak; the activities have a high intention and a single way of implementation; the activities of the associations are frequent and the depth of inquiry is not enough; the growth is rapid, but the inheritance and development is more difficult, and the corresponding countermeasures are put forward from five aspects: system, activity, team, condition and culture.

2.2 CIS Systems

CIS theory is based on the 1950s, with the improvement of social productivity, product surplus, so enterprises are required to shape the image, and the application. In the 1960s, Watson Magriss has proposed CIS terms and has been widely used in the United States and Japan. CIS theory entered China in the 1980s and believes that image design can enhance market competitiveness. CIS system can be regarded as the main frame of enterprise brand construction, as well as the actual path for enterprises to realize brand value, and is an effective method to pursue brand goals.^[3]

At present, most of the research is about college community culture, lack of empirical evidence, Taizhou TV University open education set up community culture for the promotion of theory provides valuable practical significance. At the same time, the CIS theory is introduced into the field of university community image construction, and the application is insufficient.

3. The Construction Elements of the Cis and the Relationship between Dimensions

3.1 Community Concept Identification System: the Core of Community Construction

Community purpose, community values, mission and community spirit are the core of community construction, which constitute the CIS identification system of community concept.

As an important part of the educational construction of Taizhou RTVU Open College, the community construction adheres to the values of “health, happiness, vitality, rules and unity”, combines the characteristics of the times, adheres to the college spirit of “not afraid of difficulties, surpassing oneself, solidarity and mutual assistance, and moving forward bravely”, and builds characteristic associations so that students always remember “my RTVU, my regiment, my home”. Taizhou RTVU open education campus “community” cultural brand building, brand building through the campus cultural work to achieve five major projects, a foothold: based on the local, to create a approachable college: two projects: emotional team, warm home; three major ideas: learning together, progress, development; four major cultures: curriculum culture, home culture, humanistic literacy culture, leisure decompression culture.

“Return to the building, wine, tea fragrance, friends; study together, progress together, development together”, these 24 words are very in line with our advocacy of serving students, serving society “mission and goal”. This is the school in the new situation transformation and upgrading of the service direction, but also to open up the high-quality development of RTVU necessary conditions.

3.2 Community Behavior Identification System: Guarantee of Community Construction

Project management, member training, daily operation and fund management are the guarantee of community behavior identification system.

Each association is to work under the guidance of the student federation, the association has its own structure and program, and the community activities must be programmed flow, the community activities to achieve a sense of ceremony and rhythm unified. In the actual community activities, almost every activity has been disseminated through media channels such as WeChat Public number, with a maximum flow of more than 9,000 single events. Combining with the actual situation of the college, we insist on integrating the education work into the student service, further grasp the construction of open

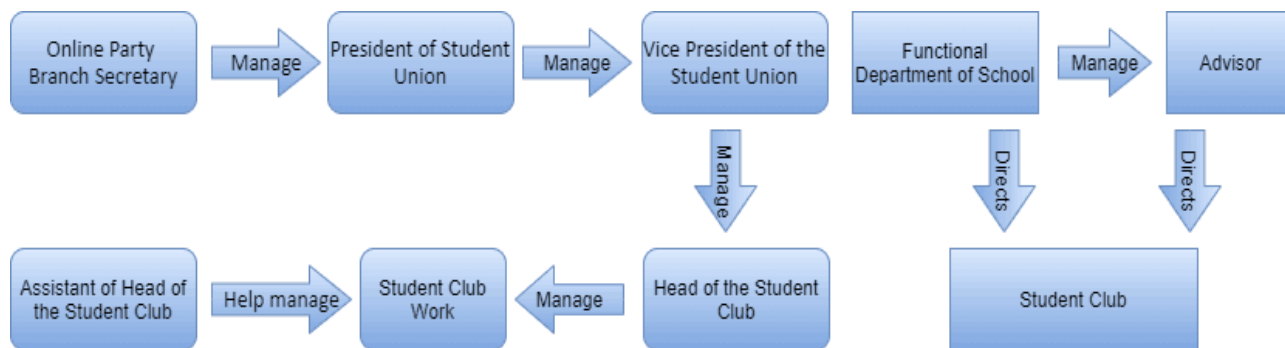


Figure 1. The internal management structure of Taizhou TV University community

college education team, strengthen the construction of education, and promote the high quality development of the college with rich and colorful campus culture construction activities.

3.3 Community Visual Recognition System: Culture of Community Construction

Association logo, community flag, community name, community activity place, community environment and so on constitute the community visual identification system, which formed the community culture of Taizhou TV University and expanded its influence.

A group of 12 associations, such as the Hulusi Society, the Basketball Society, the Entrepreneurship Society, the Reading Society, the Xiao Society, the African Drum Society, the English Society, the Film and Television Society, the Chinese Studies Society, the Calligraphy Society and the Tea Art Society, have been set up to promote the association to carry out a series of cultural activities with the integration of online + offline. Carry out the community culture “cloud exhibition and broadcast”, take the college WeChat public number as the carrier, display the community activity characteristic, enhance the cultural education actual effect.

The basketball club, in conjunction with basketball enthusiasts inside and outside the school, participated in dozens of games and achieved excellent results, such as the first school-enterprise basketball league champion, the first teacher-student basketball champion, etc. The school established a strategic cooperative relationship with Zhejiang and Haiying Television Co., Ltd., and Haiying is the training base for film and television performance of the college. It organized students to participate in film and television knowledge exchange meetings, conduct live investigation, understand the knowledge before and behind the scenes, and organize students to go to Hengdian Film and Television City on a regular basis to participate in mass actor shooting; In addition, the tea club, calligraphy club, Sinology Society and other

organized a number of large-scale activities, singing the sound of TV.

4. Construction CIS Design of the Open Education Association of Taizhou TV University

4.1 Concept Planning to Promote Community Concept Identification System

The idea plan takes the professional culture class + the association + the open college student union as the platform. In order to strengthen the construction of open associations, the College formally set up the “Open Society Workshop” in April 2019, with the Dean as the group leader. Comprehensive coordination of open education curriculum community construction, teacher training and curriculum reform and innovation work. The members of the open community workshop are composed of the leaders and teachers of the first-line community curriculum for a long time, and undertake the online and offline teaching, discussion and innovation of the open community curriculum.

From the beginning of the establishment of the Open College Student Federation, we should bear in mind the role and mission of cultural construction “gathering people’s hearts, cultivating new people and developing images”, and do a good job in the construction of campus community culture in combination with the actual situation of the College. Institutionalization, normalization to promote the construction of online organization of student federations, education-oriented, focus on promoting development. It is necessary to improve and develop the management system and organizational forms of student federations and associations, strengthen communication and exchange, actively organize and carry out campus cultural activities with rich contents and various forms, enhance “window consciousness”, strengthen “window responsibility”, and work together to make due contributions to local economic development and community governance.

4.2 Conduct Planning and Promotion of Community Behavior Identification System

Taizhou TV University 12 associations continue to carry out activities, the implementation of the “Star Plan”, the implementation of student personnel responsible, from Monday to Sunday, and every day, enrich the amateur cultural life of students, and feel the temperature of the college. For example, the tea club holds Wuyi rock tea tasting exchange, the reading club organizes the recitation of “Lang Song” ordinary, “Yu Hong Kong”, the basketball club organizes the interesting basketball match, the calligraphy club carries out the Wei tablet copying activity, the English society carries out the English study online card printing and so on, which enhances the community behavior identification system.

On August 24, 2020, “Construction Bank Cup” the sixth Zhejiang Province International “Internet +” College Students Innovation and Entrepreneurship Competition final in Zhejiang Industrial and Commercial University. There are 128 colleges and universities in the province, 28528 entries, after preliminary selection, final online review, 66 colleges and universities, 428 events entered the final. After intense competition, Open College Entrepreneurship Society “Sea Golf” won the vocational education track (creative group) bronze award. 20 September, Taizhou Zhiyi Trading Co., Ltd., The company relies on Taizhou TV University rural revitalization incubator park growth, Provide channels for students to innovate.

Chinese Learning Society invited Lin Yue Village teachers to give lectures on the theme of Chinese learning to learn what changes Xunzi had brought to Confucianism at that time, and the positive significance of Xunzi’s thought to reality; Invite the instructor to Zhang Xiujian Paper-cut Museum of Linhai City, Zheng Guangwen Temple of “the ancestor of Taiwan Education”, Taizhou Fuwen Temple to carry out Chinese culture education and research activities, walk the classroom, give students more vivid traditional culture education; organize to go to Shuixin Caotang, Shuibin Village, Luqiao District, carry out cultural activities to spread Chinese culture by means of popular propaganda, send “cultural feast” to the masses and enrich spiritual and cultural life.

4.3 Image Planning and Improvement of Community Visual Recognition System

Through more than two years of operation, the daily work of the 12 major associations of open education of Taizhou RTVU has entered the norm, the social influence has been expanding, and the educational brand image of RTVU has been promoted. Plan and carry out a series of

publicity reports, sing a good voice, transfer positive energy, carry out 12 “show the community show style series of reports, show the cultural charm and characteristics of the community”. School culture life is so colorful, when the journey is free, look at WeChat, “he said. Feel very full every day, thanks to RTVU, grateful teachers, let my journey fatigue disappear”. Practice is the only criterion for testing truth. During the course of promoting the ideological and political culture in the campus, the 17 autumn students evaluated the campus culture as follows: “follow the steps of RTVU, change wine to tea, change brand to book, change Kara OK to Qin Qi calligraphy and painting”. This is the perfect interpretation of the meaning of the twenty-four words: “go back to the building, go to wine, tea fragrance, gather friends; set up Taizhou, study together, progress together, and develop together”. Through the construction of community culture, the enrollment of Taizhou RTVU has been steadily increasing throughout the year, and the publicity work and influence of the school are solid and effective^[4].

Table 1. Changes in Enrolment Number of Associations

Term	Enrolment	Growth rate for the same period	Community and Student Recommendation		Group Enrollment Enrollment	
			Number of persons	Growth rate	Number of persons	Growth rate
18 Autumn	570	/	121	/	404	
19 autumn	710	25%	265	119%	542	34%
18 Spring	624	/	108	/	322	/
19 spring	581	-6%	199	84%	486	51%
20 Spring (epidemic)	666	15%	282	42%	500	3%

It can be seen from the above table that since the introduction of community family group culture, the total enrollment, the recommended number of community students, and the number of students enrolled outside the group have steadily increased. At the same time, from the results of satisfaction statistics, enrollment publicity and school support services^[5].

In the future education, we will build the family culture more deeply, let the school fully integrate into the society, we base ourselves on the local, make our TV University really become the “palm-top university with the temperature around the citizen”. Give full play to the backbone role of student party members, lead student associations, student associations and other student organizations, plan and carry out positive campus culture and social service activities, constantly enhance the sense of identity and belonging of open education students to the school, sense of responsibility and value to society. At present, the over-

all plan of “family group” culture has gradually formed, carefully creating “family group” cultural brand, creating open educational cultural value, through the “two leading” project and campus community culture construction (five key elements), combined with teaching, scientific research, enrollment, management and other content, the implementation of 12 major specific work measures, after three years, achieved certain results, after 5-6 years, achieved obvious results, the ultimate goal is to become the Taizhou people’s own door of the open university.

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Operation Efficiency Analysis of Commercial Hull Insurance Business —— Based on DEA model

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ABSTRACT

Hull insurance is a kind of Marine insurance, which takes various types of ships as the subject matter of insurance and covers all or part of the losses caused by natural disasters and accidents and the possible liability compensation incurred by them when they are sailing on the sea or berthing in the harbor. A time policy or a voyage policy shall be adopted for Hull insurance. Its characteristic is insurance liability is limited to water only. With the development of economy and the expansion of shipping, China's Hull insurance industry has developed rapidly. However, no one has studied the operating efficiency of China's commercial Hull insurance. This paper analyzes the operating efficiency of Hull insurance through DEA analysis method and puts forward relevant suggestions.

1. The Introduction of Hull Insurance

Hull insurance is right ocean-going vessel, with the ship, include its hull, lifeboat, machine, equipment, instrument, rigging, fuel and material are insurance mark, by the underwriter undertakes the loss that the insurance mark suffers natural disaster and accident to wait for cause and charge insurance in whole carriage process^[1].

The most important part of Hull insurance is ship inspection. The occurrence of ship survey originates from the development of Hull insurance business. Once the insured ship has a Marine accident within the scope of insurance liability, the insured will claim against the insurer for the losses and expenses arising therefrom in accordance with the provisions of the insurance clause. Damaged person always hopes to be able to get compensation from underwriter place as soon as possible, insurance person satisfies requirement of both sides, make them all

can pay compensation rationally and get compensation, must appoint inspect division to inspect to damage ship to undertake meticulous inspection, in order to safeguard bilateral rights and interests. So that the inspection work is the premise of the insurer to settle claims, is the important basis of settling claims^[2]. Surveyor's main function is to use skilled professional knowledge, standing on the position of fair, involving ships, cargo insurance mark with natural calamities and accidents, such as the loss or damage caused by the test, put from the technical analysis on happened reason, reasonable to determine the extent of the damage and range, to ask for repair, to test the applicant submit inspection report.

With the development of modern shipbuilding industry technology, the structure of ships is becoming more and more complex, which leads to the gradual expansion of the scope of ship inspection business. Through the supervision and inspection of ships, cargoes, Marine facilities

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and Marine materials, machinery and equipment to make them conform to the provisions and requirements of international conventions, national laws and regulations and rules promulgated and implemented by ship inspection agencies, so as to equip ships with the technical level of ensuring safe navigation and preventing pollution of oceans and rivers^[3].

To ensure the safety of ships, Marine installations and personnel and to prevent pollution of the waters. So, ship inspection is the service of Hull insurance, is the technical guarantee of Hull insurance, and directly related to the disaster prevention and loss of the ship. The nature of damage inspection by surveyors is crucial to the economic interests of insurers.

2. The Current Situation of China's Hull Insurance

China's Hull insurance is mainly underwritten by large property insurance companies. The risk of ship insurers is increasing due to the large-scale and high-value of ships. With the development of global shipping market, China's Hull insurance is also facing great challenges.

2.1 Shipping Dilemma and Hull Insurance Challenge

The data show that since the 1990s, the total tonnage and the number of ships of more than 300 gross tons in the world have increased steadily. The rising speed of the total tonnage of ships is much higher than that of the number of ships, and the trend of large-scale ships is more and more obvious. Although shipbuilding presents the trend of large-scale development, the more complex the shipbuilding is, the higher and the value is, which makes the insurer's underwriting risk bigger. Feng Jianhua said that from a global perspective, the average amount of claims per ship is increasing, and the proportion of high-value claims also shows an overall trend of steady increase. In the event of a 20,000 TEU accident, it will be difficult for the existing vessels to deal with the largest loss quickly^[4].

The occurrence of major accidents increases the insurance company's compensation risk. According to statistics, the global fleet is showing a trend of rejuvenation in recent years. It can be predicted that bulk carriers under 10 years old will become a common phenomenon in recent years. With the younger global fleet and the advanced shipbuilding technology, the claim frequency of Hull insurance has decreased. However, once an accident occurs, the severity of the loss will rise sharply, which will have a comprehensive and extensive impact on the entire shipping insurance industry, such as the explosion

accident in Tianjin port. IUMI once suggested at last year's annual meeting that ship insurers should pay more attention to the risks of network attack, Ro / Ro ship and passenger ship fire, structural defects of container ships, wrong declaration of container cargo, potential accidents of aircraft damage caused by low-speed navigation, and rescue capacity of extra-large container ship accidents in the next year. It can be seen that the trend of global fleet rejuvenation has not reduced the risk of ship insurer's compensation^[5].

On the contrary, in the context of insurers facing more severe test and greater cumulative risk, the premium rate has not been increased. One of the most important reasons is the excess underwriting capacity. From the domestic perspective, due to the continuous low interest rate market and the influx of a large amount of capital into the insurance market, the underwriting capacity will continue to be surplus, which will impact the underwriting conditions and underwriting profits, and the growth of shipping insurance premium rate will also be constrained. The insurance industry is not short of money in terms of the total amount of capital. If too much capital is put in, the whole market will be relatively soft and its bargaining power will be weak. Because there are too many insurance companies and too many subjects, each other has become competitive bidding, even vicious competition. And the situation is hard to change in a short period of time.

2.2 Operational Pressure of Hull Insurance Companies

As far as China's commercial insurance companies are concerned, Hull insurance is not their main item, accounting for only a few percent of their insurance share, so they do not have the demand for consolidation in this regard. At the same time, in China, the merger of insurance companies depends on many factors. First of all, there is no way to merge private and state-owned insurance companies. Secondly, for the state-owned insurance companies, the most important factor is the decision-making at the national level. If the national level has realized that there is vicious competition and should be merged, it will merge like COSCO and COSCO. However, the insurance market is far from being developed to that stage, the contradiction of the insurance industry has not reached the irreconcilable stage, and the vicious competition has not appeared.

From this point of view, the merger and reorganization of the insurance industry has its particularity compared with other industries. However, with the changes in the shipping industry, the large-scale and intelligent ships, and the rapid increase of new risks such as cybercrime, how to improve the underwriting capacity of the insurance

industry and meet the needs of customers is a major problem facing the shipping insurance industry. Therefore, the current Hull insurance industry to innovation is relatively difficult, and the space is not big. Under the influence of the new epidemic situation, the global shipping market will also face greater pressure in the future. How can the insurance companies, as the main business entities, solve these problems become the focus of attention at present^[6].

To sum up, this paper analyzes the operational efficiency of 19 major domestic property insurance companies, and analyzes the influencing factors, comprehensively analyzes the problems of Hull insurance operation and puts forward relevant suggestions^[7].

3. Empirical Analysis

The basic research framework of data envelopment analysis (DEA) method is proposed by chanes, Cooper and rod based on the viewpoint of production efficiency proposed by Ferrell. DEA method can not only measure the effectiveness of DMU, but also point out the reasons and degree of DMU inefficiency. According to the different assumptions of return to scale, DEA model can be divided into C2R model with constant returns to scale and BC2 model with variable returns to scale. Figure 1 shows the basic forms of input-oriented C2R model and BC2 model respectively. Among them, C2R model is used to judge whether DMU is both technology efficient and scale effective, and BC2 model is used to judge whether DMU is technology effective or not^[8].

$$\begin{aligned}
 & \min \theta = V\rho \\
 & \left. \begin{aligned}
 & s. t. \sum_{j=1}^n x_j \lambda_j + s^- = \theta x_0 \\
 & \sum_{j=1}^n y_j \lambda_j - s^+ = y_0 \\
 & \lambda_j \geq 0, j = 1, 2, \dots, n \\
 & s^- \geq 0, s^+ \geq 0
 \end{aligned} \right\} CR^2 \\
 \\
 & \left. \begin{aligned}
 & \min \theta = V\rho \\
 & s. t. \sum_{j=1}^n x_j \lambda_j + s^- = \theta x_0 \\
 & \sum_{j=1}^n y_j \lambda_j - s^+ = y_0 \\
 & \sum_{j=1}^n \lambda_j = 1 \\
 & s^- \geq 0, s^+ \geq 0, \lambda_j \geq 0, j = 1, 2, \dots, n
 \end{aligned} \right\} BC^2
 \end{aligned}$$

Figure 1. Basic forms of input-oriented C2R model and BC2 model respectively

In this paper, DEA Data Envelopment method and deap2.1 software are used to analyze the efficiency of property insurance companies in Hull insurance. The selected decision-making units are: seven major property insurance companies operating Hull insurance in 2018. After comparative analysis, the input indicators and out-

put indicators are selected as Table 1.

Table 1. The input indicators and output indicator

Index type	Index name	Unit
Decision making units	Seven insurance companies	
	Financial capital	Million yuan
Input indicators	Operating expenses	Million yuan
	Human resources	Ten thousand
Output indicators	The premium income	Million yuan
	Pay for spending	Million yuan

According to the selected indicators, DEAP2.1 software is used to calculate, and Table 2 shows the operation efficiency of property insurance and the state of return on scale of each insurance company in the sample year.

Table 2. The operation efficiency of property insurance and the state of return on scale

firm	crste	vrste	scale	
PICC ¹	1	1	1	-
CLIC ²	1	1	1	-
CTL ³	0.977	1	0.977	drs
PAIC ⁴	1	1	1	-
SSIG ⁵	0.967	1	0.967	drs
DIC ⁶	0.456	0.468	0.974	irs
COSCO ⁷	1	1	1	-
mean	0.899	0.939	0.957	

Note: 1. Property and Casualty Company Limited; 2. China Life Insurance (Group) Company; 3. China Taiping Life Insurance Co., Ltd; 4. PING AN INSURANCE (GROUP) COMPANY OF CHINA, LTD; 5. Sunshine Insurance Group; 6. DongHai Insurance Company; 7. COSCO SHIP-PING GAPTIVE INSURANCE CO.,LTD

Most of the insurance companies have increased their business efficiency, but the results show that the operation efficiency of some insurance companies is still poor. According to the results of the empirical analysis, I put forward several suggestions on the operation of Hull insurance by insurance companies.

4. Development Countermeasures and Suggestions

4.1 In Line with the National Development Strategy

One belt, one road strategy, one belt, one road, will be adopted to promote the investment and trade facilitation

in China. The construction of Shanghai international financial center, international shipping center and shipping insurance center will provide significant assistance for the development of China's shipping insurance industry. In addition, according to the statistics of International Hull insurance Union (IUMI), China is now the world's largest Hull insurance market and the world's second largest cargo insurance market. As the guarantee of shipping industry, the development prospect of Hull insurance in China is still very promising. Therefore, in spite of the heavy pressure on the current Hull insurance market, we are still glad to see that many insurance companies have started to set foot in Hull insurance such as ships and shipping. We hope that with the help of a series of national policies, we can lay out ahead of time and wait for a good opportunity.

4.2 Broaden Information Channels and Establish Data Sharing Platform

Insurance companies should keep close contact with relevant departments. Through strengthening cooperation with banks, we can understand the credit rating and capital operation of customers. Through the communication with the maritime management department, understand the customer's enterprise safety management and ship maintenance. Improve the anti-fraud law enforcement cooperation mechanism with government departments to crack down on insurance fraud. Through the communication with various functional departments, strengthen customer information management, in order to strengthen the risk control of Hull insurance business, and build a good and harmonious market environment of Hull insurance business.

Insurance companies should also strengthen communication and cooperation among the same industry and establish information sharing mechanism. Insurance companies should be both competitors and partners. The competition lies in their respective service level, claim settlement skills and professional level, while the cooperation lies in the common management and control of information exchange, resource sharing and underwriting risk. For the Hull insurance business with higher insurance amount and higher risk, CO insurance can also be carried out among the same trade. We can try to take the lead of the industry association to establish a Hull insurance data platform, improve the regional Hull insurance claims file, for the reference of the insurance subject in the rate formulation and underwriting plan.

4.3 Increase Personnel Training, Take the Road of Team Monopoly

In order to build a qualified ship management team, the

insurance company should not only recruit high-quality ship professionals from outside, but also strengthen the internal personnel training. By means of expert lectures, regular training, etc., and in the form of going out and inviting in, the professional skills training covering the whole process of Hull insurance business is provided for employees with multi-dimensional, differentiated, targeted and covering the whole process of Hull insurance business, so as to enhance the market adaptability and improve the practical level. In addition, it can also help grass-roots companies to solve business problems and promote the improvement of the overall quality of the ship employees of grass-roots companies by means of talent exchange of branch companies and the establishment of Hull insurance expert groups.

With the progress of science and technology and the need of maritime trade and transportation, today's ships have developed to large-scale specialization. The original small transport ships with small technology content and extensive management have gradually faded out of the market. With the development of maritime transportation, the professional and technical requirements of Hull insurance operators are higher and higher. Therefore, it is not suitable for the development of Hull insurance to develop individual business in a decentralized way. It is necessary to have a professional team with rich experience and proficient business. Insurance companies can try to form a professional Hull insurance team in various provinces and cities to implement the centralized operation of Hull insurance business in the whole city. Through centralized operation, one is to concentrate the limited strength of Hull insurance industry, make the most of the existing professional talents, and realize the effective integration of talent resources. Second, it can improve the ability of information management. After the implementation of specialized management and franchise, through the data analysis of all the insured ships of the company, the risk assessment can be carried out effectively, and the underwriting scheme can be formulated more scientifically and reasonably. Third, it can effectively solve internal friction, put an end to the phenomenon of competing for business within the system, form a joint force internally, reduce the loss of resources, and establish a good image of insurance companies externally.

4.4 Develop New Types of Insurance to Meet Diversified Market Demands

In order to get closer to the market and enhance the development potential of Hull insurance business, insurance operators should speed up the renewal and transformation of Hull insurance products. The product

transformation should focus on the main line of customer-centered work and effectively combine with the market reality to adjust and update the relevant product rate rules and terms, so as to further improve the traditional Hull insurance product market. On the basis of attractiveness, it can effectively meet the various needs of customers. For example, in view of the rapid development of Zhoushan's tourism industry, we should timely promote yacht insurance, appropriately expand the insurance liability of shipbuilding insurance in view of the increasing number of marine construction projects, and add oil pollution liability insurance to coastal inland river Hull insurance, and additional tugboat towing liability insurance for coastal inland river ships, which are marketable and well received by shipowners in the market. In order to sell products, we should speed up the pace of renewal and reform, stimulate the market through the promotion and development of new products, and increase the power of the development of Hull insurance business.

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Risk Thinking in ISO Quality Management System

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ABSTRACT

The importance of risk thinking is emphasized in the ISO quality management system. In order to do a good job in quality management, we should use risk thinking to do a good job in risk management, improve the level of quality management, and enhance customer satisfaction, so that enterprises can meet the international quality certification standards in the process of development, and have greater development space in the market. Therefore, this paper studies the risk thinking in the ISO quality management system, summarizes the concept of risk thinking in the ISO quality management system, analyzes the problems existing in the application of risk thinking in the ISO quality management system of Chinese enterprises, and puts forward some suggestions for improvement one by one. It is hoped that the analysis can promote Chinese enterprises to fully integrate risk-based thinking into quality management, calmly cope with risks and opportunities, and make customers more satisfied with their services and products.

1. Introduction

In the process of development and fierce market competition, enterprises must reverse the market and respect consumers. Only when customers are satisfied with the products or services provided by the enterprise, can the enterprise have the space for survival and development in the market and obtain long-term benefits. The product quality is a necessary factor to form customer satisfaction, and is the lifeline to develop the market. Therefore, in order to make customers more satisfied with the products or services they provide, enterprises need to do a good job in quality management, strictly control and strive to improve the quality of products or services. ISO9001 is an internationally certified quality management system, and also the “gold standard” for enterprises in quality management. The risk thinking emphasized in this “gold standard” is what many Chinese enterprises

need to further implement. In quality management, risk management can effectively reduce the probability of quality problems, so it is of great help to improve the quality of products and services.

2. Overview of Risk Thinking in ISO Quality Management System

Risk based thinking is the core concept of ISO9001 standard. The management principles of “risk-based thinking” and “process approach” are integrated into the quality management system and its processes, which are important input contents of quality management system planning and process planning. In essence, risk thinking is to consider the risks existing in quality management, accurately and comprehensively identify the risks and opportunities that may affect the quality of products and services and enhance customer satisfaction, plan and

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implement measures to deal with risks and take advantage of opportunities, so as to improve the effectiveness of the quality management system and achieve the improvement results And prevent adverse effects.

3. Problems in the Application of Risk Thinking in ISO Quality Management System

3.1 Lack of Risk Awareness

Risk thinking is the thinking mode that managers must have, but some enterprises in our country, from the top leaders to the employees, have the problem of weak risk thinking. First of all, the leaders of the enterprise do not realize the importance of risk management for the products and services provided by the enterprise, so the supervision and attention of the risk management related work are not in place. Secondly, there is a great correlation between the awareness of enterprise employees and the awareness of enterprise senior managers. Usually, the things that enterprise leaders attach importance to will also be valued by employees, and the things that enterprise leaders ignore will also be gradually ignored by employees. Therefore, if enterprise leaders do not have a deep understanding of risk thinking, it is difficult for enterprise employees to have a deep understanding of it.

3.2 Incomplete Risk Identification

To do a good job of risk management in quality management, we must do a good job of risk identification. Only by accurately identifying the risks that will affect the quality of products or services in the enterprise, can we do a good job of dealing with the risks. However, in many enterprises in our country, although they will identify the risks, they often miss many critical or hidden risks that will be fatal once they happen. These risks that are not identified in time become major hidden dangers, leading to quality reduction, even difficult to meet the quality standards, and even may lead to excessive production Safety accidents occurred during the process, resulting in casualties. At the same time, they are too optimistic about the favorable situation that opportunities may bring, and neglect the risk identification that opportunities bring. Risk is the influence of uncertainty, which may be positive or negative. The positive impact of risk may provide improvement opportunities, but not all positive impacts can provide improvement opportunities. Taking advantage of opportunities also needs to consider relevant risks.

3.3 The Scientific Nature of Risk Assessment System Needs to be Improved

When the quality risk of an enterprise is identified, not every risk needs to be dealt with. Some of the risks will not have too much impact. If solving this risk needs to consume too much resources, it is the wisest choice not to deal with this risk at this time. At the same time, when dealing with risks, we need to have priorities, and some major risks must be solved as soon as possible. This involves the risk assessment work. If the enterprise can not do a good job in risk assessment, it may lead to the major quality risk problems are not accurately defined, and eventually lead to the major quality risk problems have occurred before they are solved. This problem is very common in some small and medium-sized enterprises in China.

4. The Strategy of Using Risk Thinking

4.1 Enhance Risk Awareness

Risk awareness and thinking is the starting point of risk management. In the environment of strong risk awareness, many risk problems have been effectively dealt with before they are in danger. Every employee's awareness of their own responsibilities and roles will have more or less impact on the quality and risk of the enterprise. Therefore, we should enhance the risk awareness of all staff to make the risk management culture deeply rooted in the hearts of the people. First, the top leaders of enterprises should enhance their attention level to quality management risk thinking, and pass the risk management awareness to the middle level and ordinary staff layer by layer, so that all staff of enterprises are aware of the importance of risk management and the high attention level of enterprise leaders to quality risk. In the daily management work, we should implement strict risk standards, take the lead in promoting the implementation of risk matters, allow everyone in the enterprise to question and refute other people's attitudes, ideas and actions, exchange failures and faults, summarize and learn from them, encourage staff to pay attention to and quickly respond to external changes, and take the initiative to meet the impact of innovation and new environment, so as to Establish a good risk culture atmosphere. The second is to build a risk management index system and incorporate risk culture into employees' daily code of conduct. The quality risk management system and accountability mechanism should be established to clarify the responsibility of early warning and risk events, so as to respond to early warning and risk events quickly

and effectively. Third, strengthen the risk management knowledge of enterprise employees and special business training closely related to risks, improve the knowledge structure of employees, especially key employees, and enhance the risk sensitivity and awareness of production and operation risks of professional talents.

4.2 Comprehensive Risk Identification

Risk identification is the premise and foundation of risk management. The accuracy of risk identification largely determines the effect of risk management. It is necessary to identify the potential issues that may have an impact on the enterprise, including those that indicate risks, those that indicate opportunities, and those that may have both. To be able to identify quality risk comprehensively is a great performance of enterprises with risk thinking.

Firstly, quality management staff is the main force of comprehensive risk identification. It is necessary to provide high-quality risk management professional knowledge training for quality management staff, strengthen the training of high-quality risk management talents, and improve the professional level of quality management staff, so as to promote enterprises to have and enhance the ability of comprehensive risk identification.

Secondly, comprehensive risk identification is carried out through multiple dimensions and elements around the enterprise development goals. First, all staff participate in risk identification from the top down; second, identify the needs and expectations of the relevant parties of the enterprise; third, identify the impact of the external environment of the enterprise on the enterprise; fourth, identify the internal product and service production process of the enterprise.

Thirdly, using systematic and scientific methods to identify and analyze all kinds of risks and following the correct thinking of experience, knowledge, science and logic will help to correctly identify, analyze and evaluate risks, so as to put forward effective risk control measures. For example, on the basis of fully collecting relevant data, through the statistical analysis of the collected data, we can identify the relevant safety risks, follow the pre-set table for risk identification, identify the possible risks by designing reasonable test verification methods, use simulation technology for risk identification, establish risk management experience database, and save the past risk management data. In order to analyze the risk as a reference.

Fourth, establish a correct concept of risk identification. Risk management is to serve the development goals of enterprises. The key risks that affect the development

goals of enterprises are the focus of risk management, not all risks. However, due to the restriction of risk management cost and the limitation of risk management ability, it is impossible for enterprises to identify all risks. So we should focus on the identification of key risks.

4.3 Building a perfect risk assessment system

Risk assessment is to quantify the possible degree of impact or loss caused by an event or thing. As the basis of risk management, risk assessment is an important way for enterprises to determine information security needs, which belongs to the process of enterprise information security management system planning. In order to do a good job in risk assessment and risk classification, enterprises need to build a sound risk assessment system.

First, we should identify the various risks we are faced with, as well as the risk probability and possible negative effects; second, we should determine the development goals and risk preferences of the enterprise, especially the risks that affect the survival and development goals of the enterprise and the ability to bear risks; third, we should learn the methods of risk assessment, and use the assessment methods such as risk assessment matrix to rank the priority of each risk. To determine the priority of risk reduction and control. Fourth, after the completion of the classification, formulate solutions to the risk, such as what kind of safety measures should be taken to minimize the loss caused by the risk, report the risk assessment report to the senior leaders of the enterprise, analyze the risk tolerance, and facilitate the senior leaders to make timely strategic planning for the risk, and produce more satisfactory products for the customers. Fifth, it is necessary to reserve a good risk emergency budget, so as to directly mobilize funds when there is a risk problem, and improve the efficiency of solving the risk. Finally, we need to implement the risk management system. Once there is a risk problem, we should investigate the responsibility of the relevant responsible person according to the system. The enterprise risk assessment system should be adjusted according to the actual situation of the enterprise, there is no fixed form, but in the flexible adjustment, we must consider the role of human resources, cost, commercial value, quality level, safety and time.

5. Conclusion

ISO9001 emphasizes the importance of risk thinking, so enterprises must make full use of risk thinking in quality management. From the perspective of risk thinking, there are three main problems in the current

quality management in China, namely, the lack of risk awareness, incomplete risk identification, and the need to improve the scientific nature of the risk assessment system. Enterprises should use risk thinking to solve these problems. By enhancing risk awareness, comprehensively identifying risks and building a sound risk assessment system, risk thinking can gradually penetrate into the quality management of enterprises.

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The Concrete Analysis of the Change of Import and Export Trade of Chinese Enterprises Is Based on the Perspective of RMB Exchange Rate

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ABSTRACT

The change of import and export trade of Chinese enterprises actually reflects the appreciation and depreciation of RMB, which are closely related to the total volume of import and export trade of Chinese enterprises and the formulation of corresponding foreign exchange measures. Generally speaking, the rise of the RMB exchange rate means the appreciation of the RMB is conducive to imports, while the decline of the RMB exchange rate means the depreciation of the RMB and the decline of the price of export commodities, so it has a greater price advantage and is conducive to exports. Chinese enterprises should correctly grasp the rise and fall of RMB exchange rate and carry out import and export trade reasonably when developing abroad.

1. Introduction

The study of exchange rate fluctuations can better help Chinese enterprises to get new development in foreign trade, mainly to do a good job of risk aversion and adjust product structure according to the appreciation and depreciation of the RMB. After China's reform and opening up, China gradually integrate with the world market, the RMB exchange rate through the two significant changes, also in 1994 the RMB exchange rate system, the official exchange rate and market in 2005 and the floating exchange rate system reform, two foreign currency exchange difference for the reform and the renminbi in the subsequent years have caused huge impact to our country enterprise

import and export trade.

2. Analysis of the Influence Principle of RMB Exchange Rate Fluctuation on Import and Export of Chinese Enterprises

2.1 The Operation Mechanism of RMB Appreciation

The situation of the appreciation of the renminbi will show up in the overall positive domestic economy development situation in our country, the economy is relatively stable period, the appreciation of the renminbi makes a unit of currency can buy more foreign products in international market, at this time, China's enterprises should be

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more actively import foreign products, rather than exports. If the export of Chinese enterprises is increased at this time, it will lead to the purchase of Chinese goods by enterprises in other countries, they need to spend more money, so that the same unit of dollar currency can buy fewer goods than the earlier period. Although the appreciation of RMB has improved the status and discourse power of China's currency in the international market, it has also made foreign enterprises need to buy the same amount of products with more funds, and the price advantage of China's export has gradually disappeared. At this time, if the export volume is increased, good results often cannot be achieved ^[1].

2.2 Operation Mechanism of RMB Depreciation

Depreciation, exchange rate drops, foreign companies can use a unit of dollars to buy more products in our country, it shows that our country enterprise product prices fell, from the domestic market, although our country's products are the same, the buying power of a currency unit but in terms of foreign markets, our product is lower than the price of before, therefore, depreciation brought export opportunities for our country. Our country enterprise should seize this development opportunity to carry on the active production, expands the foreign trade export volume, then promotes the enterprise own development. The decline of RMB exchange rate shows that China's currency depreciates, so it has a certain advantage in the price of products. Export enterprises can make use of this advantage to fight a good price war. Thus to a certain extent stimulate the export of our products.

3. Analysis on the Channel Influence of RMB Exchange Rate Fluctuation on Trade Balance

3.1 Affect Commodity Import and Export Price

The exchange rate changes of RMB are reflected in two aspects: appreciation and depreciation, and the appreciation and depreciation of RMB will affect the import and export trade of enterprises to a certain extent, and then affect the level of China's economic development. Two important factors need to be taken into account when the RMB exchange rate changes and Chinese enterprises adjust the import and export trade volume and related policies. First, the temporality of transmission. It takes a process from the adjustment of currency exchange rate to the price pass-through of import and export commodities. Although the change of exchange rate will affect the actual import and export trade, it takes a certain time. Therefore, although the changes in the price of financial

assets caused by the exchange rate fluctuations will show its effect quickly, it is a slow process to affect the import and export of commodities, and the price changes of import and export commodities caused by the exchange rate fluctuations will take some time to show. Second, the balance of trade. The price of import and export commodities driven by the change of RMB exchange rate will affect the trade balance to a certain extent. The international market economy is extremely complex, and changes all the time. The RMB exchange rate also changes all the time. The price of import and export commodities will also adjust with the exchange rate changes due to the impact of the RMB exchange rate changes, which affects the balance of payment of import and export trade of Chinese enterprises to a certain extent ^[2].

3.2 Affecting National Income

With the development of economic globalization and integration, national income will also be affected by RMB exchange rate fluctuations. For example, the depreciation of RMB will lead to the decline in the price of export commodities, which requires enterprises to actively export to foreign countries. However, for imported commodities, the same capital can buy fewer commodities. In this way, the nominal income level of Chinese citizens also shows a downward trend. With the same share of money, we can only buy fewer goods, which reflects the decline of the actual purchasing power and the decline of residents' disposable income.

4. The Stage Analysis of the Influence of RMB Exchange Rate Fluctuation on Import and Export of Chinese Enterprises

4.1 Analysis on the Fluctuation of RMB Exchange Rate and Enterprise Import and Export Trade from 1994 to 2005

In 1994, due to the need of economic development and penetrate the international market in our country, the national official exchange rate and the market rate of the renminbi have been adjusted, will be the official exchange rate and the market exchange rate, which caused the RMB exchange rate continued to fall, the behind reason is that our country economy development condition in the developed countries economic development and far, especially with the development of the U.S. economy. However, the devaluation of RMB has also led to a sharp increase in China's export volume, promoted the rapid development of China's foreign trade, and constantly presented trade surplus ^[3]. Since 1995, China's RMB exchange rate grad-

ually began to appreciate slightly. Although the overall situation of China's economic development was not very good at that time, the export commodities still accounted for a large proportion in the international market and the trade surplus continued. Renminbi appreciation brought about by the reduction of commodity exports in China is not obvious. Although the economy has been developed to a certain extent, due to price factors, China's national income did not rise, the level of per capita income is still relatively low.

In 1997, affected by the Asian financial crisis, the currencies of Southeast Asian countries began to depreciate on a large scale. In order to maintain the balance of the Asian economy, China kept the exchange rate of RMB against the US dollar stable in the adverse economic situation. From the perspective of the economic environment at that time, RMB actually showed an appreciation. The growth rate of export trade is only 0.5%, and the import trade even has a negative growth, which has caused a great impact on the development of Chinese enterprises. In 1999, the domestic economy began to recover, the country actively responded to the import and export trade, the import and export trade volume showed varying degrees of increase, the RMB exchange rate also maintained a very stable trend but slowly increased. Generally speaking, from 1994 to 2005, the RMB exchange rate continued to appreciate slowly in the fluctuations, which had a certain impact on China's export trade. However, due to the introduction of a series of policies and regulations and the obvious advantages of the high quality and low price of China's export commodities, the RMB appreciation did not have a substantial impact on China^[4]. Table 1 can reflect the overall situation of China's foreign trade from 1994 to 2005.

Table 1. Overall situation of China's foreign trade from 1994 to 2005

Year	Exports (\$100 million)	Proportion of export growth	Imports (\$100 million)	Proportion of import growth
1994	1210.1		1155.2	
1995	1487.8	0.22949	1320.8	0.14335
1996	1510.5	0.01526	1388.3	0.05111
1997	1827.9	0.21013	1423.7	0.02550
1998	1837.1	0.00503	1402.4	-0.01496
1999	1949.3	0.06107	1657	0.18155
2000	2492	0.27841	2250.9	0.35842
2001	2661	0.06782	2435.5	0.08201
2002	3256	0.22360	2951.7	0.21195
2003	4383.7	0.34635	4127.6	0.39838
2004	5933.7	0.35358	5612.3	0.35970
2005	7620	0.28419	6601.2	0.17620

4.2 Changes of RMB Exchange Rate and Export Trade of Enterprises from 2005 to 2013

4.2.1 Analysis of the Factors of Rmb Appreciation

2005 was another key period for the RMB exchange rate fluctuation in China. The People's Bank of China announced that the floating exchange rate system of currency adjustment was introduced based on market supply and demand. The influencing factors and the conversion unit of RMB exchange rate fluctuation were no longer just US dollars. And announced on July 12 that the net value of China's RMB exchange rate against the US dollar rose rapidly by 2 percentage points. During the period from 2005 to 2013, the RMB showed a continuous appreciation trend, mainly for the following reasons.

The floating exchange rate system reform in 2005 made the exchange rate fluctuation of RMB need to refer to the currencies of 8 major countries in the world in a basket of currencies, rather than one currency of US dollar. With further push the floating exchange rate system reform and the formation of the market price mechanism, making China's RMB exchange rate to determine the need to further follow up the economic development level, and with the level of domestic economic development as the important reference basis, in addition, influence increasing in our country in the world, and further enhance the position of the world. (2) the development of domestic economy, further enhance the standards of China's foreign trade, per capita GDP growth, the international investment and trade environment continue to improve, in the developed countries also gradually changed the part about China's economic development will have a negative impact to the world economy, many developed countries have agreed that China is a country with a high investment potential, foreign capital into our country continuously, created a good environment for the appreciation of the renminbi. (3) The export advantage caused by the low RMB exchange rate makes the export trade of developed countries face great pressure. If the RMB exchange rate has not been effectively improved, China's export trade volume continues to rise and grow steadily, which poses a great threat to the exports of Japan, the United States and other developed countries. Under the influence of various pressures and factors, China's RMB exchange rate ushered in a continuous rising trend.

4.2.2 Analysis of the Change of Export Trade of Chinese Enterprises

As can be seen from Table 2, from 2005 to 2008, the trade volume of export continued to grow.

Table 2. Overall situation of China's export trade from 2005 to 2013

Year	Exports (\$100million)	Proportion of export growth	Imports(\$-100million)	Proportion of import growth
2005	7620		6601.2	
2006	9689.8	0.27163	7914.6	0.19896
2007	12204.6	0.25953	9561.1	0.20803
2008	14306.9	0.17225	11325.7	0.18456
2009	12016.1	-0.16012	10059.2	-0.11183
2010	15777.5	0.31303	13962.8	0.38806
2011	18983.8	0.20322	17434.8	0.24866
2012	20487.1	0.07919	18184	0.04297
2013	22090	0.07824	19499.9	0.07237

In this period of time, the mechanism of a basket of currencies and floating exchange rate mechanism of RMB has been a growth, and the flexibility of the RMB exchange rate gradually strengthen, can be found by comparing the export trade and import trade, our country has been showing a trade surplus, it has to do with the influence of the traditional exchange rate changes on import and export trade is not consistent. During 2008-2009, both export trade and import trade showed negative growth, which was largely related to the international financial crisis in 2008. From 2010 to 2013, China walked out of the negative impact brought by the economic crisis and realized a continuous increase in import and export trade. Although the trade surplus shrank sharply in 2010 and 2011, it has steadily widened since 2012.

From exchange rate movements on import and export trade mechanism, the influence of the appreciation of the renminbi should reduce the export trade, and increase the import trade, through the analysis of the import and export trade of our country in recent years, we found that: (1) the appreciation of the renminbi has constantly optimize the structure of the import and export trade in our country, enable enterprises to adapt to the domestic industrial structure adjustment on the adjustment of trade structure, thereby lowering the dependence to foreign goods, in order to realize our country enterprise further development. (2) The continuous growth of trade surplus promotes the development of national economy in a healthy and positive direction. China constantly adjusts the structure of export commodities, and makes reasonable use of foreign exchange reserves on the basis of the rise of RMB exchange rate. (3) The rise of RMB exchange rate makes the

products purchased per dollar become less. Although it affects the interests of China's foreign exports to a certain extent, it can effectively alleviate the trade friction caused by the continuous surplus. Such as the United States and other developed countries for China to set multilateral trade barriers and restrictive trade measures, and effectively promote the development of China's import and export trade.

4.3 Changes of RMB Exchange Rate after 2014 and Import and Export Trade of Enterprises

In March 2014, the RMB began to depreciate, and in August and September 2015, the RMB greatly depreciated, which had a great impact on China's economic development. From the internal reasons, it was related to the weak international economy and a large amount of capital outflow in China. Since 2014, China has paid more attention to the construction of ecology, politics, spiritual civilization and other aspects. Although economic construction is still the center, the development mode of seek improvement in stability has been adopted, and the economic development speed has slowed down. Therefore, RMB devaluation is inevitable^[5]. From the perspective of external reasons, the European economy has not yet come out of the economic crisis. In order to stimulate domestic consumption and promote economic growth, a large number of euros have been issued, and the dollar has continued to appreciate. All these reasons have resulted in the depreciation of China's RMB. On the other hand, the devaluation of the RMB has further stimulated China's foreign trade. Chinese enterprises can take advantage of this opportunity to export products and occupy the international market, which has eased the export pressure of China and further expanded the export trade volume, and also played a positive role in alleviating the employment pressure of China. The disadvantage is that the decline of RMB exchange rate makes China need to spend more money to buy the same foreign products, which brings severe challenges to the development of import enterprises. As the cost of foreign investment increases, the cost of imported products will also increase, which continues to increase the trade friction between China and some countries.

5. Conclusion

To sum up, based on the RMB exchange rate, the change of import and export trade will cause certain influence to our country enterprise, whether the appreciation of the renminbi, or RMB devaluation, China's enterprises import and export trade need according to the interna-

tional market environment as well as the national policy to make corresponding adjustment, so as to promote the development of our economy, and promote our country enterprise better to go out.

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Study on Influencing Factors of Subjective Well-being of Workers in Manufacturing Industry

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ABSTRACT

Strengthening the research on the influencing factors of subjective well-being of workers in manufacturing industry is helpful to adopt comprehensive measures to improve the well-being of industrial workers, enhance the competitiveness of enterprises and promote their better development. This paper attempts to analyze the factors that affect workers' subjective well-being from the aspects of employees themselves, economic income, and enterprise organization.

1. Introduction

Throughout the ages, people are pursuing happiness, and it is because of the desire for happiness that they can promote the development of human society. Especially under the background of the implementation of the strategy of industrial power, the manufacturing industry is in the key stage of transformation and upgrading from manufacturing to creation. It is of great practical significance to stimulate workers' vitality and innovation, enhance the competitiveness of manufacturing market and promote industrial transformation and upgrading focusing on the specific group of manufacturing industry workers^[1]. In practice, it is also necessary to explore the factors affecting workers' subjective well-being from many angles, and actively take comprehensive measures to give full play to the important role of improving workers' well-being. And promote the strategic goal of industrial power faster and better achieved. Based on this, the influencing factors of subjective well-being of workers in manufacturing industry are studied and analyzed.

2. Analysis of the Influencing Factors on the Subjective Well-being of Workers in Manufacturing Industry

Table 1. Main Factors Affecting the Subjective Well-being of Workers in Manufacturing Industry

influencing factor; influence factor	primary coverage
economic income	Salary level, fluctuating overtime, job stability, material base
social support	Wage levels and policies, stable employment security, social insurance
leader style; style of leadership	Respect employees, recognize employees, set an example
Work itself	Working environment hardware, clear division of responsibilities, participation in management authority, working time and pressure
Organizational level	Safe environment, training development, organizational equity
Individual employees	Family motivation, physical and mental health, interpersonal relationships, goal pursuit
Happiness culture	People-oriented, pursuit of harmony, give employees a sense of belonging

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As shown in table 1 above, there are seven main factors that affect the subjective well-being of workers in the manufacturing industry.

2.1 Economic Income

Economic income is one of the important factors affecting the well-being of workers. The essential purpose of people entering enterprises is to obtain high wages, change their current living conditions, and obtain higher economic income. The higher the worker's personal intuitive happiness, as one of the important factors affecting the well-being of workers, especially in terms of salary levels, also has a direct impact on the subjective well-being of industrial workers. However, compared with the white-collar workers in enterprises, industrial workers have the characteristics of low education, lack of professional vocational skills, low willingness to learn, and so on. Their main purpose is to make more money to increase economic income make their families happier, comparing the two pay levels, we can find that there is a big gap. To improve the subjective well-being of industrial workers, we also need to optimize from the aspects of job stability and material security^[2].

2.2 Social Support

Social support, which includes a large number of factors affecting social support, such as employment security, wage policies, social insurance and so on, especially in the area of overtime pay and social insurance, has a relatively high level of concern for industrial workers and has a direct impact on their subjective well-being. Only by perfecting the corresponding policies and regulations at the national level can the vital interests of industrial workers be fundamentally protected. To a certain extent, the leadership style determines the management style of the enterprise. In order to make the factors of production play a full role in the production of the factory, we must do a good job of respecting employees and setting an example.

2.3 Work Itself

Whether the division of responsibilities is clear, after feeling the respect and recognition of the leaders, the employees will be more serious and responsible for the actual work, and then give full play to their subjective initiative in their own work, more efficient and high quality to complete their own work. At the same time, good leadership style helps to create a good working atmosphere and achieve harmonious development between enterprises and employees. participation in man-

agement power, work environment and so on will have a great impact on the individual well-being of workers, here we can compare the factory to a machine, and industrial workers are parts of the machine, to ensure that the machine is efficient and stable, in addition to creating a good working environment, but also to clarify the important responsibilities of each part, and in the production process planning and design, to promote the smooth achievement of practical production objectives, in practice to give industrial workers more platform participation and management opportunities, can help employees find passion in the actual work, And get more satisfaction and happiness from it.

2.4 At the Organizational Level

These factors include, inter alia, organizational equity, a safe environment and training and development. Because industrial workers are based on organizations, they are guaranteed to work in a safe environment, and basic skills and professional quality training and education are strengthened, which can stimulate the vitality and creativity of industrial workers and ensure their happiness. Giving industrial workers more platform participation and management opportunities in practice can help employees find passion in practical work and gain more satisfaction and happiness from it.

2.5 Individual Employees

Individual and personal characteristics of employees are also an important factor affecting subjective well-being, such as: some employees take part in the work with high spirits every day, while some employees do not have any interest in their work. The reason is that there are great differences in personality, growth experience, interpersonal relationship, family motivation and so on. It is also necessary to use positive and effective methods to manage and guide employees scientifically in order to give full play to their enthusiasm and initiative and to towards common goals^[3].

2.6 Happiness Culture

Happiness culture is an important finding in the study of the influencing factors of industrial workers. For example, some employees take part in the work with high spirits every day, while some employees do not have any interest in their own work. The reason is that there are great differences in personality, growth experience, interpersonal relationship, family motivation and so on, subjective well-being, which makes workers lucky. Happiness culture is an important an important finding in the study of the influencing factors of workers' subjective well-being, regards workers' well-being as an effective

construction of promotes it in the form of a common happiness culture.

3 The Model and Application Enlightenment of Subjective Well-being Transmission in Manufacturing Industry

3.1 Mode of Conduction

Manufacturing industry is one of the pillar industries in China, and the number of workers in manufacturing industry is huge, so how to improve the subjective well-being of workers is an important subject. The application of happiness conduction model can effectively improve the happiness of manufacturing workers, not only to improve industrial efficiency, but also to promote social harmony and stability.

The subjective well-being level of industrial workers varies greatly from stage to stage, as follows: (1) In the new stage, the factors that affect the level of the worker's master's well-being after the worker joins the enterprise after the interview, in addition to considerable income and stable employment relationship, it also includes perfect training, reasonable production process, work burden and so on. It is mainly that workers need to take some time to adapt to their own work to enter new jobs, can adapt and do well as soon as possible in the new work environment, and can bring workers great happiness; (2) At the stable stage of development, when industrial workers adapt to the actual working environment and work content, they will pay more attention to the division of responsibilities, performance appraisal, harmonious interpersonal relations, and their own career development plans. It is hoped that enterprises can give considerate welfare and guidance, and the subjective well-being of workers will be further enhanced after meeting these conditions; (3) at the mature stage, industrial workers in this stage are more eager to be respected and valued by leaders and shift their attention to career planning and job promotion^[4].

3.2 Applied Enlightenment

If we want to improve the subjective well-being of workers and promote the transformation and development of manufacturing industry, we can improve the subjective well-being of workers and promote the industrial transformation and development^[5]. Specific measures include: (1) to provide a comfortable working environment and a safe operating environment for industrial workers in the new entry stage, and to establish a scientific salary system for workers in accordance with

the wage levels and policies formulated by the State, and to actively organize new entrants to receive pre-employment training in order to help them master practical work skills and adapt to actual jobs as soon as possible in a relatively short period of time; (2) During the period of stabilization, when industrial workers have adapted to the job content and requirements of their jobs, a more stable employment relationship has been formed by signing contracts, and the pay system has been appropriately adjusted, and even the division of responsibilities and performance appraisal can be incorporated into it, so that industrial workers can receive more substantial economic income, and wages and subsidies are paid according to working hours for overtime; (3) In the period of development, when industrial workers are able to handle their own work well, enterprises want to further stimulate their work vitality, in addition to maintaining a stable employment relationship, but also more concerned about their own development needs, and based on reality to provide industrial workers with scientific and reasonable career planning and guidance, even according to the different positions of workers, to give highly targeted training and education, so that they can take a longer-term career position, for industrial workers with different development needs, but also to provide a broader development platform for the production and development of enterprises to add more support;

4. Conclusion

This paper is based on the study of the influencing factors of subjective well-being of workers in manufacturing industry. With the continuous development of social economy and science and technology, China's manufacturing industry has made great progress and gradually moved towards the direction of independent creation. As the most basic factor of production, the research and analysis of the factors affecting the subjective well-being of industrial workers can provide strong guidance for enterprises to improve workers' well-being, enhance their competitiveness and realize transformation and upgrading. So that workers in different stages of subjective well-being needs can be effectively met, and then promote the manufacturing industry towards a better direction.

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The Influence of Economic Policy Uncertainty and Habit Formation on Rural Residents' Consumption

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ABSTRACT

Based on the household survey data of rural residents in 30 provinces (cities, districts) of China from 1995 to 2019, this paper constructs an econometric model of farmers' consumption behavior with habit formation and economic policy uncertainty, and makes an empirical analysis of farmers' consumption behavior by using sys-gmm estimation method. The results show that: since the reform and opening up, the changes of Chinese farmers' consumption behavior not only show excessive sensitivity to income changes on the whole, but also show a significant habit forming effect, and the existence of habit effect will reduce the impact of economic policy uncertainty on consumption; there is a large gap between regions, and the consumption in the western region is affected by the uncertainty of economic policy, the impact is greater. Therefore, the government should pay attention to the impact of economic shock on consumption, maintain the systematicness and stability of the policy, enhance the stability, continuity and accuracy of the policy, drive the development of the western region, build a long-term policy mechanism to promote the sustained and rapid increase of farmers' income, and further change farmers' consumption concept.

1. Introduction

With the accelerating process of reform and opening up, China's economic system reform has achieved remarkable results. Expanding domestic demand, especially the consumption demand of rural residents, has become a hot topic of academic circles and government departments. In the new stage of China's high-quality development, it has become a major task during the "14th five year plan" period to adapt to the general trend of China's consumption upgrading and speed up the release of the consumption potential of 1.4 billion people. On November 18, 2020, the executive meeting of the State

Council made a plan on "boosting major consumption and promoting the release of rural consumption potential". Rural consumption is an important part of the consumer market and has great development potential. In 2021, No. 1 central document confirmed that rural construction should be placed in the important position of socialist modernization, and the rural industry, talent, culture, ecology and organization should be promoted in an all-round way, so as to accelerate the modernization of agriculture and rural areas, and speed up the formation of mutual promotion between workers and peasants, mutual complementarity between urban and rural areas,

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and coordinated development. Fernandez Villaverde J^[1] and other scholars pointed out that the impact of economic policy uncertainty may lead to the decline of macroeconomic variables such as consumption, output, investment and employment, and this negative relationship is relatively stable. However, the novel coronavirus pneumonia has hitherto unknown impact on consumption, and consumption and key consumption are the first to bear the brunt. Rural consumption has also been greatly affected. As a developing country in the transition of market economy, the frequent changes of government officials, economic reform and macroeconomic regulation and control make the overall level of China's economic policy uncertainty index higher and the fluctuation range larger. Moreover, at this stage, the instability of China's economic growth model of "focusing on investment and export while ignoring consumption" needs to be solved. Therefore, it is particularly important to explore the consumption of rural residents under the condition of economic policy uncertainty.

In order to explore ways to expand residents' consumption, scholars at home and abroad have carried out extensive discussions, in which habit formation is an important perspective. Habit formation reflects residents' preference for current and future consumption, fits the consumption characteristics of rural residents' consumption under the impact of economic policy uncertainty, and is one of the internal causes of residents' consumption change. From a theoretical point of view, the study of economic policy uncertainty and habit formation on rural residents' consumption is an innovation based on previous theories. Starting from the dual perspective of uncertainty and habit formation, the study of rural residents' consumption is a more detailed elaboration of the evolution process of China's rural residents' consumption level and consumption structure, which is conducive to innovation or improvement and has Chinese characteristics. The consumption behavior theory of color. In a practical sense, China is a typical country with dual economic structure. The income gap between urban and rural residents is relatively large, which leads to a large gap in the consumption behavior of urban and rural residents. This paper studies the consumption behavior of rural residents from the perspectives of habit formation and uncertainty, and puts forward corresponding policy suggestions according to the results of empirical analysis, which can provide the basis for expanding the consumption demand of residents, and has non important practical significance for promoting the steady and healthy development of rural economy and the realization of Rural Revitalization Strategy.

2. Literature Review and Theoretical Hypothesis

2.1 The Impact of Economic Policy Uncertainty on Rural Residents' Consumption

At present, the mainstream literature at home and abroad generally believes that the judgment and expectation of economic participation institutions and individuals on the current economic situation are inconsistent, which leads to the uncertainty of economic policy. Baker^[2] and others defined the uncertainty of economic policy as the economic risk caused by the government's uncertain policy effect in response to the economic environment. By constructing different policy uncertainty indexes, Bonn and Pfeifer^[3] confirm that policy uncertainty has a negative impact on economic growth, and this negative relationship is relatively stable. Kim and Kung^[4] also confirmed that when faced with uncertainty, enterprises will increase cash holdings, thus reducing investment. The impact of economic policy uncertainty may lead to the decline of macroeconomic variables such as consumption, output, investment and employment. By analyzing the data, Susan Basu^[5] found that the impact of uncertainty led to a significant decline in output, consumption, investment and working hours. Therefore, in view of the greater impact of uncertainty on Residents' consumption, reducing uncertainty is of great significance for releasing residents' consumption potential. Cheng Yanran^[6] found that under the influence of uncertainty, the consumption behavior of Chinese residents generally shows strong precautionary saving motivation, which has obvious differences between urban and rural areas and regions; but the inhibitory effect of economic uncertainty on investment behavior is only obvious in the central and western regions and the northeast regions. Huang Dongyan^[7] uses the relevant data of urban residents' consumption in Hebei Province from 2000 to 2015 to find that the impact of economic policy uncertainty has a certain negative impact on urban residents' consumption in Hebei Province, but the duration is not long; and income has a certain regulatory effect on the impact effect. Relevant research literature shows that macroeconomic uncertainty often has a negative impact on the economy, such as the lack of aggregate demand, the interruption of enterprise capital chain, the lack of liquidity, enterprises will reduce investment or wait-and-see attitude, wait for investment opportunities, or delay investment decisions. Based on the above statements, this paper puts forward the following assumptions:

Hypothesis 1: the uncertainty of economic policy will

have a negative impact on the consumption of rural residents.

2.2 The Influence of Habit Formation on Rural Residents' Consumption

Scholars at home and abroad have conducted a lot of meaningful research and Discussion on Residents' consumption behavior from the perspective of habit formation theory. The theory of consumption habit formation was put forward by Duesenberry^[8]. The hypothesis holds that consumers' current consumption expenditure level will be affected by both current income and past consumption. Kueng and Yakovlev^[9] both think that there is obvious habit formation in residents' consumption behavior, which is influenced by past consumption experience and current consumption level. In other words, the habit formation effect of residents is weak in the short term, but strong in the long term. Yang Qi^[10] uses the group method to construct "pseudo panel" for GMM estimation, and finds that migrant workers' family consumption has excessive sensitivity to immediate income; because the consumption habit is in the transition from rural residents' consumption mode to urban residents' consumption mode, migrant workers' family consumption has no significant internal habit formation effect, but has significant external habit formation effect. Zang Xuheng^[11] studies the dynamic influence mechanism of habit formation on Residents' consumption under the current consumption environment. Facing the impact of external uncertainty, the habit formation characteristics of residents' consumption will reduce their consumption tendency and inhibit its recovery. In the mutual restriction between the two, the consumption tendency of residents will eventually tend to decrease. Wang Xiaohua^[12] et al. Constructed an econometric model of farmers' consumption behavior, and found that the changes of Chinese farmers' consumption behavior not only showed excessive sensitivity to income changes on the whole, but also showed significant habit formation effect; both the excessive sensitivity and habit formation effect were greatly different due to the different stages of farmers' income growth rate. Dong Yan^[13] constructs the econometric model of household savings model under the habit formation. Starting from the urban-rural dual economic structure, she concludes that the influence of habit formation factors on rural family residents is stronger than that of urban family residents. Based on the above statements, this paper puts forward the following assumptions:

Hypothesis 2: the current consumption level of rural residents is affected by the formation of habits.

Hypothesis 3: the existence of habit formation reduces the impact of economic policy uncertainty on rural resi-

dents' consumption.

3. Empirical Research

3.1 Estimation Method

Considering that the variables of habit formation and economic policy uncertainty are variable coefficients varying with time, and in order to avoid the endogenous problems between explanatory variables and random disturbance terms, Difference-Generalized method of moments (diff-gmm) estimation method proposed by Arellano and bond (1991) is used to solve the problem, and to ensure the robustness of the results and avoid the possible endogenous problems in the model in this paper, we choose the estimation method of system generalized estimation (sys-gmm) proposed by Blundell and bond (1998) to solve the problem of system consistency and sequence correlation.

$$Y_{i,t} = \beta_0 Y_{i,t-1} + \beta_1 X_{i,t} + \mu_i + \varepsilon_{i,t} \quad (1)$$

Among them, $Y_{i,t}$ are explained variables, $Y_{i,t-1}$ are explained variables of lag period, $X_{i,t}$ are explained variables, β is estimated coefficient, individual effect and random disturbance term.

In order to further test the reliability of the estimation results of sys-gmm model, this paper conducts sargan test after dynamic panel regression to judge whether the instrumental variables in this paper are effective. In addition, in order to test whether there is sequence correlation in random disturbance terms, AR test is also carried out. In order to ensure the robustness of the empirical results as far as possible, the dynamic panel two-step sys-gmm estimation is carried out, and the p value corresponding to AR (1) and AR (2) is tested according to the Arellano bond test, so as to show that there is no second-order autoregression. Sargan test is used to ensure the validity of instrumental variables and avoid over identification. In addition, we also added random effects (RE) for robustness test, and the results of panel mixed regression OLS and dynamic panel difference GMM as the control group to test the equation.

3.2 Model Setting and Variable Selection

In the aspect of model setting, this paper takes the consumption of rural residents in each province as the explained variable, the disposable income as the explained variable, and the lag consumption and economic policy uncertainty as the explained variable. At the same time, considering that there are significant differences in economic degree among provinces in China, in order to control the influence of other factors on the accuracy of the

results, control variables are introduced into the equation. In addition, considering the endogenous problem and sequence correlation problem, the lag term is introduced as a tool variable to reduce the error of parameter estimation. Therefore, the basic form of the dynamic model is as follows:

$$C_{i,t} = \beta_0 + \beta_1 C_{i,t-1} + \beta_2 Y_{i,t} + \beta_3 g_{i,t-1} + \mu_{i,t} \quad (2)$$

In order to better verify the impact of the internal effect of economic policy uncertainty and habit formation on rural residents' consumption, the product of economic policy uncertainty ($EPU_{i,t-1}$) and rural residents' consumption ($C_{i,t-1}$) in the lag period is added as a new control variable:

$$C_{i,t} = \beta_0 + \beta_1 C_{i,t-1} + \beta_2 Y_{i,t} + \beta_3 EPU_{i,t-1} + \beta_4 EPU_{i,t-1} * C_{i,t-1} + \mu_{i,t} \quad (3)$$

$C_{i,t}$ are the explained variables, which indicate the consumption level of the rural residents in the T period of the i-th province. The endogenous variable ($C_{i,t-1}$) of the explained variable lags one period to reflect the formation effect of farmers' consumption habits. $Y_{i,t}$ are the core explanatory variables, which indicate the current per capita disposable income of rural residents. β_1 reflects the intensity of farmers' habit formation effect, β_2 represents farmers' marginal propensity to consume, and the Lag one period $EPU_{i,t-1}$ represents the uncertainty of economic policy. This paper selects the annual data of EPU as the control variable, and then uses the weighted average method to transform the monthly data:

$$EPU_t = \frac{EPU_1 * 1 + EPU_2 * 2 + \dots + EPU_{12} * 12}{1 + 2 + \dots + 12} \quad (4)$$

$\beta_3 > 0$, When the income of rural residents is stable, they will increase consumption appropriately; $\beta_3 < 0$, $EPU_{i,t-1} * C_{i,t-1}$ refers to the moderating effect of habit formation on the uncertainty of economic policy, which is a random disturbance term, reflecting the impact of random factors on the model, including rural per capita GDP and rural consumer price index (CPI) as control variables, indicating the variables that affect the consumption of rural residents, including Beijing, Shanghai and Tianjin, regardless of urban and rural consumption prices Lattice index, so it is not in the scope of this paper.

3.3 Descriptive Statistics

In this paper, the official statistical yearbooks of rural areas in various provinces are selected. Due to the lack of data in Tibet and Chongqing, the data are eliminated. Finally, the panel data of 30 provinces and cities in China

from 1995 to 2019 are selected for regression analysis. Then, the country is divided into three regions: Eastern, central and western regions. For the main variables, in order to eliminate the heteroscedasticity between the variables, the logarithmic processing is carried out, as shown in Table 1 Descriptive statistical results of the main variables.

Table 1. Overall statistical characteristics of panel data in 30 provinces from 1995 to 2019

Variables	Eastern Region		Central region		Western Region	
	Mean	SD	Mean	SD	Mean	SD
Per capita consumption expenditure (C)	8.45	0.822	8.163	0.863	7.966	0.85
Per capita disposable income(y)	8.776	0.818	8.404	0.835	8.161	0.813
Economic policy uncertainty(EPU)	0.5	0.806	0.5	0.806	0.5	0.807
Per capita GDP(GDP)	10.22	0.925	9.609	0.897	9.507	0.986
Consumer price index of rural residents (CPI)	4.133	1.437	4.637	0.0381	4.635	0.039

Source: China Rural Statistical Yearbook.

The results of descriptive statistics in Table 1 show that: firstly, the rural per capita consumption expenditure, per capita disposable income and rural per capita GDP in the eastern region are higher than those in the central and western regions, and the standard deviation is larger, which indicates that the economic level of the eastern region is higher as a whole, and there are differences between the income level and consumption level among regions. The consumption level of rural residents in the central and western regions is relatively close, and the difference between the eastern and the central and western regions is obvious. However, the consumer price index of rural residents in the central and western regions is relatively close, and that in the eastern region is the lowest. Due to the relative lack of resources in the central and western regions, the transportation cost is on the high side.

4. Empirical Test Results and Analysis

Because the lag index of the explained variable is used as the explanatory variable in this paper, the individual effect and disturbance effect may have the problem of autocorrelation. In addition, due to the resource endowment, cultural differences and other factors in different provinces, in order to overcome these endogenous problems, we use sys-gmm estimation.

4.1 Regression Results

Because this paper uses the lag index of the explained variable as the explanatory variable, the individual effect

and disturbance effect may have the problem of autocorrelation. In addition, because there are some factors in different provinces, such as regional resource endowment, cultural differences and so on, which may have a certain correlation with the explanatory variable, so in order to overcome these endogenous problems, this paper finally uses the method Sys-gmm estimation.

Table 2. The estimated results of the impact of economic policy uncertainty and habit formation on rural residents' consumption

Variables	OLS mixed regression	Random effect of re	DIFF-GMM	SYS-GMM
Habit formation (Ci, t-1)	-0.755** (-2.24)	-0.601* (-1.71)	-0.000** (-2.19)	-0.356 (-1.02)
Economic policy uncertainty (EPUi, t-1)	-8.745*** (-2.89)	-8.181*** (-2.66)	-0.000*** (-3.99)	-3.213 (-1.03)
Superposition effect (EPUi,t-1*Ci,t-1)	8.860*** (-2.92)	-0.048*** (-2.61)	-0.001 (-1.46)	0.022** (-2.3)
Rural per capita disposable income (Y)	0.123*** (-3.53)	0.109*** (-3.11)	0.050*** (2.76)	0.114* (-1.76)
Rural per capita Gross Domestic Product (GDP)	0.411*** (-9.41)	0.404*** (-9.07)	-0.044 (-0.56)	-0.319*** (-3.68)
Consumer price index of rural residents (CPI)	-0.004 (-0.31)	-0.011 (-0.73)	0.041* (1.79)	0.062* (-1.79)
Constant	-9.283*** (-2.84)	-9.278*** (-2.82)	0.142 (0.17)	-7.151 (-1.36)
Observations	646	646	590	562
Prob > chi2	0	0	0	0
R-squared	0.8655	0.8607		
P value of AR (1) test			0.0000	0.059
P value of AR (2) test			0.2351	0.170
Sargan test p value			1.000	1.000

Note: ***, **, and * are significant at 1%, 5%, and 10% levels respectively. The data in brackets are t statistics.

The output results of the model show that the P values of AR (1) test and AR (2) test are greater than 0.1, which indicates that there is no sequence correlation in the residual term, so the original hypothesis of “no autocorrelation in the disturbance term” is accepted, and the setting of dynamic regression model is reasonable. In terms of instrumental variables, the p value of sargan test and sargan difference test of the model are both much greater than 0.1, which means that the original hypothesis of “all instrumental variables are valid” is satisfied, that is, the selected instrumental variables are valid. The specific results of regression are shown in Table 2.

According to the dynamic panel model (3), table 2 lists the regression results of mixed OLS, random effects and the regression results of diff-gmm and sys-gmm. From sys-gmm The regression results of the model show that the habit formation coefficient from 1995 to 2019 is -0.356, which is basically at the same level as the panel mixed regression result and the random effect result, indicating that the habit formation has a negative impact on the consumption of rural residents, and the coefficient of economic policy uncertainty is -3.213, which indicates that under the impact of economic policy uncertainty, the rural residents will have a negative impact The coefficient of the superposition effect of habit formation and economic policy uncertainty is 0.022, which is significant at the 5% significant level, indicating that the impact of economic policy uncertainty on rural residents' consumption will be weakened due to the existence of habit formation, and because of the lag of economic policy uncertainty, every 1% increase in the superposition effect will increase farmers' consumption by 0.023; per capita consumption can be reduced The coefficient of disposable income is 0.014, which is significant at the significant level of 10%, indicating that income has a significant role in promoting the consumption of rural residents. The coefficient of income level of rural residents is 0.306, which is also significant at the level of 1%, indicating that the consumption behavior of rural residents in China shows a habit effect, and has a strong dependence on income, which is related to the uncertainty of economic policy 066, which is also significant at the level of 1%. The surface economic policy uncertainty has a significant impact on the consumption of rural residents.

From the regression results of control variables, the regression coefficient of consumer price index (lnCPI) is 0.062, and the result coefficient is significant. The results of Table 2 also show that at the significant level of 1%, the coefficient of rural per capita GDP is -0.319. Although China is the second largest economy, the consumption rate level of China has been at a relatively low level. From the stability of the regression results, in the sys-gmm, the consumption rate of China is relatively low In the model, the $\ln C_{i,t-1}$ estimation results are close to the estimator level of random effects, which indicates that there is no serious error problem caused by weak instrumental variables in the regression results. In addition, the P value of AR (2) test is 0.17, and there is no sequence correlation in the random disturbance term of the horizontal equation. At the same time, the p value of sargan overidentification test is 1, which indicates that the instrumental variables used in the estimation process of sys-gmm model are appropriate and effective, and that the estimation of sys-gmm model is

applicable to the empirical equation set in this paper.

4.2. The Influence of Different Regions on the Consumption Differentiation of Rural Residents

Table 3. Estimated results of the impact of economic policy uncertainty and habit formation on rural residents' consumption in different regions.

Variables	Eastern Region		Central region		Western Region	
	FE	SYS-GMM	FE	SYS-GMM	FE	SYS-GMM
Habit formation (Ci, t-1)	0.523*** (10.90)	0.430 (1.50)	-0.003 (-0.05)	0.312* (1.90)	0.049 (0.87)	0.813 (1.24)
Economic policy uncertainty (EPUi,t-1)	0.065*** (3.77)	0.152 (0.74)	0.066 (1.43)	0.059* (1.87)	0.105* (1.76)	-0.192 (-0.66)
Superposition effect (EPUi,t-1*Ci,t-1)	-0.001 (-0.57)	-0.004 (-0.58)	0.000 (0.00)	-0.004 (-0.63)	0.003 (0.83)	0.004 (0.72)
Rural per capita disposable income (Y)	0.035 (1.52)	0.342 (0.84)	0.881*** (5.16)	0.541* (2.12)	0.106 (1.35)	-0.406 (-0.37)
Rural per capita Gross Domestic Product (GDP)	0.395*** (10.02)	0.294 (1.09)	0.093 (0.80)	0.192* (1.87)	0.627*** (8.29)	0.494 (1.42)
Consumer price index of rural residents (CPI)	-0.015 (-0.57)	-0.238 (-1.31)	2.089** (2.32)	-0.152 (-1.42)	1.821* (1.78)	0.054 (0.26)
Observations	232	232	230	230	184	184
Number of regions	10	10	10	10	8	8
R-squared	0.974		0.851		0.788	
P value of AR (1) test		0.079		0.199		0.246
P value of AR (2) test		0.018		0.552		0.871
Sargan test p value		0		0.003		0
Hansen statistics		1		1		1

Note: ***, **, and * are significant at 1%, 5%, and 10% levels respectively. The data in brackets are t statistics.

The coefficient of habit formation is 0.430 in the eastern region, 0.312 in the central region and 0.813 in the western region. The coefficient of habit formation in the western region is the highest, and the coefficient of uncertainty of economic policy in the western region is -0.192, which indicates that the uncertainty of economic policy has a negative inhibitory effect on the consumption of rural residents in the western region. Compared with the western region, the income level of the central and eastern region has been at a higher level, and the rural residents have accumulated a certain amount of savings, so they have a strong guarantee ability in the face of policy uncertainty in the economic system reform.

The income coefficient of the central and eastern re-

gions is positive, which indicates that the increase of income is positively correlated with the consumption of rural residents, while the income coefficient of the western region is -0.011, which indicates that the increase of income has a crowding out effect on the consumption of the western region. It can be seen from table 3 that when the economic policy uncertainty and habit formation have a superposition effect, the coefficients of the eastern region and the central region are both negative -0.04, that is to say, in the face of drastic income fluctuations and policy uncertainty, it will lead to a decline in the formation effect of consumption habits, which has a certain degree of inhibitory effect on the consumption of rural residents in the Middle East.

From the perspective of control variables, rural per capita GDP, which reflects the level of economic and social development, has a positive impact on consumption

The impact of consumer price index (CPI) on the consumption of rural residents in the central and eastern regions is inhibited, while the impact on the western region is weak. When the uncertainty increases, there will be a certain expansion of goods. The rapid rise of prices inhibits the consumption of residents, especially in the eastern and central regions more obvious.

5. Conclusions and Policy Recommendations

Based on the dynamic panel data of 30 provinces in China from 1995 to 2019, this paper uses the estimation method of sys-gmm model to explore the impact of economic policy uncertainty and habit formation on rural residents' consumption. The empirical test results show that the consumption of rural residents has a strong stickiness on the whole, and the consumption lagging one period and the uncertainty of economic policy are negatively correlated with the current consumption. The consumption behavior of rural residents in China shows a habit effect, and has a strong dependence on income. The coefficient of superposition effect between the uncertainty of economic policy and the formation of habit is 0.022 and at the level of 5%, it also shows a significant phenomenon of promoting consumption. There is a significant difference between the income level and consumption level among regions. The consumption level difference between the western region and the central and eastern regions is more obvious. The influence of habit formation on consumption in the western region is more obvious, and it has a greater dependence on income. When facing the uncertainty of economic policy, it will be more impacted, and the consumption will be reduced Fees have also been significantly reduced. In view of the above conclusions, this paper puts forward the following policy recommendations:

(1) The government should have a correct and reasonable understanding and evaluation of the relationship between economic policies and residents' consumption, and grasp the residents' sensitivity to policies, so as to prevent the stimulus effect of policies from declining or disappearing. In addition, government departments should maintain the system and stability in macroeconomic policy control, and reduce the negative impact of uncertainty on Residents' consumption.

(2) We should strengthen the overall planning of rural consumption market, change farmers' consumption concept, and improve the consumption environment of rural residents. We should promote the continuous extension of urban consumer market to rural areas, constantly enrich the types of rural consumer goods and improve the quality of rural consumer goods, so as to provide more possibilities for farmers to expand consumption; we should strengthen the investment and construction of rural infrastructure, establish the radiation driven transportation and network service system of "city leading countryside", provide convenience for farmers to consume in cities or online shopping, and stimulate farmers' consumption The scale expansion of demand.

(3) The development of the whole country is unbalanced, so is the development of the western region. The problem of regional gap is basically the gap between urban and rural areas, that is, the gap between the level of industrialization and urbanization. To develop the western region, we should coordinate the development of the whole country, allow some regions to get rich first, and realize common development and common prosperity. The government should reform and improve the economic system, expand the opening up to the outside and the inside, promote the resources of the economically developed regions, domestic and overseas resources, and be able to flow more to the western region driven by the market, so as to narrow the gap between urban and rural areas in the central and western regions.

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Foreign E-commerce Practitioners in “Taobao Village”: Isolation and Integration

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ABSTRACT

This research mainly analyzes the actual situation of social integration of migrant E-commerce practitioners in Xintang Town of Guangdong Province through field survey. According to the survey, the overall level of social integration is relatively low, and there are three isolation barriers, namely time, space and psychology.

Regarding the influencing factors of social integration level, it is concluded through the principal component analysis that five main factors impacting the social integration of migrant E-commerce practitioners are life factor, business factor, housing factor, social factor and individual factor. By establish a multiple logistic analysis model, it is found that type of friends, interest protection and frequency of recreational activities would impact the social integration of migrant E-commerce practitioners most significantly among all factors.

1. Introduction

1.1 “Taobao Village” and “Taobao Practitioners”

From the first “double 11” shopping carnival to the present new year promotion, “618” mid-year promotion, “double 11”, “double 12” and year-round livestreaming commerce, Chinese e-commerce platforms hits new records of sales volume constantly in the more and more intensive promotions. While we are busy calculating for cash back or using coupons through our phone or computer screens, people who make the convenient shopping mode possible are also working busily on the other end of network.

In 2019, the trading volume of Chinese E-commerce reached 34.81 trillion Yuan, including 10.63 trillion Yuan of online sales, with a year-on-year growth of 16.5%, and the online retail sales of physical goods was 8.52 trillion Yuan, and its proportion in the total retail sales of consum-

er goods increased to 20.7%^[1]. The number of E-commerce practitioners reached 51,256,500. Different from the general understanding that E-commerce features flexibility, it is quite common that these E-commerce practitioners have a tendency to agglomerate^[2]. Since E-commerce is extremely sensitive to the source of goods, cost, and logistics, places where there are many low-rent houses, source advantage or convenient logistics would become the natural gathering place of E-commerce practitioners.

Owing to the fact that places with these features are mostly villages in the city or villages in the urban fringe or villages and towns with characteristic industries, these gathering places are called “E-commerce village” or “Taobao village”. According to the definition of Alibaba Research Institute, “Taobao Village” refers to a village with more than 10% of the local households participating in E-commerce or has annual trading volume more than 10 million Yuan. According to the Research Report on

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China's Taobao Village (2020), During 2013 to 2019 the number of Taobao Village in China grew rapidly to 4310 from the original 20 within 7 years, and it even reached 5425 in June 2020^[3].

1.2 Xintang Town

This Study focuses on Xintang Town, which is well-known throughout the country for its denim clothing processing and sales. There are denim commercial service complexes such as Xintang Cowboy Town and Fangyu-an E-commerce Industrial Park. In 2013, Xintang Town had 4766 denim textile and garment production related enterprises. Xintang Town consists of 8 "Taobao village", and produces more than 800 million denim garments annually, accounting for 60% of domestic denim clothing sales and 30% of denim clothing export of China in 2013. Around 2010, low-cost labor in Southeast Asia caused sudden drop in overseas orders, coupled with the rise of the Taobao industry, many factories in Xintang Town began to pay more attention to domestic sales in response to changes in market demand, and the Taobao industry is flourished.

At present, Xintang Town has formed a mature denim clothing e-commerce industry chain, ranging from production, inventory, agent delivery, business training to logistics services, online advertisement and review management, attracting a large number of foreign e-commerce related workers. Thus it is a typical area for studying the integration of foreign e-commerce practitioners.

1.3 Literature Review

Currently, studies on "Taobao Village" mainly focus on the reasons of agglomeration, its business mode and its impact on local economic development, but there are few studies on the life and social integration of individuals that constitute the "Taobao Village". On the other hand, researches on social integration of traditional migrant workers are abundant.

Regarding the status of social integration, Wang Guixin and Luo Enli (2007) found in a study of migrant workers in Shanghai that their degree of social integration is low, but in the process of improvement^[4]; Yang Xusong et al. (2006) surveyed migrant workers in Shenzhen, Found that there is a considerable degree of isolation between migrant workers and the locals^[5]. In Li Shuzhuo's (2008) professional survey of migrant workers in Shenzhen, it was found that in terms of behavior integration, migrant workers lack social support, while in terms of emotional integration, their integration situations are generally in better condition^[6].

Regarding the social integration models, Li Peilin and Tian Feng (2012) used linear regression analysis to point out that social integration does not have a progressive relationship at the economic, social, psychological, and identity levels^[7]. Zhu Li (2002) pointed out that there is gradualism in the process of social integration at all levels^[8]. Yang Juhua (2010) further specifically pointed out this progressive relationship, which is based on the economic level, with identity level being the final stage^[9].

This paper mainly studies E-commerce practitioners in Guangdong's largest "Taobao Town", namely Xintang Town, through questionnaires and interviews, and analyzes the basic mode of their work and life, level of local integration and factors influencing the social integration.

1.4 Data Source

The data used in this study is mainly derived from data obtained from two field surveys in Xintang Town. The first survey was conducted during 2015 based on the related national innovation project. A total of 200 questionnaires were distributed to all residents, including 175 valid ones. The second survey was conducted in March-April 2017 for local F-commerce practitioners. A total of 840 questionnaires were distributed, of which 630 valid questionnaires were recovered.

2. Evaluation of the Social Integration Level of Foreign E-Commerce Practitioners

2.1 Index Evaluation

Since social integration is a complex dynamical-changing process covering various aspects, there has not been a unified standard for defining the level of social integration. Currently, different measurement standards are usually adopted according to the actual situation, and usually consist of two evaluation methods, namely single-index measurement and multi-dimensional measurement.

Single index measurement mainly extracts a key research index and takes it as the standard for judging the level of social integration. For instance in the research on the social integration status of female migrant workers in three cities of Hubei Province, the researcher selected "the willingness to stay" as a single index (Xiang Lihua, 2013)^[10]; in the survey of social integration of migrant workers in Shenzhen, Li Shuzhuo took the identity as the index for judging the social integration level.

Multi-index measurement method follows the theoretical requirements on the multi-perspective observation of social integration. In terms of the factors that influence the social integration, influencing factors may vary according

to the targets of research. Based on the existing studies on the social integration of migrant workers in China, the following core indexes can be summarized.

Table 1. Common indexes of social integration measurement

Dimension	Index
Economic dimension	Disposable income
	Average monthly expenditure
	Housing (living space, living environment, rent affordability, rent and purchase condition)
	Occupation (reputation, stability, safety, strength, welfare)
Social dimension	Social condition (willingness to make friends, type of friends, friends-making scale, relationship with friends and relatives, organization)
	Community activities (activity participation)
	Political participation (election and being elected, local political concern)
	Policies (household register system, welfare policies)
	Rights and interests protection (difficulty of legal rights protection, approach of legal right protection)
	Public services (education and medical treatment)
Cultural dimension	Traffic smoothness
	Living habits (food, clothing, tradition)
	Values
Psychological dimension	Emotional identification (life satisfaction)
	Identity (whether the local identity is approved)
	Willingness to stay

Combining the actual situation of Xintang Town, namely migrant E-commerce practitioners are mainly from the surrounding regions within the province, there are small social integration barriers in language, lifestyle and customs, and other aspects, which may lead to a high level of social integration in cultural dimension. Therefore, this research selects three dimensions, including the economic dimension, social dimension and psychological dimension, and three representatives respectively, including occupational stability, friends-making willingness, and identity. First of all, the three indexes are analyzed one by one.

2.1.1 Occupational Stability Index

In terms of the occupational stability index, migrant E-commerce practitioners' stability perception of this industry is selected as the evaluation criterion. According to the questionnaire results, most people insist that local E-commerce industry is generally stable, accounting for 57% of total respondents, and few people, only 5%, think it "really poor" or "really good". Regarding this index, it reflects that practitioners' perception of local E-commerce stability is in the middle level.

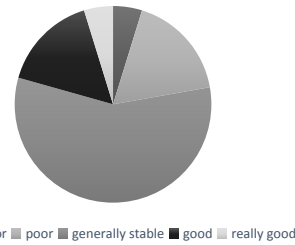


Figure 1. Proportion chart of the occupational stability evaluation on E-commerce practitioners

2.1.2 Friends-Making Willingness Index

Concerning the friends-making willingness index, in the question "are you willing to make friends with local people", those selecting "willing to" and "quite willing to" account for 54% of all respondents, while those expressing "unwilling to" and "quite unwilling to" only account for 3%, suggesting that foreign E-commerce practitioners have good performance in the willingness of making friends. On one hand, it reflects their strong willingness of social integration, and on the other hand, it shows the lack of relationship and connection network between foreign E-commerce practitioners and local friends.

Combining the survey on the friends type of foreign E-commerce practitioners, it can be found that this group is inclined to making friends with foreigners than locals, and the proportion of respondents selecting "most are foreigners" and "all are foreigners" is as high as 50.8%, while those selecting "most are locals" and "all are locals" only take up less than 10%, indicating the poor relationship with local people and proving the lack of local social relationship network among foreign E-commerce practitioners.

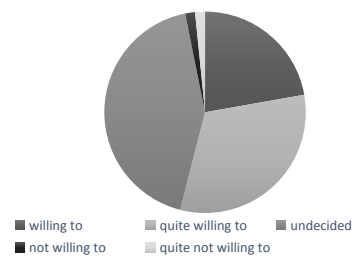


Figure 2. Proportional chart of E-commerce practitioners' friends-making willingness

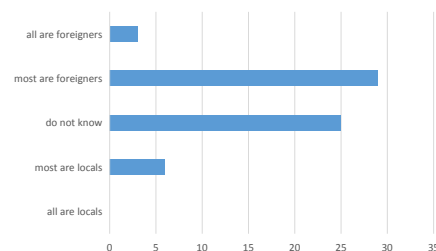


Figure 3. histogram of the distribution of E-commerce practitioners' friends

2.1.3 Identity index

In respect of identity index, respondents are inclined to deem themselves as foreigners, and the proportion is as high as 42%, while those thinking themselves as locals only takes up 3%, indicating that foreign E-commerce practitioners hold a low affective commitment to locals, and it is also consistent with the interview results that they think it is the workplace, rather than the hometown. In addition, 29% respondents think that they are both locals and foreigners, highlighting the dual identity.

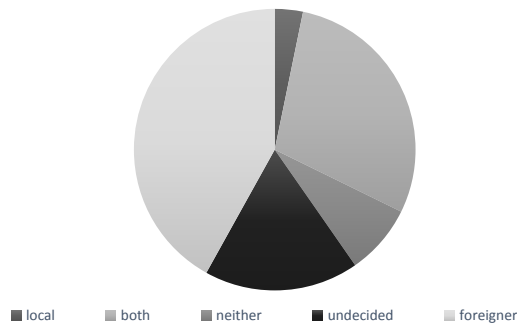


Figure 4. Distribution diagram of the identity types of E-commerce practitioners

2.2 Comprehensive Index Evaluation

To study the social integration of foreign E-commerce practitioners much more comprehensively, average assignment of the three indexes is conducted to obtain the social integration index of the respondents, so as to evaluate their social integration level.

Table 2. Data assignment of each index of social integration

Index Points	Occupational stability (the degree of stability of local E-commerce for respondents)	Willingness to make friends (the willingness of respondents to make friends with locals)	Identity (What group of people do the respondents think they belong to)
1	Very poor	Quite unwilling to make new friends	Foreigners
2	Poor	Unwilling to make new friends	Neither a local nor a foreigner
3	Common	Common	Both a local and a foreigner
4	Good	Willing to make new friends	New local
5	Very good	Quite willing to make new friends	Local

Since the variable “work stability” may be greatly impacted by management type, business scale, economic condition, and other factors, its weight is defined as 0.2, while the other two indexes, “willingness to make friends” and “identity”, are defined as 0.4 respectively. As a result, the social integration index of each sample is obtained, and the data features are as follows:

Table 3. Frequency distribution table of social integration indicators

Data range	[1,2)	[2,3)	[3,4)	[4,5]
Number	70	191	279	90
Frequency	0.11	0.30	0.44	0.14

Table 4. Data characteristics

Average	Median	Mode	Variance	Range
2.95873	3	2.2	0.59	2.6

According to the problem setting, “work stability”, “willingness to make friends” and “identity” are within the 1-5 scoring system, in which, the higher the score is, the lower the social integration level will be, so the social integration level after weighted processing also has this characteristic.

In accordance with this characteristic, the most concentrated numerical results of social integration indexes are [3,4), accounting for 44%. Statistically, the sample size ranging between [2.5,5) is 41, accounting for 65%, suggesting that the social integration of foreign E-commerce practitioners is poor. In terms of extremum, very good social integration refers to the number in [1,2) and very poor social integration refers to the number in [4,5). The number of samples in the two sectors differs slightly, suggesting that local social integration is relatively concentrated, on the moderate or poor level.

3. Analysis on the Influencing Factors of Social Integration of Foreign E-Commerce Practitioners

3.1 Principal Component Analysis

Since the questionnaire involves numerous variables, to better analyze factors impacting the social integration of foreign E-commerce practitioners, SPSS software is used for the analysis of correlation coefficient matrix shown as follows, and it is clear that some factors may impact each other and even overlap.

Table 5. Correlation coefficient matrix of respective variables

Correlation matrix ^{a,b}							
		gender	age	education	marital status	household registration	way to come here
Correlation	gender	1.000	.247	.244	.120	-.293	-.478
	age	.247	1.000	-.100	.516	-.361	.147
	education	.244	-.100	1.000	-.340	.092	-.510
	marital status	.120	.516	-.340	1.000	.000	.125
	household registration	-.293	-.361	.092	.000	1.000	-.408
	way to come here	-.478	.147	-.510	.125	-.408	1.000
	willingness to make friends	.048	.472	-.543	.250	-.653	.650
	type of friends	.090	-.446	-.257	.189	.309	.094
	rights infringement	-.657	-.458	-.081	-.120	-.098	.478
	rights satisfaction	.151	.513	-.107	.553	-.516	.395
	operating time	.398	.750	.060	.044	-.215	-.044
	stability	.239	.258	.085	.125	.204	-.313
	monthly income	.120	.516	-.170	.250	.408	-.062
	residence type	.131	.646	.000	.548	-.149	.000
	type of houses	.452	-.056	-.385	.094	.000	-.378
	housing satisfaction	.200	.599	.081	-.120	-.683	.120
	residence plan	.114	-.020	.604	-.068	.502	-.547
	Identity	-.393	.000	-.310	.274	-.447	.548
	frequency of recreational activities	.273	.595	.417	.175	-.358	-.307
	utilization of cultural and sports facilities	-.121	-.225	.139	.218	.360	-.170
cultural and sports satisfaction	.310	.585	-.325	.342	-.391	-.137	
Membership in community groups	-.293	-.120	-.092	-.408	-.333	.408	
public service satisfaction	-.219	.474	-.156	.574	-.375	.459	

Correlation matrix ^{a,b}							
		willingness to make friends	type of friends	rights infringement	rights satisfaction	operating time	stability
Correlation	gender	.048	.090	-.657	.151	.398	.239
	age	.472	-.446	-.458	.513	.750	.258
	education	-.543	-.257	-.081	-.107	.060	.085
	marital status	.250	.189	-.120	.553	.044	.125
	household registration	-.653	.309	-.098	-.516	-.215	.204
	way to come here	.650	.094	.478	.395	-.044	-.313
	willingness to make friends	1.000	-.038	-.048	.411	.123	.050
	type of friends	-.038	1.000	-.090	.060	-.464	-.047
	rights infringement	-.048	-.090	1.000	-.151	-.524	-.418
	rights satisfaction	.411	.060	-.151	1.000	.139	-.198
	operating time	.123	-.464	-.524	.139	1.000	.285
	stability	.050	-.047	-.418	-.198	.285	1.000
	monthly income	.025	-.094	-.478	-.158	.636	.219
	residence type	.000	-.414	-.131	.520	.480	-.274
	type of houses	.151	.286	-.452	-.239	-.033	.472
	housing satisfaction	.382	-.632	-.200	.302	.608	.299
	residence plan	-.602	-.052	-.310	-.086	.060	-.239
	Identity	.383	.104	.393	.693	-.432	-.342
	frequency of recreational activities	-.088	-.762	-.147	.305	.538	.153
	utilization of cultural and sports facilities	-.104	.418	.066	-.108	-.524	-.194
cultural and sports satisfaction	.219	-.517	-.310	.303	.492	.068	
membership in community groups	.163	.000	.293	.000	.072	.204	
public service satisfaction	.505	.043	.055	.725	-.141	-.143	

Correlation matrix ^{ab}							
		monthly income	residence type	type of houses	housing satisfaction	residence plan	identity
Correlation	gender	.120	.131	.452	.200	.114	-.393
	age	.516	.646	-.056	.599	-.020	.000
	education	-.170	.000	-.385	.081	.604	-.310
	marital status	.250	.548	.094	-.120	-.068	.274
	household registration	.408	-.149	.000	-.683	.502	-.447
	way to come here	-.062	.000	-.378	.120	-.547	.548
	willingness to make friends	.025	.000	.151	.382	-.602	.383
	type of friends	-.094	-.414	.286	-.632	-.052	.104
	rights infringement	-.478	-.131	-.452	-.200	-.310	.393
	rights satisfaction	-.158	.520	-.239	.302	-.086	.693
	operating time	.636	.480	-.033	.608	.060	-.432
	stability	.219	-.274	.472	.299	-.239	-.342
	monthly income	1.000	.411	-.047	-.120	.342	-.616
	residence type	.411	1.000	-.414	.131	.374	.100
	type of houses	-.047	-.414	1.000	.090	-.413	-.207
	housing satisfaction	-.120	.131	.090	1.000	-.409	.131
	residence plan	.342	.374	-.413	-.409	1.000	-.374
	Identity	-.616	.100	-.207	.131	-.374	1.000
	frequency of recreational activities	.044	.673	-.232	.608	.204	.000
	utilization of cultural and sports facilities	.033	-.010	-.142	-.687	.489	.012
cultural and sports satisfaction	.137	.524	.362	.572	-.234	.075	
membership in community groups	-.408	-.447	.000	.488	-.614	.298	
public service satisfaction	-.201	.251	-.173	.219	-.157	.691	

Correlation matrix ^{ab}						
		frequency of recreational activities	utilization of cultural and sports facilities	cultural and sports satisfaction	membership in community groups	public service satisfaction
Correlation	gender	.273	-.121	.310	-.293	-.219
	age	.595	-.225	.585	-.120	.474
	education	.417	.139	-.325	-.092	-.156
	marital status	.175	.218	.342	-.408	.574
	household registration	-.358	.360	-.391	-.333	-.375
	way to come here	-.307	-.170	-.137	.408	.459
	willingness to make friends	-.088	-.104	.219	.163	.505
	type of friends	-.762	.418	-.517	.000	.043
	rights infringement	-.147	.066	-.310	.293	.055
	rights satisfaction	.305	-.108	.303	.000	.725
	operating time	.538	-.524	.492	.072	-.141
	stability	.153	-.194	.068	.204	-.143
	monthly income	.044	.033	.137	-.408	-.201
	residence type	.673	-.010	.524	-.447	.251
	type of houses	-.232	-.142	.362	.000	-.173
	housing satisfaction	.608	-.687	.572	.488	.219
	residence plan	.204	.489	-.234	-.614	-.157
	Identity	.000	.012	.075	.298	.691
	frequency of recreational activities	1.000	-.259	.564	-.072	.101
	utilization of cultural and sports facilities	-.259	1.000	-.554	-.435	.208
	cultural and sports satisfaction	.564	-.554	1.000	-.167	.125
	membership in community groups	-.072	-.435	-.167	1.000	.000
	public service satisfaction	.101	.208	.125	.000	1.000

For instance, the correlation between “way to come here” and “identity”, as well as “frequency of recreational activities” and “recreation satisfaction” is significant. To clearly analyze the influencing factors of social integration, principal component analysis is conducted for all variables, and the results are shown as follows.

According to the results, the characteristic value of

the first 7 components is over 1, and the accumulating contribution rate is 91.58%, namely it is able to explain 91.58% of the variance. According to the scree plot, the slope of curve change decreases at the seventh factor, and it becomes flat at the 12th factor, so the first 7 principal components are extracted for comprehensive evaluation.

Concerning the component matrix, variables of greater

Table 6. Principal component analysis results

component	Explained total variance					
	Initial eigenvalue			Extract sum of squares and load		
	total	variance %	accumulation %	total	variance %	accumulation %
1	5.751	25.005	25.005	5.751	25.005	25.005
2	4.837	21.030	46.035	4.837	21.030	46.035
3	3.375	14.673	60.708	3.375	14.673	60.708
4	2.805	12.196	72.904	2.805	12.196	72.904
5	1.852	8.050	80.954	1.852	8.050	80.954
6	1.318	5.732	86.686	1.318	5.732	86.686
7	1.125	4.891	91.577	1.125	4.891	91.577
8	.807	3.507	95.084			
9	.567	2.463	97.547			
10	.322	1.401	98.948			
11	.242	1.052	100.000			
12	8.517E-16	3.703E-15	100.000			
13	6.115E-16	2.659E-15	100.000			
14	5.308E-16	2.308E-15	100.000			
15	4.130E-16	1.796E-15	100.000			
16	2.394E-16	1.041E-15	100.000			
17	1.894E-17	8.235E-17	100.000			
18	5.513E-18	2.397E-17	100.000			
19	-1.853E-17	-8.058E-17	100.000			
20	-2.068E-16	-8.991E-16	100.000			
21	-4.951E-16	-2.153E-15	100.000			
22	-6.361E-16	-2.766E-15	100.000			
23	-7.973E-16	-3.467E-15	100.000			

Table 7. Component matrix

	component						
	1	2	3	4	5	6	7
gender	.285	.525	-.165	.307	.514	.069	-.418
age	.878	.232	.207	.145	-.180	.221	.105
education	-.176	.462	.073	-.612	.412	.397	.043
marital status	.397	-.051	.571	.527	.056	-.108	.335
household registration	-.674	.422	.186	.176	-.298	-.019	.375
way to come here	.242	-.791	.092	.014	-.467	.188	-.184
willingness to make friends	.546	-.507	-.078	.379	-.125	.188	-.199
type of friends	-.531	-.262	.114	.622	.185	.221	-.167
rights infringement	-.289	-.630	.072	-.476	-.206	-.273	.142
rights satisfaction	.633	-.346	.461	.076	.303	.175	-.094
operating time	.673	.529	-.181	-.048	-.345	.202	-.166
stability	.141	.339	-.485	.324	.033	.339	.587
monthly income	.161	.595	.207	.336	-.664	.138	-.065
residence type	.589	.290	.650	-.151	-.134	-.227	-.045
type of houses	.012	.136	-.546	.689	.314	-.267	.090
housing satisfaction	.801	-.020	-.469	-.282	.092	.141	.069
residence plan	-.298	.644	.584	-.257	.083	.135	-.111
Identity	.249	-.818	.279	-.083	.273	-.079	.134
frequency of recreational activities	.667	.398	.117	-.484	.207	-.085	.225
utilization of cultural and sports facilities	-.513	.008	.610	.194	.168	.202	.080
cultural and sports satisfaction	.762	.201	-.102	.116	.064	-.569	.046
membership in community groups	.092	-.499	-.623	-.264	-.085	.312	.130
public service satisfaction	.446	-.515	.489	.139	.200	.244	.237

Extraction method: principal component.
a.7 components have been extracted.

correlation coefficient with the first principle component include age, housing satisfaction, frequency of recreational activities, operating time, rights satisfaction and literary satisfaction, and the correlation coefficient is over 0.6, showing that this factor represents the daily life features of foreign E-commerce practitioners, thus named “life factor”.

Variables of greater correlation coefficient with the second principle component include gender, residence plan, operating time, and monthly income, and the correlation coefficient is higher than 0.5. Variables of greater negative correlation coefficient of this principal component include the way to come here, willingness to make friends, rights infringement, identity and public service satisfaction, of which the absolute value of coefficient is over 0.5, suggesting that the component is greatly related to the business condition, and it is in a negative correlation with social life, thus named “business factor”.

As for the third principal component, factors of great correlation coefficients include marital status, residence type, residence plan, rights satisfaction, and utilization of cultural and sports facilities, in which, the residence type, residence plan and utilization of cultural and sports facilities are directly related to the present situation of community where respondents live, thus named “housing factor”.

As for the fourth principal component, variables whose correlation coefficient is over 0.5 include housing type, marital status, and type of friends, since it aims at foreign E-commerce practitioners, it is named as “social factor”.

Concerning the fifth principal component, variables whose correlation coefficient is over 0.5 include gender and education level, and others of great correlation coefficient include rights satisfaction and housing type, thus named “individual factor”.

Since in the sixth and seventh principle component, the correlation coefficient of all factors is relatively small, and it also distributes averagely. Moreover, the cumulative contribution value of the first five components is over 80%. Therefore, regarding the impact on social integration, “life factor”, “business factor”, “housing factor”, “social factor” and “individual factor” are mainly discussed.

3.2 Multiple Logistic Regression Analysis

To analyze the factors impacting the social integration level more accurately, the figure ranging in [1,2) is defined as high integration level and assigned to be 0; the one ranging in [3,4.5) is defined as low integration level and assigned to be 1; the one ranging in [4,5) is defined as low integration level and assigned to be 2, as the dependent variables of this research. Since the variable is tri-variate,

multiple logistics regression analysis model is adopted for research.

3.2.1 Objective Factors

(1) Data Processing of Objective Factors

Gender: males are assigned to be 0, while females are assigned to be 1.

Age: those “below 20” and “21-30 years old” are combined into the group “below 30”, and assigned to be 0; those “between 31 and 40”, “between 41 and 50” and “above 50” are combined into a group, and assigned to be 1.

Level of education: those in “primary school and below” and “junior high school” are combined into “junior high school and below” group and assigned to be 0; those in “senior high school/ vocational school” is assigned to be 1; those in “junior college” and “undergraduate and above” are combined into the highly-educated group “junior college and above” and assigned to be 2.

Marital status: the unmarried is assigned to be 0, while the married is assigned to be 1.

Household type: agricultural household is assigned to be 0, while non-agricultural household is assigned to be 1.

Reasons to come here: driven by relatives and friends is assigned to be 0, while through employment is assigned to be 1.

Concerning the friendship: those in “all are locals” and “most are locals” groups are combined into the group “inclined to locals”, and assigned to be 0; “the number of locals and foreigners is similar” is marked to be 1; those in “most are foreigners” and “all are foreigners” groups are combined into “inclined to foreigners” group, and assigned to be 2, forming a tri-variate variable.

Monthly income: “within 2000” and “2001-5000” are combined into the group “below 5000”, and assigned to be 0, and the rest is sorted out into “above 5000 Yuan”, and assigned to be 1.

Community participation: in the question “are you in a local social group or organization (team, labor union), etc.”, those answering yes are assigned to be 0, or it is 1.

Operation time: “within three months” and “three to six months” are combined into “short-term business” and assigned to be 0; “6 months to a year” is defined as “mid-term business” and assigned to be 1; “1 to 3 years” and “more than 3 years” are combined into “long-term operation” group and assigned to be 2, forming a tri-variate variable.

(2) Multiple Logistic Regression Analysis of Objective Factors

The processed social integration level is taken as a dependent variable, five demographic indexes, including gender, age, residence permit, marital status and house-

hold type, are set as co-variates, and eight grading indexes, including level of education, type of friends, operating time, monthly income, frequency of recreational activities and association members, and way of coming here, are set to be independent variables, for the multiple logistic regression analysis. Results show that the significance level is $0.040 < 0.05$, so the model has significance.

According to the above likelihood ratio test, the significance level of the five independent variables, namely gender, age, type of household, type of friends and frequency of recreational activities is less than 0.1, indicating the great influence on dependent variables, namely social integration. The significance level of the holding of residence permit, monthly income, participate in the association or not is over 0.4, indicating the small impact on social integration.

3.2.2 Subjective Psychological Cognitive Factors

These independent variables mainly reflect respondents' subjective satisfaction over the present life. Therefore, "quite satisfied" and "relatively satisfied" answers to three questions, namely "protection of the rights and interests of labors in the place of employment", "satis-

faction of the current housing", and "satisfaction of the overall public service facilities in the place of residence" are combined into "satisfied" group, and assigned to be 0; those answering "common" is assigned to be 1; those answering "relatively dissatisfied" and "very dissatisfied" are combined into "dissatisfied" group and assigned to be 2, forming a tri-variate variable. Since it is the subjective view of respondents, which is closely related to other factors. Therefore, it is taken as a group of variables for logistic regression analysis.

According to the results, the significance level of this regression analysis is $0.025 < 0.05$, so the model is significant, and of high goodness of fit. According to the likelihood ratio test in the following table, in the three satisfaction indexes, the significance level of rights satisfaction is below 0.1, indicating the great influence on social integration, while the significance level of the other two variables is over 0.1, indicating the small influence on social integration.

4. Conclusion and Reflection

Although foreign E-commerce group shows poor social

Table 8. Multivariate logistic regression analysis of objective factors

Model fitting information				
Model	Model fit standard	likelihood ratio test		
	-2 times log likelihood	chi square	df	significant level
Intercept only	107.559			
Final	60.271	47.289	32	.040

Table 9. Objective factor multiple logistic regression analysis likelihood ratio test table

Likelihood ratio test				
effect	Model fit standard	Likelihood ratio test		
	-2 times log likelihood of the simplified model	chi square	df	Significant level
intersect	60.271 ^a	.000	0	.
gender	65.328	5.057	2	.080
age	65.390	5.120	2	.077
residence permit	61.225	.954	2	.621
marital status	64.213	3.942	2	.139
household registration	70.022	9.752	2	.008
education	67.309	7.039	4	.134
type of friends	72.844	12.574	4	.014
operating time	65.475	5.204	4	.267
monthly income	62.059	1.788	2	.409
frequency of recreational activities	69.897	9.627	4	.047
membership in community groups	61.219	.948	2	.622
way to come here	63.234	2.963	2	.227

Table 10. Multivariate logistic regression analysis parameter estimation table for objective factors

parameter estimation							
	a	b	standard error	wald	df	significant level	Exp(B)
0	intersect	17.917	9924.495	.000	1	.999	
	gender	-17.876	1181.614	.000	1	.988	1.724E-8
	age	26.462	2637.090	.000	1	.992	3.108E11
	residence permit	-23.126	5476.393	.000	1	.997	9.048E-11
	marital status	-43.913	3338.085	.000	1	.990	8.485E-20
	household registration	-7.884	8360.668	.000	1	.999	.000
	[education=0]	-.456	3.252	.020	1	.889	.634
	[education=1]	15.316	1181.611	.000	1	.990	4483152.498
	[education=2]	0 ^e	.	.	0	.	.
	[type of friends =0]	-51.150	6873.206	.000	1	.994	6.107E-23
	[type of friends =1]	3.541	2.671	1.757	1	.185	34.493
	[type of friends =2]	0 ^e	.	.	0	.	.
	[operating time =0]	-11.937	3139.021	.000	1	.997	6.546E-6
	[operating time =1]	-2.945	1.843	2.554	1	.110	.053
	[operating time =2]	0 ^e	.	.	0	.	.
	[monthly income =0]	-2.293	2.413	.903	1	.342	.101
	[monthly income =1]	0 ^e	.	.	0	.	.
	[frequency of recreational activities =0]	-1.419	1.913	.550	1	.458	.242
	[frequency of recreational activities =1]	16.623	1181.611	.000	1	.989	16575204.800
	[frequency of recreational activities =2]	0 ^e	.	.	0	.	.
	[membership in community groups =0]	-3.128	3.794	.680	1	.410	.044
	[membership in community groups =1]	0 ^e	.	.	0	.	.
[way to come here=0]	15.621	1181.609	.000	1	.989	6080272.406	
[way to come here =1]	0 ^e	.	.	0	.	.	
1	intersect	-23.994	2.950	66.140	1	.000	
	gender	.395	.974	.164	1	.685	1.484
	age	3.656	1.882	3.775	1	.052	38.709
	residence permit	2.192	2.357	.865	1	.352	8.950
	marital status	-.983	1.681	.342	1	.559	.374
	household registration	22.467	.000	.	1	.	5.718E9
	[education=0]	-.661	1.478	.200	1	.655	.516
	[education=1]	-2.466	1.658	2.211	1	.137	.085
	[education=2]	0 ^e	.	.	0	.	.
	[type of friends =0]	2.994	1.831	2.674	1	.102	19.960
	[type of friends =1]	1.071	1.125	.906	1	.341	2.918
	[type of friends =2]	0 ^e	.	.	0	.	.
	[operating time =0]	-2.282	1.745	1.709	1	.191	.102
	[operating time =1]	-1.112	.979	1.289	1	.256	.329
	[operating time =2]	0 ^e	.	.	0	.	.
	[monthly income =0]	.725	1.233	.346	1	.557	2.064
	[monthly income =1]	0 ^e	.	.	0	.	.
	[frequency of recreational activities =0]	-1.339	1.115	1.442	1	.230	.262
	[frequency of recreational activities =1]	-1.133	1.266	.801	1	.371	.322
	[frequency of recreational activities =2]	0 ^e	.	.	0	.	.
	[membership in community groups =0]	.260	1.151	.051	1	.821	1.297
	[membership in community groups =1]	0 ^e	.	.	0	.	.
	[way to come here=0]	.253	.865	.086	1	.770	1.288
	[way to come here =1]	0 ^e	.	.	0	.	.

integration in Xintang Town, but the overall willingness of social integration is relatively strong. Regarding the influencing factors, they can be classified into life, business, housing, social and individual aspects, in which gender, age, type of household, type of friends, frequency of recreational activities and satisfaction over rights protection have significant impact on the social integration of foreign E-commerce practitioners.

The social integration of foreign E-commerce practitioners is not merely a process of combining two into one, but a complicated process of mutual communication and interaction. Currently, the social integration of foreign E-commerce practitioners in Xintang Town is relatively poor, which would impact the further development of local urban construction, social harmony and E-commerce industry. To promote the social integration of foreign E-commerce groups, efforts can be made to its influencing factors.

Since it is less possible to change the demographic characteristics of foreign E-commerce practitioners, such as gender, age and household, policies can focus on the

change in the type of friends, increase of the frequency of recreational activities, and improvement of rights protection system.

It is mentioned above that foreign E-commerce groups have a strong willingness to make friends, but they tend to make friends with foreigners. Since quite a few E-commerce practitioners come here with their relatives and friends and develop a social relationship network with foreigners settling down here. Although this network of social relationship provides foreign E-commerce practitioners with a sense of security and mental support, it prevents the communication with other local residents to a certain extent. In the interview with local E-commerce practitioners, some mention that they lack effective social communication. To urge them to step out of the relationship network with foreign relatives and friends and integrate into the local social life, more opportunities to communicate with other local groups shall be provided.

In addition, the analysis shows that frequency of recreational activities is in a positive correlation with social integration, since recreational activities have significant

Table 11. Subjective factor multiple logistic regression analysis model fitting information table

model fitting informatio				
Model	Model fit standard	likelihood ratio test		
	-2 times log likelihood	chi square	df	significant level
Intercept only	86.149			
Final	49.337	36.812	22	.025

Table 12. Subjective factors multiple logistic regression analysis goodness of fit table

goodness of fit			
	chi square	df	significant level
Pearson	43.082	50	.745
deviation	37.020	50	.914

Table 13. Subjective factors multiple logistic regression analysis likelihood ratio test table

likelihood ratio test				
effect	model fit standard	likelihood ratio test		
	-2 times log likelihood of the simplified model	chi square	-2 times log likelihood	significant level
intersect	49.337	.000	0	.
gender	51.628	2.291	2	.318
age	52.887	3.550	2	.169
residence permit	50.276	.939	2	.625
marital status	49.758	.420	2	.810
household registration	54.688	5.351	2	.069
rights satisfaction	58.145	8.808	4	.066
Housing satisfaction	53.138	3.800	4	.434
Public service satisfaction	53.712	4.374	4	.358

impacts on the happiness of foreign E-commerce practitioners and provide them with places and opportunities to communicate with other local groups.

Satisfaction over rights protection is also an important factor influencing the social integration. But what is different is that it can only be interfered by the government. With the reform of urban-rural system, systems and policies for the rights protection of foreign E-commerce practitioners would be remarkably enhanced, but for local government, it is essential to publicize the ways to protect interests and rights.

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Past, Present, and Future: Research on the Influence of International Competition and Collaboration Relationship between US and China

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ABSTRACT

“America has no permanent friends or enemies, only interests”, by Henry Kissinger. US and China have become the usual pattern of new international trade as the top two economic entities since 2010. After former President Trump took over the chair, the trade conflict between the US and other countries, especially China, has been sharpened to increase domestic employment. A new era of international competition on the economy has grown invincibly in a brutal way.

This paper states and analyzes the economic development and historical interactions between China and the US, standing from China’s perspective. Four-time periods are introduced in the paper for China’s progressing procedure: 1949-1978 pre-opening, 1979-2000 post-opening, 2001-2016 WTO period and focusing on the 2017-2021 deterioration. The methodology starting from industrial structure, trade deficit, monetary and fiscal policy. The key questions include; why China has faster growth, why the US tries to restrict China’s development, and its effective influence.

The paper’s conclusion lies in the comprehensive prediction of the future economic relationship between China and the United States in the ongoing 50 years, yields to the world trade habits and potential international economic system revolution, demonstrated from three sectors: economic structure change and technical restrictions.

1. Introduction

Kerry Liu (2020) had summarized the integral Chinese policies response before 2020 to the trade war with the US in his research, in which he concluded that the Chinese government had changed its policy focus from demand stimulus to supply stimulus that much more effective than traditional pattern under the pressure of high tariffs, while started reforming institution to focus more on quality development. As for COVID-19 relative analysis, this paper has introduced the results from Miguel Faria-e-Castro (2020) and Luca Fornaro and Martin Wolf (2020), which

quantified the effects of the Coronavirus Aid, Relief and Economic Security Act of 2020 in the US, the \$2 trillion package by White House on Mar 27, 2020. Meanwhile, the package involving transfers is seemingly useful, and unconditional transfer could be the least costly speaking of implementation.

2. Relationship before China-US Trade War

2.1 Pre-Opening Stage (1949-1978)

After establishing the People’s Republic of China on Oct 10, 1949, the economic communication between Chi-

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na (PRC) and the US has been unofficially started as the signal of WWII's termination. However, the founded of the PRC was also the starting point of ongoing China's internal conflict. From 1949 to 1960, China (PRC) was incredibly intimate with the Soviet Union due to the ideology's similarity to communism. The 5-year loan equivalent to \$500 million to China (PRC) took up 14.3% of the entire government expenditure, contributing tremendously to the reconstruction of infrastructure and industry, including the weapons used against the US during the Korean and Vietnam War. As a KMT supporter during the domestic cold war standing for capitalism, the US shut down almost all communication channels with China (PRC). Even though the formal diplomatic relationship was not framed during this period, a negligible amount of private transactions and investments has been active despite the Cold War's miniature between the CCP in mainland and KMT in Taiwan. However, the investment and lending from the Soviet Union to China (PRC) has dramatically become the trigger of contradiction between them and also the initial point of changing attitude to the US.

2.2 Post-Opening Stage (1979-2000)

After the relationship breakdown between China and the Soviet Union in the 1960s for territory conflicts and other factors, things went different after 1972. When former US President Richard Nixon officially visit Beijing months after Henry Kissinger's secret meeting as the pioneer for the breakthrough of China-US relationship, China attempted to get in touch with the US proactively. However, due to a 10-year misleading extremely progressive strategy, China has suffered from a massive recession, so that the transactions with all other countries were almost shut down. Otherwise, the initial time of China-US diplomacy could be advanced for up to 10 years. At the turning point of 1972, the total trade amount was about only \$13 million. However, in 1979, of official claim of diplomatic relationship establish, the bilateral trade amount increased to \$1 billion, 80 times more than seven years ago. When the time came to the night before China entering WTO, the number went up to \$74.5 billion, meaning an average annual increase rate of an incredible 24%. It is a well-deserved and well-known honeymoon period between China and the US.

2.3 After Entering WTO (2001-2016)

After the Yinhe incident in 1993, Third Taiwan Strait Crisis in 1996, and the Belgrade embassy bombing event in 1999, the US-China relationship was no longer intimate as 20 years before. Also, even though the US's imports

continued to grow, it was dramatically declined due to numerous and comprehensive protests in China, hitting the floor in 1999. However, as China's diplomatic behavior, the US side only received verbal complaints from the Chinese government. Hence, despite the minority of resistance to China's Socialism, the voice from the US remained relatively positive regarding China, which built the foundation for the later assistance to join WTO.

On Dec 11, 2000, China formally 're-entered' WTO for a seat. However, there was a meeting between China and the US 1 year before the WTO meeting from Nov 10 to Nov 15, 1999. In the agreement signed in Beijing, the US admits China's identity as a WTO member and promised assistance for the entry, indicating that the relationship of economic partner was still ongoing. Just one year later, the shocking Sept 11 Attacks broke out and deviated both China and the US's attention from competition to the anti-terrorism. China positively supported the US anti-terrorism wars in Afghanistan and joined relevant action in the UN to maintain global safety. Since the influence of terrorism, the conflict between the two countries was eased for a while.

Starting from 2009, the US president's replacement has signaled a new stage of China-US diplomatic relationship. Different from the uncompromising attitude of republicans like Bush Jr., Barack Obama treated China issues more peacefully. In 2014, the bilateral trade balance arrived at \$5.5 trillion, touching the ceiling of the current increase rate of international trade amount between the US and China.

Nonetheless, the US-China relationship was gradually worsening because of several global contradictions like the THAAD system in South Korea and South China Sea Arbitration, setting up a fuze for future deterioration.

3. Deterioration (2017-2020)

3.1 Introduction

Since the beginning of 2018, several economically-influential events have caused significant fluctuation or, more precisely, destruction in the largest economy groups. Two crucial incidents are still ongoing: the all-out trade war proposed by the United States and the pandemic of COVID-19. In response to economic phenomenons brought by trade war and virus, governments from 2 of the largest and also most special economies, China and the US, have been attracting massive attention from researchers, policymakers, companies, and investors inclusively. Subsequently, this report will mainly focus on fiscal policies from these two top economic entities.

Effectively on Jul 6, 2018, US President Donald Trump

announced that tariffs would be increased to 25 percent on a reduced 818 products (from 1,334) while other new 284 products are under consideration. After a four-month break over the period from Dec 2018 to April 2019, on May 10, 2019, the trade war between the two countries stepped into the second stage. Starting from that moment, total US tariffs hit the maximum of \$550 billion while total Chinese tariffs to US products also reached \$185 billion ceiling as a response. Afterward, under the widespread COVID-19, two countries are attempting to mitigate the conflicting situation with the signal of Phase One Agreement.

According to the Liu (2020) and his previous results, the background behind the China-US trade war is complicated and considered to have consisted of three aspects: First, from the perspective of US policymakers and executives, there exist suspicious unfair operations levied by China, including but not limited to: China's cyber economic espionage against US companies; invalid protection to the intellectual property rights; anti-innovation and duplicate encouraging policies; avoid of WTO duties; abuse of policies supporting specific industries; the intervention of currency value (Morrison, 2018). Second, from the US government's aspect, the China-US trade war is the superficiality of US protection to the imports relevant domestic industries. Besides, this unilateralism was also performed as renegotiation or unauthorized quit of WTO. Third, China's fast development was challenging the US's dominant position and suspected to impact the capitalist market and western order (De Graaff & Apeldoorn, 2018).

After two massive shocks from a trade war, COVID-19, known as Coronavirus, spread out with an exponential speed, which could be traced back to Dec 31, 2019, when the first cluster of pneumonia cases was reported in Wuhan. Starting from Jan 20, 2020, China's central government required a complete lockdown in Wuhan and crowded regions then continuously nationwide quarantine in other areas, which caused a severe supply shortage to the economy by forcing the secondary industries to shut down with the reason of shortage of labor force. After the introduction for China-US trade war, this paper will then summarize and analyze the policies implemented by the Chinese government in response to the trade war and the widespread COVID-19.

3.2 Trade War

After the initial proposition of 'global safeguard tariffs' towards all countries except Canada, also acknowledged as the unveiling of trade war or the first stage, CPC Politburo meeting has decided to accelerate the reform of insti-

tution to supply-side structure, increasing the production capacity and quality of relevant industries, which was the first secret confrontation between US and China.

Table 1. Timeline for China's Fiscal Policies before Jul. 16, 2018

Apr 2, 2018	China levied tariffs (ranging from 15% - 25%) on 128 products in total, including foods and metals.
Apr 4, 2018	China announced 25% tariffs on 106 products in total, including foods, chemicals, and electronic devices.
Apr 17, 2018	China announced anti-dumping duties of 178.6% on imports of sorghum from the US.
May 18, 2018	China's Commerce Ministry announced that China would stop tariffs on US sorghum.
May 20, 2018	China agreed to armistice also to buy more US goods.
Jun 16, 2018	China adjusted the tariff list to 545 products while announced a second round tariff, including 114 products.

On Jul. 31, 2018, 25 days after the trade war announcement from the House as the signal of the second stage of trade war, the CPC Politburo meeting reached an internally consensus in stabilizing employment, finance, foreign trade, foreign investment, and market expectations. Primary fiscal policies proposed during this period were taxation adjustment. First, China's Ministry of Commerce was asked to take the proactive fiscal policy, then proposed external tariffs to massive amounts of specific US goods including foods, agricultural products, medical equipment, chemicals, and machinery ranging from 5% to 25%. In contrast, to stimulate export to compensate for the trade loss between the US, China has increased the export tax rebate rate while reducing the export processing days since Nov 1, 2018.

Based on the official number given by US Trade Representative Office, since 1985, the trade deficit with China has been continuously increasing, excluding two special moments: 2009 and 2019, among which 2009 was recognized by the recession by the 2008 financial crisis when domestic demand was sharply declined along with the import. According to Liu (2020), China's trade balance should be unaffected by the increased two-sided tariffs. However, after 2018, the trade balance between China and the US fell back to about five years ago, 2014. However, when noticing net import, the decline on it is not such vast as Trade balance, which is about three years backward. Since it has been only one year after the tariff levied, there is not enough evidence to indicate its influence in the long run, but it shows China's exports tax rebate policy effectively promotes export from China to the US.

Table 2. US Trade Balance with China (\$ million).

Source: United States Census Bureau

2013	2014	2015	2016	2017	2018	2019
-318,684	-344,818	-367,328	-346,825	-375,423	-419,527	-345,617

The Chinese government revised the taxation in several other fields, mainly including value-added tax cut (starting from May 1, 2018) and personal income tax cut (starting from Oct 1, 2018). Even though the growth rate of personal income tax reduced from 21.7% before the cut to 14.2%, the personal income tax return was executed at the beginning of 2020, so as a tax policy, personal income tax was playing a role in stabilizing the market expects more than stabilizing finance or employment in 2019.

Generally speaking, China’s tax policies effectively enhanced economic growth under tariff pressure by relieving the expense financial burden for companies while stimulating consumption.

Unlike the first two-stage, After Sept 11, 2019, the trade war between the Big Two has been ushering in the dawn: China’s Tariff Commission unveiled two tariff exemption goods from the US, including most manufacturing products, which would be valid for one year. This first compromised policy has enlightened the future.

On Jan 15, 2020, Phase One Deal, recognized as the truce sign, was signed by both China and the US, agreeing to roll back tariffs, expand international trade, and adjust clauses of intellectual properties and currency practices.

The temporary exemption lists would preserve valid for only one year, and the earliest one would be expired in September 2020. Even though the situation is right at a turning point currently, it is still unpredictable where the relationship between the two largest economies will head for.

The trade war has generated an extensive shock to both the Chinese and US economies and their community. As the most intuitive influence brought from the trade war, there were two strong appreciation trends of Chinese RMB after the trade war breakout and then followed by an instant depreciation. According to the record on Macro trends and Trading Economics, even though the overall exchange rate tends to be the same number based on the current number as a percentage of initial data at the beginning of the trade war, it has been severely fluctuating within the past three years. The highest depreciation of RMB exceeded -10% from January 2018 to September 2019. As another new trend, an apparent appreciation is recognizable, starting from the explosion of COVID. Besides, As illustrated, the US unemployment rate did not suffer much because of a trade war, since it continued decreasing from 4% after July 2017 till the pandemic and experienced an incredible lift to the maximum of 15% (Figure 2). Compared with the US, the urban unemployment rate of

China was about to be the same as the US before the point, but later jumped from approximately from 4% to 5% owing to the trade war, while another climbing of 1% happened after the pandemic, where the ceiling resulted from the nationwide lockdown and quarantine during the pandemic period. However, one point that should be mentioned here is that the reported unemployment rate varies from different channels (Fig.2 & Fig. 3), showing opposite trends. Feng (2015) argued that China’s official unemployment rate was calculated by a preliminary survey surrounding to urban area, and the real unemployment rate is about to be double or triple of the official records. Since the authorized absolute number was generally given around 10 million on average in 2018, we may estimate 30 million unemployed people as real data (or approximately 3.75% in total labor force), which was close to the given data.

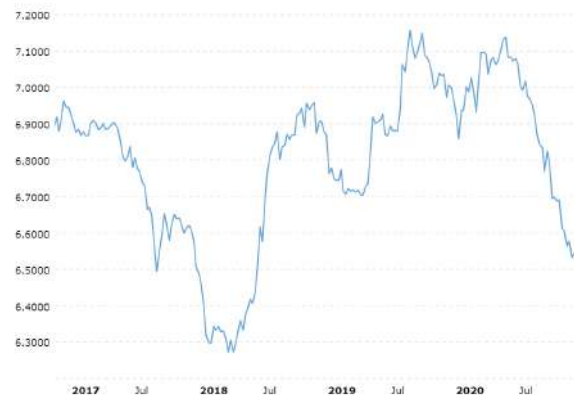


Figure 1. RMB-Dollar Exchange Rate during Trade War

Source: Macrotrends

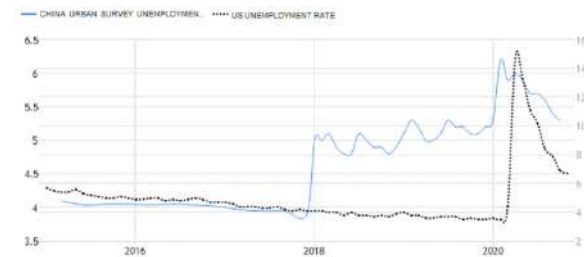


Figure 2. Unemployment Rate during Trade War (%)

Source: Trading Economics



Figure 2. China’s Unemployment Rate during Trade War (%)

Source: CEIC

3.3 COVID-19 Influence

To compensate for the capital loss during the quarantine period, similar to the US, China has mainly implemented a package of 2.5% of GDP (or RMB 2.7 trillion) up to Apr 23, 2020, in addition to the existing 1.2% of GDP fiscal measures or financial plans, including increasing spending on pandemic prevention and control; increasing production of medical equipment; increasing expenditure on unemployment insurance; tax relief and waived social security contributions. As a result of rising government spending, China's daily capacity, up to Apr 8, 2020, reached 3.4 million, 1.5 million as KN95 mask and medical protective suit, respectively. As a

Miguel Faria e Castro (2020) argued that a fixed intervention package of 3.7% of total GDP to increase unemployment insurance benefits is the most effective method to maintain a certain level of dynamic equilibrium between household income and borrower consumption. Surprisingly, the Chinese government's total spending exactly equals 3.7%, and the only difference from the theoretical value is that the Chinese government did not only take unemployment insurance into account. As intuitive evidence of the effect of the 3.7% of GDP spending, the output growth of industries was -1.1% in March 2020, compared to -13.5% loss during Jan and Feb 2020. Meanwhile, the export growth in March was -6.6% while the previous predicted value from Reuters is -14%, which was consisted of more medical equipment than other days, including ventilator, thermometer, etc. All those numbers are showing an optimistic recovery for the Chinese economy. However, since the US has made the same decision to expand government spending with little success instead, the rehabilitation of the Chinese economy might be more attributed to other perspectives, saying effective execution of lockdown and self-isolation. However, this paper would no conduct further discussion on administrative issues.

4. Future (2021-)

4.1 Short Run

Since the US government's stated significant purpose is to eliminate the trade deficit between China, this paper employed a simple framework of bilateral current account model within one period, starting from the open economy model. To simplify, I assume there are only two countries in this system, ignoring info and other asymmetries.

Firstly, in the standard open economy model, we have the output Y as the sum of consumption C , government expenditure G , investment I (ignored because research is based on the government perspective), and net export NX ,

which is equivalent to trade balance TB since there are only two countries in the system:

$$Y = C + G + TB \tag{1}$$

Time is discrete and noted by t as year. Then the utility is a function of consumption C_t and C_{t+1} , assuming the contribution of each is represented by logarithm owing to diminishing marginal effect, and the government's primary target is to maximize the following utility function:

$$\max_{C_t, C_{t+1}} U = \ln C_t + \ln C_{t+1} \tag{2}$$

Meanwhile, considering the revised intertemporal budget constraint (IBC) for the utility function, as the present value of consumption equals the present value of output, with the discount of interest rate r :

$$C_t + G_t + \frac{C_{t+1} + G_{t+1}}{1+r} = Y_t + \frac{Y_{t+1}}{1+r} \tag{IBC (3)}$$

As utility function is bowed-inward, so both of the function would have the same marginal rate as C_{t+1} in the form of C_t at the maximized point. Hence, by equating partial derivation of (2) and (3), we have:

$$\begin{aligned} \frac{MU_{C_t}}{MU_{C_{t+1}}} &= \frac{MY_{C_t}}{MY_{C_{t+1}}} \Rightarrow \frac{\partial U / \partial C_t}{\partial U / \partial C_{t+1}} = \frac{1}{1/(1+r)} \\ \Rightarrow \frac{C_{t+1}}{C_t} &= 1+r \Rightarrow C_{t+1} = (1+r)C_t \end{aligned} \tag{Euler Equation}$$

Hence, we obtained the optimized relationship between consumption $C_t C_{t+1}$ and with the variable of interest rate r . However, the interest rate is not a direct data, so we plug the Euler Equation back into IBC (3), yielding the optimized number of C_t^* and C_{t+1}^* when considering maximizing the utility function:

$$\begin{aligned} C_t + G_t + C_t + \frac{G_{t+1}}{1+r} &= Y_t + \frac{Y_{t+1}}{1+r} \Rightarrow \\ C_t^* &= \frac{1}{2} \left(Y_t + \frac{Y_{t+1}}{1+r} - G_t - \frac{G_{t+1}}{1+r} \right) \\ C_{t+1}^* &= \frac{1}{2} (1+r) \left(Y_t + \frac{Y_{t+1}}{1+r} - G_t - \frac{G_{t+1}}{1+r} \right) \end{aligned}$$

Therefore, we may calculate the Trade balance for both US and China from (1):

$$\begin{aligned}
 TB_t &= Y_t - C_t - G_t = Y_t - \frac{1}{2} \left(Y_t + \frac{Y_{t+1}}{1+r} - G_t - \frac{G_{t+1}}{1+r} \right) - G_t \\
 &= \frac{1}{2} \left(Y_t - G_t - \frac{Y_{t+1} - G_{t+1}}{1+r} \right) \tag{4}
 \end{aligned}$$

$$\begin{aligned}
 TB_{t+1} &= Y_{t+1} - C_{t+1} - G_{t+1} = Y_{t+1} - \frac{1}{2} (1+r) \left(Y_t + \frac{Y_{t+1}}{1+r} - G_t - \frac{G_{t+1}}{1+r} \right) - G_{t+1} \\
 &= \frac{1}{2} (1+r) \left(\frac{Y_{t+1} - G_{t+1}}{1+r} - Y_t - G_t \right) \tag{5}
 \end{aligned}$$

Being aware that the trade balance will sum up to zero in a two-country system, while keeping effective interest rate constant because of the assumption as no extra premium in different investment (otherwise the international investment could be biased directly to one country). Besides, define the difference of government expenditure between the US and China as $\Delta G = G^{US} - G^{CN}$:

$$TB_t^{CN} + TB_t^{US} = 0 \Rightarrow r = \frac{Y_{t+1}^{US} - Y_{t+1}^{CN} - \Delta G_{t+1}}{Y_t^{US} - Y_t^{CN} - \Delta G_t} - 1 \tag{6}$$

Since the difference of output is also a straight-line function of $\Delta G = G^{US} - G^{CN}$, we may consider to integrate and then delete the output variable Y in both denominator and numerator. Noticing $Y = C + G + TB$, we know Y has a strong and significant positive linear relationship with G. So we could define: $Y^{US} - Y^{CN} = (a+1) \cdot \Delta G + k$, where $a+1$ is a positive constants, plugging into (4), we may have an equation of r by ΔG :

$$r = \frac{\alpha \cdot \Delta G_{t+1} + k_{t+1}}{\alpha \cdot \Delta G_t + k_t} - 1 \tag{7}$$

Since it is a simple closed model with two countries, the interest rate r is equivalent to the GDP growth rate.

As Luca Fornaro and Martin Wolf stated in their essay in March 2020, they provided a pessimistic opinion that intensive policies should be introduced based on current increasingly expanding victims under pandemic. However, R&D of specific vaccines has been gaining positive results. According to a study of 365000 patients in the UK, there is a rapid decay of antibody of COVID-19 after three months, which suggests the failure of community immune strategy in England and the severity of unstoppable virus diffusion in the US with the current known number of 15 million. Hence, the US government needs to increase expenditure further on stimulating supply, especially on medical facilities, noticing that the medical supplies would be in shortage soon. Meanwhile, China

is returning to average capacity and even exceed the domestic supplies, which means the government could slow down the stimulus in case of the old issue of overcapacity. Hence, it is convinced that the US government would spend more than China government with an increasing speed in the short run to compensate for the harmful effects of COVID-19.

Therefore, we may suppose ΔG should be increasingly boosted, considering the marginal growth rate of interest rate:

$$\begin{aligned}
 -\frac{Mr_{\Delta G_t}}{Mr_{\Delta G_{t+1}}} &= -\frac{\partial r / \partial \Delta G_t}{\partial r / \partial \Delta G_{t+1}} = -\frac{(\alpha \cdot \Delta G_{t+1} + k_{t+1}) \cdot \alpha / (\alpha \cdot \Delta G_t + k_t)^2}{\alpha / (\alpha \cdot \Delta G_t + k_t)} \\
 &= -\frac{\alpha \cdot \Delta G_{t+1} + k_{t+1}}{\alpha \cdot \Delta G_t + k_t} < 0
 \end{aligned}$$

Hence, we may conclude that the interest rate would increase positively as a discount factor for economic growth in this simple model, which indicated that the GDP will still keep growing based on US expansionary fiscal policy.

More significantly, noticing in equation (5), the trade balance between China and the US is positively related to interest rate r. Predictably, the trade balance would increase without relevant policies implemented as the interest rate growing, or the trade deficit of the US would be widened further.

Conclusively, there might be more conflicts with the trading policies in response to this situation, so the relationship between the US and China would continue to deteriorate in the short run from an economic perspective. And currently, after the president Biden took over the seat, as a representation of the hardline, he put more focus on other aspects but not economy, since we could see the Phase One Contract is still expanding. Anyway, this worsen trend would be somewhat mitigated by utilizing political and diplomatic intervention, but the contradiction between US and China is still going to rebound in recent years by another format.

4.2 Long Run

The relative advantage of each region always determines all spontaneous collaborations between countries. For instance, the US has always been obtaining capital, represented by the advances in productive tools and comprehensive technologies, which generate massive added-value during manufacture. In contrast, most underdeveloped and developing countries' relative advantage is labor, land, and resource expenses based on the GDP and CPI as salaries. Therefore, when China needed progress in necessary infrastructure and eliminated absolute poverty, the US could be the best strategic friend to

exchange capital and labor force resources, which could be proved by the honeymoon period between the 1980s and 2000s. However, after China's initial capital accumulative period in the past 40 years, the labor force and land became more expensive, while the Chinese industry began to seek and create added-value by individual manufacture. The profiting room of the US in China was minified step by step. Currently, the US capital investment is proceeding to move out of China to surrounding regions like Southeast Asia and India, signaling the next generation of competition between China and the US: technological race.

Like the Arms race between the US and Soviet Union, the new-gen of technological race is unstoppable and accelerated. However, the difference between those two types of race is the goal and economic effect: Arms race focused on strengthening military force as preparation for incoming WWII, which laid a substantial financial burden on trainee, maintenance, and surplus arms stock. In contrast, any technological progress would lift productivity then adapt a positive effect on the supply-side, increasing GDP and living standard synchronously.

According to the estimation and simulation, the total Chinese GDP will exceed the US in 2030. However, along with the destruction of pandemic, the time would probably come earlier, up to 5 years, saying that the global economic structure has an opportunity to be rebuilt, which is also the turning point of the relationship between the US and China: Either a positive change or a war in small scale, probably around Taiwan as the current global central issue. The situation tends to become more intense based on US and China's recent policies targeting Taiwan regions.

Afterward, assuming the conflict at the turning point did not devastate both countries' economies, the technological race would continue till 2035, China's 15-year blueprint called 'China Standards 2035'. Around this particular time, the triadic patent, or the officially acknowledged patent hold by China, would reach the same level as the US, indicating that the real balance between those two top entities so that the technological collaboration could

take the majority of interactions but not just unidirectional capital input.

As another factor, the world is never a game with two countries. In recent days, India was also growing with increasing speed. Similarly to China, it is estimated that Indian GDP would also exceed the US around 2035. As the US and China face the third challenger to them, the contradiction between these two countries would be reduced. Unlike the cold war times, China's triple polarization, India and the US would become much more stable for many years after 2035.

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