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# EXPLORING THE TRADE RELATIONSHIP UNDER THE ASYMMETRIC INTERDEPENDENCE IN THE CROSS STRAIT

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#### **ABSTRACT**

Taiwan is an island-oriented economic system's state, its economic development depends on the expansion of international trade, while the economic and trade cooperation is becoming more and more important in the cross-strait, Taiwan's trade dependence on the mainland is high, the trade surplus is increasing year by year, but there is a statistical gap on the cross-strait economic and trade, and the real gap needs to be further analyzed in order to know the truth fact. The methodology in this study is Literature Review, it try to know the main factors affecting Taiwan's economic development. The mainland is vast in land and rich in resources and rapid economic development; However, Taiwan is small area and poor resources, and it's economic growth is slowing down; In fact, there is indeed an asymmetry in trade relations between the cross-strait economic situation, but the degree of interdependence is different. Taiwan has a competitive advantage in high-tech industries, a good investment and financial environment, and a continuous trade surplus with the mainland, and it can also be found that Taiwan has a competitive advantage from the trade special coefficients (TSC) index, and cannot be determined by the total amount of trade completely. Although the political and economic environment is different between the two sides of the strait, those of non-governmental work such as investment, consumption, and trade cooperation has become an important key factor in the economic development between Taiwan and the Mainland China.

**Keyword:** Asymmetric Dependence, TSC, Cross-strait.

#### 1. INTRODUCTION

Taiwan has through the period of import substitution form the labor-intensive and light industry in the 1950s, the period of export expansion in the 1960s, the industrial import substitution in the 1970s, and the industrial technology orientation in 1980. It shows that Taiwan was led by the industry in the overall industrial structure, because most of energy, raw materials and capital goods depend on the imports from China, USA...etc., it was accounted for more than 90% of the total imports, and there is a trend of turning to the development of the capital economy. Due to Taiwan's lack of natural resources and it's economic growth is highly dependent on the expansion of international trade, it created the "Taiwan experience" successfully that had attracted by the other countries in the world, especially when the two sides of the strait signed the "Economic Cooperation Framework Agreement" (ECFA) at the Chongqing city in June 2010, it has establish a foundation for expanding economic exchanges and cooperation, and has reached high economic growth, stable prices, and the relatively average income distribution in Taiwan. [2], [12], [13]

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On the other side, Taiwan's high prices and the big gap between the rich and the poor widened gradually in the 2020, which has become a hidden worry about economic development and social equity, because Taiwan's economic transformation is inseparable with geopolitical and political factors, and the economic structure of the two sides of the strait is an economy system of interdependence and asymmetry. Taiwan's human resources are relatively abundant through information disclosure and education popularization, the innovative management of product added value in economic structure, and it is a great of help to Taiwan's expansion of international trade, the promotion and implementation of ECFA seems to have a big changed due to political factors in 2021, the rights and interests of the people on both sides of the strait have been impacted by the economic and trade consultation and cooperation, it must be keep a good relationship with China in order to solve the concerned economic and trade problems in Taiwan. [15], [17]

#### 2.ECONOMIC COOPERATION AND DEVELOPMENT IN THE CROSS-STRAIT

Taiwan is a trading partner with the United States in the early years, however, China had been became one of Taiwan's largest import and export trading partners gradually after the 1990s, the main imports were the agricultural materials and industrial raw materials, for example the total exports was accounted for 28%, and imports also 13.2% from China to Taiwan in 2010, With the increasing economic interdependence between the two sides of the strait, the volume and value of cross-strait economic and trade have also increased rapidly, the average income of the people has increased, and the demand for high-quality consumer goods has also continued to increase gradually. According to the Taiwan Customs statistics, the total amount of cross-strait trade increased rapidly from US\$5.16 billion in 1990 to US\$117.87 billion in 2016, with an average annual growth rate of about 15%, in which Taiwan's total exports to the mainland increased from US\$4.4 billion to US\$73.88 billion, and Taiwan's total imports from the mainland increased from US\$770 million to US\$43.99 billion, and the trade surplus increased from US\$3.63 billion to US\$29.89 billion at the same period. [2], [3], [7]

According to the early study of post-war political economy and social science, the analysis on the domestic political economy and the main research topics are the consultative unificationism model, the welfare state and social policy, the role of the state in economic development, and the relationship between enterprise and finance. The free trade was flourished after the collapse of the Bretton Woods System, and transnational production networks underwent significant evolution in the 1970s. Taiwan was the first time to the rotation of party power in May 2000, the government adopted a policy of "Positive Open and Effective Management" in order to cooperate with the mainland economic policy, in addition to expanding cross-strait investment and opening up trade, and strengthened the economic management mechanism at the same time, it including those items such as the proportion of imported products from 53% to 80% in mainland, the abolition of restrictions on the type of mainland investment industry, it allowing some mainland tourists to come to Taiwan, and the promotion of "Small Three Links" with the other side of the strait.

Generally speaking, there are many characteristics on the investment from Taiwan to China. In terms of the scale of manufacturers, the early owners of small and medium-sized enterprises, and then increase to the medium and large enterprises gradually; In terms of industrial structure, labor-intensive manufacturing was the mainstay in the early days, and then turned to capital and technology-intensive manufacturing, and the proportion increased gradually in recent years; In

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terms of investment location, most of them were concentrated on the Pearl River Delta region, and then turned to the Yangtze River Delta in the early days, North China and other regions, and more and more Taiwan's businessmen turned to inland investment. In addition, in order to overcome the bubble economy problem, the Chinese government has adopted austerity policies during the period such as the Asian financial turmoil in 1997, the US subprime crisis in caused international financial turmoil in 2008, the mainland economy recession gradually. it was affected the willingness of foreign investment in China. [1], [3]

The cross-strait economic and trade policies have been changing constantly due to the different political situation, the investment and trade have continued to expand in economic exchanges; According to the statistics of the Investment Review Committee of the Ministry of Economic Affairs, the amount of foreign direct investment (FDI) has reached 69.19 billion US dollars, it becoming the largest accumulation of foreign direct investment from 1991 to 2000 in Taiwan. the investment amount reached US\$143.76 billion, the highest in the calendar year of 2021, and the average size was the highest in 2016. the Statistics of Taiwan's foreign and Chinese mainland investment in the past years show as table 1. [22], [23]

Table 1 Statistics of Taiwan's foreign and Chinese mainland investment in the past years: unit: US dollars and thousands of yuan

Year	FDI (n	o China)		Mainland China				
	Items	Amount	Average	Items	Amount	Average		
1991~2021.09	17,097	163,647,832	9,571.73	44721	195,279,512	4,366.62		
~	~	~	~	~	~	~		
2011	306	3,696,827	12,081.13	887	14,376,624	16,208.14		
2012	321	8,098,641	25,229.41	636	12,792,077	20,113.33		
2013	374	5,232,275	13,990.04	554	9,190,090	16,588.61		
2014	493	7,293,683	14,794.49	497	10,276,570	20,677.20		
2015	462	10,931,146	23,660.49	427	10,965,485	25,680.29		
2016	496	12,123,094	24,441.72	323	9,670,732	29,940.35		
2017	502	11,573,208	23,054.20	580	9,248,862	15,946.31		
2018	638	14,294,562	22,405.27	726	8,497,730	11,704.86		
2019	670	6,851,155	10,225.60	610	4,173,090	6,841.13		
2020	516	11,805,105	22,878.11	475	5,906,489	12,434.71		
2021/1-9	306	8,968,929	29,310.23	321	2,860,842	8,912.28		

Resources: DGBAS, 2021 •

Owing to the vertical division of labor relationship between cross-strait trade obviously in the past 20 years, Taiwan exports raw materials and semi-finished products from China, and mainland China processing and exporting to the European and American markets, it also increases the export of Taiwan's raw materials and semi-finished products to Chinese mainland, it bringing a large of

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benefits from the investment and trade. With the adjustment of the industrial structure of the Chinese mainland, the era of high growth of Taiwan's exports to the mainland has slowed down, and the cross-strait economic relations have not only formed a pattern of complementary and competition in the international industrial division of labor structure, but also an asymmetrical and unbalanced phenomenon, that is, the amount of cross-strait investment and trade has grown simultaneously, and Taiwan has a large number of investment flows to the Chinese mainland, and making the economic dependence on Chinese mainland because it has a huge trade surplus, and the trade surplus between the two sides of the Taiwan Strait has continued to increase after 2000.

## 2.1 Taiwan's trade dependence is high to the China

The coronavirus disease (COVID-19) epidemic hit the global economy seriously and affecting to the cross-strait economic and trade relations in 2020, while Taiwan's economy was not impacted by the epidemic significantly, it's economic growth rate of 3.11%; However, Taiwan's trade dependence on China was as high as 26.2% in 2020, it is a highest record than last years, and the export dependence was close to 30%, which showed that Taiwan's trade dependence on China was still high; According to the General Administration of Customs of China, Taiwan exported US\$181.7 billion and imported US\$54 billion to China, with a surplus of US\$127.7 billion in 2020. However, China's Customs Administration counted exports of US\$92.5 billion, imports of US\$57.4 billion, it's surplus of US\$35.2 billion in the same period, a statistical difference of about 5 times, it showing that the asymmetric dependence between the cross-strait economic and trade is indeed worth to exploring [8], [9]

### 2.2. Taiwan's trade surplus is increasing year by year

According to statistics from the Customs Administration of the Ministry of Finance, the total trade between the two sides of the strait reached US\$181.47 billion in 2017, and then increased year by year, it reaching US\$216.29 billion in 2020, and the total trade volume between the four years increased by nearly 20%; During the same period, the exports rose from US\$129.91 billion to US\$151.38 billion, an growth rate of 16.52%, while imports increased from US\$51.55 billion to US\$64.81 billion, an growth rate of 25.72%, while the trade surplus increased from US\$78.36 billion to US\$86.57 billion, with a growth rate of 10.48%, except for the negative growth rate and surplus of total trade volume in 2019, the remaining years had shown an upward trend. it means that the cross-strait economic and trade relations is very important. A Statistical Comparison of Taiwan's Imports and Exports to Chinese mainland (including Hong Kong) show as Table 2.

**Table 2 Statistical Comparison of Taiwan's Imports and Exports to China (including Hong Kong)** 

Unit: US\$100 million; %

Items	Total amount			Export			Import			Surplus	
year	Amount	%	rate	Amount	%	rate	Amount	%	rate	Amount	rate
2017	1814.7	31.7	15.4	1299.1	41.2	16.0	515.5	20.0	13.7	783.6	17.5
2018	1931.0	31.2	6.4	1379.0	41.3	6.1	552.0	19.4	7.1	827.0	5.5
2019	1905.7	31.0	-1.3	1321.2	40.1	-4.2	584.6	20.5	5.9	736.6	-
											10.9
2020	2161.9	34.2	13.4	1513.8	43.9	14.6	648.1	22.6	10.9	865.7	17.5

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2021 1	996.3	33.2	27.4	1384.6	42.7	28.1	611.7	22.1	32.5	773.0	24.9
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Resources: Customs Administration, MOF, Taiwan •

#### 2.3. The statistical gap between the cross-strait trade

The trade relation are getting closer little by little, but the statistical gap between the cross-strait trade continues to increase, the bilateral trade between the two sides of the strait as an example, according to the entrepot trade statistics of the Hong Kong Customs, the amount of Taiwan goods exported to the mainland through Hong Kong was only about 240 million US dollars in 1980, and increased to 3.28 billion US dollars in 1990; The amount of re-exported mainland goods into Taiwan through Hong Kong is small relatively, with trade amounting about US\$80 million in 1980 and increasing to US\$765 million in 1990. Obviously, the rapid growth of bilateral trade between the two sides of the strait from 1980 to 1990, mainly due to Taiwan's indirect exports to the mainland, and Taiwan's bilateral trade with the mainland has a large of surplus every year and expanding constantly. Owing to the China was dissatisfied with the former President Lee Tenghui to visit the United States in 1995, it was announced a series of acts of civil attack and military intimidation against Taiwan, and the Taiwan Government has adopted a policy of "No Haste and Patience", and as a result that Taiwan businessmen have experienced to negative growth of investment in the mainland China. [2], [6], [18]

According to the General Administration of Customs of China in 2020, Taiwan exported US\$181.7 billion and imported US\$54 billion to China, with a surplus of US\$127.7 billion. During the same period, however, if according to the statistics of Taiwan's Customs Service, it's exports of 92.5 billion US dollars and imports of 57.4 billion US dollars, the surplus has 35.2 billion US dollars, the difference between the two sides of the strait shows that the basis or content of cross-strait economic and trade statistics is not consistent, because if only from the view point of trade surplus, Then the China's statistics are about three times than that of Taiwan, there is a gap in trade statistics between the two sides of the strait obviously, in order to understand the difference between the intermediate goods and the final consumption, and try to understand its significance and proportion, Only in this way can we accurately estimate the real trade situation between the two sides of the strait. [3]

# 3. ASYMMETRY INTERDEPENDENCE BETWEEN THE CROSS-STRAIT ECONOMIC AND TRADE

The territory is vast and has a rapid economic development in mainland China, however, it has small area and good advantages human resources in Taiwan, the relation of cross-strait economic and trade contains interdependence generally, but the degree of dependence is different, which also triggers the association of cross-strait interdependence and asymmetry, as well as different economic and trade strategies derived from different degrees of dependence. In general, the asymmetry interdependence is interdependent and does not forced on the mutual benefit, it's means that interdependence can not only increase the power resources of one country, but also weaken the power base of another country, so that interdependence while promoting international cooperation, and also will stimulate the fear of countries with fragile interdependence relatively. [16]

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## 3.1. Interdependence

Interdependence shows the different degrees of influence due to the characteristics of the political and economic environment. Any kind of event that occurs anywhere will have an impact on some people or all people elsewhere in the current international economic and social situation in the world, which also shows that different countries are forming an ever-expanding network of common interests, and national interests have become an increasing trend, thus laying the economic foundation for international peace in an interdependent world. [5], and it has become an interdependent and asymmetrical model of economic and trade cooperation and development between the two sides of the strait.

### 3.2. Asymmetry Interdependence

If there is asymmetry interdependence in the international economy, the country with fragility of interdependence need to consider the concerned events such as the unequal distribution of benefits, it will not only interrupt the process of interdependence, but also may choose war to maintain the survival and security of the country in order to solve the asymmetry interdependence among countries. The asymmetry interdependence will give the less dependent party a symmetrical and non-mutually beneficial characteristic of power interdependence, and the fear that relatively weak countries may produce in the process of interdependence of countries also constitutes the root cause of international conflict. [13]

In a globalized economic system, international political economists often define asymmetric independence as mutual but unequal dependencies. Mainly due to the different raw material resources and different quality of human resources between countries after economic globalization, and those countries must rely on each other in order to pursue the country's economic development, the mainland market consolidation may have multiple reasons such as the country's traditional security concept, as well as the policies and methods of maintaining security in recent year. [4].

#### 3.3. Trade Dependence Can't Be Judged Solely by the Total Amount

Owing to the sovereignty dispute between the two sides of the strait over the past years, the government offices of both sides have intervened in bilateral economic and trade exchanges, and the ultimate purpose of the mainland authorities is to accelerate the political reunification of the two sides of the strait, while Taiwan's economic and trade policy towards conservative and passive on in order to avoid excessive dependence on the mainland economy [3]. If we observe from the relatively strict definition and processing mode of import and export goods in international activities, the dependence of economic trade cannot be judged solely by the total amount [11], but should be subdivided into the characteristics of goods, and pay attention to the concept of intermediate goods and final consumption, such as the cross-strait high-tech intermediate financial trade specialization coefficient is 66.6%, which highlights the significance of Chinese mainland technology dependence on Taiwan; That is the closeness of the high-tech industrial chains between Taiwan and the United States is much higher than that of the Sino-US industrial chain. [1], [14]

#### 3.4. Taiwan's economic and trade advantages

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It is a small and open economy system in Taiwan, and its advantages of economic and trade exchanges in cross-strait are as follows.

#### 3.4.1. Taiwan has a competitive advantage in the ITC industry

Taiwan is the world's largest foundry producer of computer chips, as well as the design and manufacture of advanced LCD panels, DRAM computer memory, network equipment, and consumer electronics in 2021, Major of hardware companies such as Acer, Asus, HTC, Foxconn, TSMC and Pegatron have already played a leading role in their decision-making and production models in the world. [11]

Although the development of the textile industry is limited by those factors such as labor shortages, increased indirect costs, high land prices, and environmental protection, which have led to the lack of development, and enterprises are also actively looking for factories in countries with higher niche and attempt to maintain the operating model, their importance has decreased gradually, and the ITC industry is the orientation of Taiwan's competitive advantage right now. [10]

### 3.4.2. Taiwan has excellent investment environment

According to the Business Environment Risk Intelligence (BERI) which regularly publishes the "Investment Environment Risk Assessment Report" in April, August and December every year, it evaluates the possible profitability of multinational enterprises investing in various countries from the perspective of three major indicators, such as operational risk, political risk and exchange risk, as a basis for evaluating the quality of the investment environment, and Taiwan ranked third in terms of investment climate, and ranked 4th in terms of the investment environment risk assessment, second only to Switzerland, Norway and South Korea in the world (website of the Ministry of Economic Affairs of the Republic of China, 2021). [22]

#### 3.5. Comparison of competitive advantage index in cross-strait

Generally, a domestic economic and trade competitive advantage can be measured by the Trade Special Coefficient (TSC), which can also be called the trade competitiveness index, or trade specialization coefficient. It mean refers to the proportion of the difference in a country's import and export trade to the total import and export trade, the larger the coefficient, the greater the advantage, and vice versa. In general, the Trade Competitive Advantage Index is an effective tool for analyzing the international competitiveness of the industry structure, which can reflect changes relative to the world market, that is, whether the same product produced in the country is in the competitive advantage of a product supplied by other countries in the world market, and its calculation formula of trade competitive advantage index as follows: [11], [20]

TC index = (exports - imports) / (export + imports), if the value range is (-1, 1),. It mean if the TC index is greater than zero, it indicates that the goods have strong international competitiveness, and if the international competitiveness is near to 1, the stronger the competitiveness; If the TC index is less than zero, it means that the goods are not internationally competitive; If the index is zero, it means that such goods are intra-industry trade. In addition, government departments or enterprises can also analyze whether domestic industries have trade competitive advantages from the size of TC, that is, according to the changes of the trade competitive advantage index or the size of the TC value, it can be used to judge the competitive advantages and disadvantages of the

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## product, that is:

- 1, (-1, -0.6), A significant competitive disadvantage;
- 2. (-0.6, -0.3), A great competitive disadvantage;
- 3. (-0.3, 0), A slight competitive disadvantage;
- 4, (0, 0.3), A weak competitive advantage;
- 5. (0.3, 0.6), A strong competitive advantage;
- 6, (0.6, 1), A significant competitive advantage

According to the statistical data of the Customs Department of the Ministry of Finance, Taiwan's TC value was 0.4318 in 2017, and 0.3872 in the first nine months of 2021, it's indicating that Taiwan has a strong trade competitive advantage than that of the Mainland China. [21], [23]

#### 4. CONCLUSIONS AND SUGGESTIONS

In the course of the development of economic and trade relations between Taiwan and the mainland, although they have been influenced by different politics and policies on both sides of the strait, the economic and trade development of the two sides in the strait has fluctuated. However, the scale of cross-strait economic and trade is still advancing with the times, and according to the foregoing analysis and explanation, the conclusions and recommendations can be listed as follows:

- 4.1. Taiwan is an island-oriented economic system's state, it's economic growth depends on the expansion of international trade. Taiwan has high-quality human resources, which contribute to the innovative management of product added value to expand the advantages of international trade.
- 4.2.In terms of the cross-strait economic and trade, Taiwan's trade dependence on China is high, but there is a huge gap in bilateral trade statistics due to different statistical bases.
- 4.3.It need to face on the asymmetry interdependence of economic and trade in the cross-strait, if Taiwan's people can reduce the doubts and fears from the interactions, the political and economic situations on both sides of the strait will be different, it can achieve sustainable cooperation and development under the orientation of non-governmental investment and consumption.

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