

# A Comparative Study of Dual Circulation Development Pattern in China and the United States

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## Abstract

The proposal of constructing the new pattern of dual circulation development is the product of the comprehensive effect of internal and external factors in the new stage of China's development, which meets the needs of China's economic and social development. Based on the comparative study of the internal and external circulation development of China and the United States, this paper concludes the similarities and differences of these two countries in the dual circulation development. The similarities mainly include: First, the early export-oriented economy gathered strength; Second, the industrial foundation is relatively solid; Third, China and the US have a strong domestic demand. The differences mainly include: First, the technological strength of the US is superior to that of China; Second, the US has the hegemony of the world currency; Third, the external environment for the development of the US is superior; Fourth, China's real economy is more stable. Through comparison, this paper finds that: First, the early export-oriented economic development provides the economic foundation for the dual circulation transition; Second, the industrial base is the prerequisite for the positive interaction between internal and external circulation; Third, the huge domestic consumption demand is the driving force for the development of internal cycle. Based on the above research, this paper puts forward the corresponding policy enlightenment.

## Keywords

China and America Dual Circulation Economy, Similarity, Differences

## 1. Introduction

In today's world, China is undergoing profound changes unseen in a century.

Internationally, the impact of COVID-19 is far-reaching, and the trend against globalization is more pronounced. The global industrial and supply chains are facing major shocks and increased risks. Domestically, after the reform and opening-up, China has seized the important opportunity of economic globalization, participated in the international economic cycle, and promoted rapid economic growth. At the same time, the demand structure and production function have undergone major changes, the internal circulation of the production system is not smooth and the disconnection between supply and demand appears, the “bottleneck” problem is prominent, and the complexity of structural transformation increases. To resolve this contradiction, we need to adapt to changes, overcome difficulties and speed up the building of a new development pattern.

In this context, on May 14, 2020, the Standing Committee of the Political Bureau of the CPC Central Committee proposed for the first time to “deepen supply-side structural reform, give full play to China’s super-large market advantages and domestic demand potential, and build a new development pattern in which domestic and international dual circulation promote each other”. On August 24, 2020, General Secretary Xi Jinping held a symposium of experts in economic and social fields and pointed out that “we should promote the formation of a new development pattern with the domestic cycle as the main body and the domestic and international dual circulation mutually reinforcing. This new development pattern is proposed according to the changes of China’s development stage, environment and conditions, and is a strategic choice to reshape China’s new advantages in international cooperation and competition. It indicates that China is constructing a new dual circulation development pattern, which is the direction of China’s future economic development.

The new development pattern of dual circulation is put forward according to the change of domestic and international environment, which has practical significance. On the one hand, China’s economic development has shifted from high-speed growth to stable growth. The size of the economy is large, the size of the middle consumer group has reached 400 million people, and the domestic market can support the economic development model with the internal circulation as the main factor and the external circulation as a supplement. On the other hand, the trend of anti-globalization and the increasing trade frictions both indicate that the international great cycle has been greatly hindered and uncertainties have greatly increased. At this time, it is wise to shift the economic focus from the international great cycle to the domestic great cycle to avoid risks. After reviewing the existing literature, this paper finds that Chinese scholars have done a lot of research on the development mode of China’s dual circulation economy. [Fan & Cai \(2021\)](#) propose that China has formed an economic development pattern with domestic circulation as the main body since 2009, and the construction of a new dual circulation development pattern should solve the imbalance of economic structure. [Guo \(2020\)](#) analyzed the characteristics of China’s internal and external economic circular development at different stages of de-

velopment. Jiao & Shi (2021) analyze the transformation of China's economic development model from the perspective of political economy. Wang & Niu (2021) divide the development process of China's dual circulation economy into two stages, one is the development mode dominated by internal circulation before the reform and opening up, and the other is the development mode of internal and external interaction after the reform and opening up. There are also scholars who study from a more in-depth and subdivided perspective. Zhang (2021) focuses on China's domestic market and conducts in-depth research on the development of China's internal circulation. Liu & Li (2016) studied RMB internationalization strategy under the background of dual lectures. Wen, Zhang, & Wang (2021) focus on international scientific and technological cooperation under the new dual-cycle development pattern of China.

In addition, Chinese scholars have studied the dual circulation of the United States in many aspects. Guan & Zheng (2021) analyze the promotion effect of American consumption on the internal cycle from the perspective of consumption. Jiang (2021) divides the development process of the "dual circulation" economy in the United States into the internal cycle stage, the external cycle stage and the dual circulation stage after 1914. Qian & Pei (2021) clarify the connotation and theoretical logic of dual circulation, and review the international experience of the United States and Japan to provide suggestions for China to build a new dual circulation development pattern. Wu (2021) studied the internal and external circulation characteristics of The United Kingdom, the Soviet Union and the United Kingdom, providing historical experience for China's dual circulation economic model. Xie & Li (2021) study the development history and current characteristics of dual circulation in the United States. Finally, some scholars analyze the problems faced by China's dual circular economy from the perspective of Sino-US relations and put forward countermeasures. Li & Shi (2022) analyze the reasons for US sanctions against Chinese high-tech enterprises, and provide countermeasures for China to deal with trade frictions and sanctions. Tao (2020) studied the causes, characteristics and means of the FINANCIAL sanctions imposed by the United States on China, and put forward preventive measures to nip them in the face.

Faced with the problem of how to promote China's dual circulation development, China can seek experience from the economic development of the United States, a developed economy, by comparing the similarities and differences in the economic development of China and the United States. Studies by established scholars show similarities between what China faces today and what the United States did in 1913. In 1913, the United States became the world's largest economy and an emerging world economic power. At this time, the United States was faced with a complex external environment and underwent a transition period of development (Jiang, 2021). This is similar to the complex situation China is currently facing. However, there are still many differences between the economic development models of China and the United States. There are huge differences

between China and the United States in scientific and technological strength, currency competitiveness, external obstacles and competitive industries, from which the advantages and disadvantages of different models can be summarized.

This paper selects the development stage of American economy “from outside to inside” around 1913 for research. In contrast, around 2008, China gradually changed into a major domestic cycle with the domestic and international dual circulations promoting each other. Through comparative analysis of the similarities and differences between China and the United States, this paper summarizes the different characteristics of the two countries’ dual-cycle development on the one hand, and discusses how China seeks experience and draws lessons from the development process of the United States on the other hand, so as to better help China build a new pattern of dual-cycle development.

## **2. Similarities between China and the United States in Dual Circulation Development Pattern**

### **2.1. China and the United States Have Accumulated Their Strength through Their Early Export-Oriented Economies**

There are similarities in the background and situation of the transformation from outside-in in the development of China and the United States. In terms of economic strength, the per capita industrial output value and total industrial output value of the United States ranked first in the world in 1913, and the per capita GNP surpassed Britain for the first time. In the same year, New York became the world’s largest financial center and the New York Stock Exchange became the world’s largest exchange. This shows that the United States has become the world’s largest economic power. After the reform and opening up and China’s accession to the WTO, China took advantage of the introduction of foreign capital and domestic labor cost advantages to obtain international labor-intensive industry production advantages, and formed an export-oriented economic model of “two sides outside”, and its economic strength improved greatly. China’s GDP has been the second largest in the world since 2010. According to State Statistics Bureau, China’s total foreign trade reached \$2173.8 billion, ranking third in the world, of which manufactured goods accounted for 93.6% in 2007. By 2020, China’s total foreign trade will reach us \$464.626 billion, making it the world’s largest trading nation. It can be said that both China and the United States have strong economic strength and full release of productive forces in the premise background of “shifting from outside to inside” in the development of dual circular economy. Under the support of powerful productive forces, the national economic development mode from external circulation to internal circulation is the only way for a big country to stabilize its own economic stability.

### **2.2. Both China and the US Have Relatively Solid Industrial Foundations**

Another similarity between the development of Chinese and American dual cir-

ulation circular economy lies in the early industrial structure, which is manifested by the developed secondary industry, which contributes the most to the GNP. Since its founding, the United States has established the idea of “industrial nation” for its future economic development. In Hamilton’s Report on manufacturing industry, he clearly proposed to establish market operation rules, implement trade protection, and encourage technological innovation and invention. With the rise of the Industrial Revolution, industrialization gained momentum, with laws protecting free market competition and patent offices encouraging innovation. Later, after the second industrial Revolution, the Productivity of the United States was rapidly improved, and a large number of manufactured products were exported and occupied a large part of the international market share. After World War II, the United States contributed 42% of the world’s industrial finished products, 57% of steel, 62% of crude oil, 43% of electricity and 80% of automobiles, which fully reflected the export of American industries to the world and the development of external circular economy reached its peak. As a result, the US has accumulated economic power by exchanging manufactured goods for foreign currency through international circulation.

In the course of China’s economic development, the secondary industry also presents the characteristics of economic growth. Since China’s reform and opening up, the contribution of the secondary industry to economic growth has basically maintained a high level. As shown in **Table 1**, the contribution of the secondary industry to economic growth remained around 50% before the 2008 financial crisis. The contribution of the secondary industry to GDP growth is generally higher than that of the primary industry and the tertiary industry, indicating that the rapid development of the secondary industry in China has driven economic growth since the reform and opening up, especially before 2008. Therefore, the development of China’s secondary industry has a huge pulling effect on economic growth, the development of manufacturing and foreign trade to promote the development of external circulation. Government set up special economic zones, open coastal areas, encourage foreign investment into China investment. Also government encourage the development of foreign trade and foreign trade system reform, vigorously implement the “three plus one” way to trade, such as expanding the breadth and depth of opening to the outside world, establishing socialist market economic system, inspired the vitality of China’s economic development in an all-round way. After China’s accession to the WTO in 2001, relying on its labor cost advantage, China has gained the production advantage of international labor-intensive industries, and the development level of foreign trade has been further improved, with its dependence on foreign trade once increasing from 38.47% in 2001 to 62.73% in 2007. Development of Foreign trade under the pull of foreign trade, China has formed an export-oriented economic model dominated by the external circulation. Under this development, China has formed the largest and most complete industrial system. China has 41 industrial categories, 207 industrial middle categories and 666

**Table 1.** Contribution of three industries to china's economic growth (%).

| Year | GDP Growth | Primary Industry Contribution | Secondary Industry Contribution | Tertiary Industry Contribution |
|------|------------|-------------------------------|---------------------------------|--------------------------------|
| 1978 | 11.67      | 10.05                         | 61.32                           | 28.63                          |
| 1979 | 7.59       | 25.12                         | 51.50                           | 23.38                          |
| 1980 | 7.83       | -5.94                         | 87.66                           | 18.28                          |
| 1981 | 5.11       | 41.81                         | 16.55                           | 41.63                          |
| 1982 | 9.02       | 41.42                         | 27.26                           | 31.32                          |
| 1983 | 10.77      | 25.34                         | 42.92                           | 31.73                          |
| 1984 | 15.19      | 26.72                         | 40.73                           | 32.55                          |
| 1985 | 13.43      | 3.76                          | 57.40                           | 38.83                          |
| 1986 | 8.95       | 9.82                          | 49.37                           | 40.82                          |
| 1987 | 11.62      | 10.69                         | 50.84                           | 38.48                          |
| 1988 | 11.22      | 5.84                          | 56.75                           | 37.41                          |
| 1989 | 4.21       | 17.72                         | 37.31                           | 44.97                          |
| 1990 | 3.92       | 47.34                         | 31.66                           | 21.00                          |
| 1991 | 9.26       | 5.98                          | 60.47                           | 33.55                          |
| 1992 | 14.22      | 6.82                          | 62.37                           | 30.81                          |
| 1993 | 13.88      | 6.31                          | 64.14                           | 29.55                          |
| 1994 | 13.04      | 5.89                          | 64.18                           | 29.94                          |
| 1995 | 10.95      | 8.95                          | 59.71                           | 31.35                          |
| 1996 | 9.92       | 9.98                          | 58.34                           | 31.69                          |
| 1997 | 9.24       | 6.68                          | 53.63                           | 39.68                          |
| 1998 | 7.85       | 7.57                          | 52.42                           | 40.01                          |
| 1999 | 7.66       | 5.68                          | 48.15                           | 46.17                          |
| 2000 | 8.49       | 4.00                          | 50.48                           | 45.52                          |
| 2001 | 8.34       | 4.39                          | 45.27                           | 50.34                          |
| 2002 | 9.13       | 3.91                          | 47.87                           | 48.22                          |
| 2003 | 10.04      | 2.91                          | 57.32                           | 39.77                          |
| 2004 | 10.11      | 7.83                          | 50.79                           | 41.38                          |
| 2005 | 11.39      | 5.18                          | 50.02                           | 44.80                          |
| 2006 | 12.72      | 3.94                          | 49.93                           | 46.13                          |
| 2007 | 14.23      | 2.52                          | 49.32                           | 48.16                          |
| 2008 | 9.65       | 5.44                          | 47.96                           | 46.60                          |

Source: National Bureau of Statistics.

industrial subcategories. Therefore, China's industrial chain is complete, and industries can support each other.

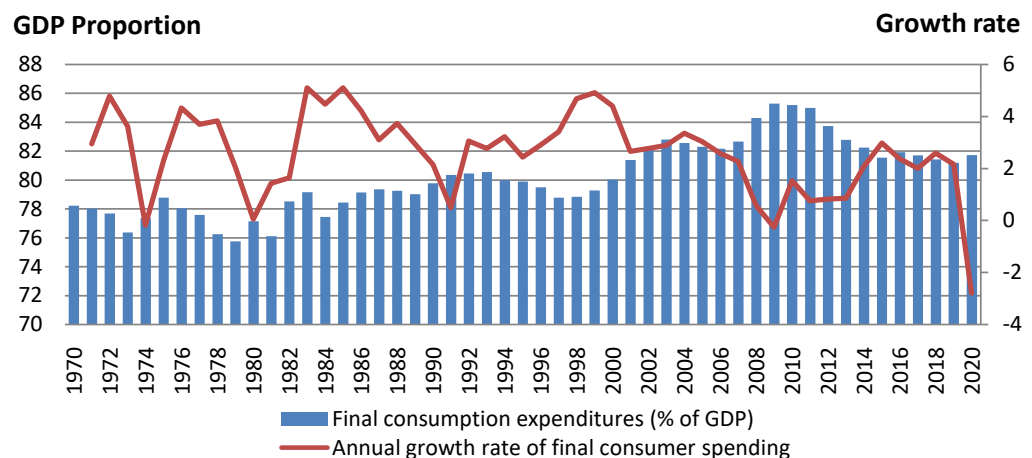
By comparison, it is found that the industrial structure of the United States

before and after 1913 and China before and after 2008 is mainly the secondary industry. The development of the secondary industry not only promotes the development of foreign trade to earn foreign exchange, but also forms a complete industrial chain, which provides self-circulation ability for the transformation of the focus of the dual-cycle development model from “outside to inside”.

### 2.3. Both China and the US Have Strong Domestic Demand

From the perspective of consumption power, both China and the United States choose to change to a dual circulation development mode dominated by internal circulation in the historical stage when the potential of domestic consumption is high. The United States is an economic development model driven mainly by household consumption, and excessive consumption maintained by low savings rate and high borrowing rate is a typical feature of household consumption in the United States (Qian & Pei, 2021). With the development of American industrialization, the scale of American industrial production keeps expanding, and the gross national product and per capita disposable income increase rapidly. In 1914, the population of the United States increased 2.93 times than that of 1860, but the gross national product increased 6 times, and the average consumption capacity of each person increased twice. The increase of residents' income directly drives the improvement of consumption power, thus the scale of the domestic market in the United States has been expanded, and the contribution of consumption to economic growth ranks the first in the “troika”. In 1980, final consumption scale of the United States exceeded 2 trillion US dollars, 77% of GDP (Figure 1). The final consumption accounted for 77.2% of GDP, which means it provides a solid foundation for the development of internal circulation (Guan & Zheng, 2021).

China's domestic demand is increasing, China's economy in recent years has been to the domestic cycle as the main body of the transformation. Although the level of China's internal circular economy has not reached the level of the United



**Figure 1.** US final consumer spending of GDP and annual growth rate, 1970-2020 (%). Source: World Bank database.

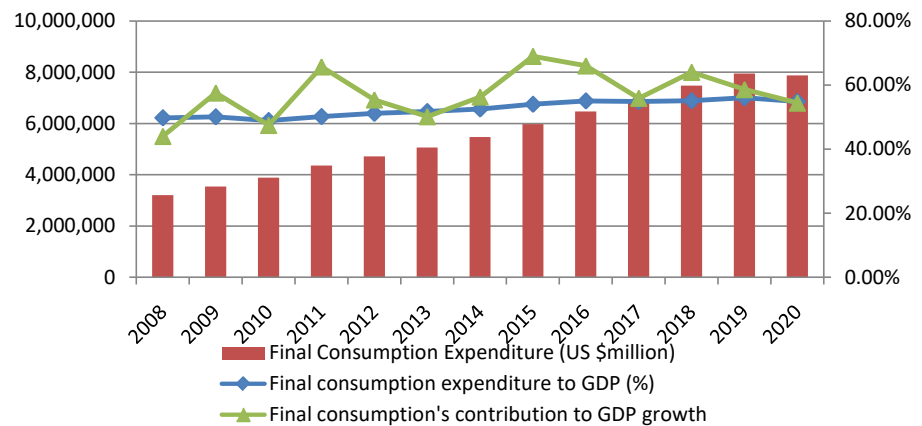
States, with the rise of China's economic aggregate, the dependence of China's economy on foreign trade will continue to decrease, and the power source of future economic growth will be domestic demand to a greater extent. In terms of scale, domestic demand is an important driving force for China's economic growth. As President Xi Jinping pointed out in his speech at a forum of economic and Social experts on August 24, 2020, "Since the 2008 international financial crisis, China's economy has been shifting to a major domestic cycle. The ratio of current account surplus to GDP has dropped from 9.9% in 2007 to less than 1% now. Domestic demand accounted for more than 100 per cent of economic growth in seven years. In the coming period, the domestic market will lead the national economic cycle more obviously, and the potential of domestic demand for economic growth will be constantly released." China's aggregate demand is dominated by domestic demand, with final consumption accounting for more than 50% of GDP in recent years. Since 2008, the contribution rate of China's final consumption expenditure to China's GDP growth has been rising in fluctuations. Since 2011, the contribution rate of China's final consumption expenditure has been more than 50% (**Figure 2**), and this proportion will keep rising in the foreseeable future. China has a large population, a growing middle-income group and a huge growth potential in the domestic market. Domestic demand will become a major driving force for future economic growth.

### **3. Differences between China and the United States in Dual Circulation Development Pattern**

#### **3.1. The Technological Strength of the United States Is Superior to That of China**

There is a big difference in the level of science and technology between China and the US. American scientific and technological achievements are very remarkable, and the commercialization of scientific and technological achievements is remarkable. During the second Industrial Revolution, the United States paid more attention to scientific and technological innovation than the United Kingdom (*Goodfriend & McDermott, 2021*). Therefore, scientific and technological innovation played a particularly significant role in promoting economic growth in the Second Industrial Revolution. The United States mastered a series of core technologies in the production and manufacture of automobiles and airplanes, and then quickly realized industrialization and mass production of assembly lines. Therefore, the automobile manufacturing industry in the second industrial Revolution period to the United States manufacturing and national economic GDP contributed a lot. In aircraft production and manufacturing, the United States has realized the monopoly of aircraft production by relying on the monopoly of advanced production technology. In the third industrial revolution, the United States in the nuclear industry, aerospace industry, biotechnology, invest a lot of research and development funds in emerging industries such as semiconductor, encourage scientific and technological innovation, always put





**Figure 2.** Contribution rate of final consumption expenditure to GDP growth in China (2008-2020). Source: World Bank database.

the control in the industrial chain is the core technology of advanced industry, and the backward, the consumption of resources and environment industry is transferred to the developing countries (Xie & Li, 2021). Therefore, the United States has the most advanced technology in these high-tech industries and thus preempted most of the market share. As can be seen from the number of patents granted in the United States over the years (Table 2), the number of invention patents increases almost every year, and the scientific and technological innovation capacity and commercialization of achievements in the United States are always making progress

In comparison, China's economic development started late, and its early attention to science and technology and capital investment were insufficient. First, before the 21st century, China's education level is not high enough, and higher education is even lacking. The country is short of scientific and technological innovation talents. Second, China's productivity level was not high at that time and there was not enough money to invest in scientific research and development. China's export-oriented economy mainly relies on undertaking labor-intensive industries transferred from developed countries, so it has low requirements for scientific research and development. Many of the technologies needed by China's early manufacturing industry were also imported and purchased from abroad, and the independent research and development capacity was insufficient. Up to now, China's manufacturing industry is still lacking in some high-tech fields. Chinese enterprises are not strong enough in the awareness of integrating into the global innovation network and integrating global innovation resources, and lack of ability (Wen et al., 2021). Due to China's lack of independent research and development capacity and limited technological level, some technologies cannot be broken through. For those products that cannot be manufactured in China, we have to import and encourage foreign investment to build factories to meet domestic demand. And be controlled by person on technology cannot realize independent production inevitably. For example, in 2018, the US Department of Commerce issued technical sanctions

**Table 2.** Number of patents granted in the United States in a calendar year.

| Year | Patent for Invention | Design Patent | Foreign Resident Patent |
|------|----------------------|---------------|-------------------------|
| 1909 | 36,562               | 387           | 3812                    |
| 1919 | 36,795               | 1523          | 3687                    |
| 1929 | 45,267               | 2907          | 5921                    |
| 1939 | 43,073               | 5593          | 6338                    |
| 1949 | 35,131               | 4451          | 3105                    |
| 1959 | 52,408               | 2769          | 8340                    |
| 1969 | 67,559               | 3335          | 17,573                  |
| 1979 | 48,854               | 3119          | 19,462                  |
| 1989 | 95,537               | 6092          | 47,804                  |
| 1999 | 153,485              | 14,732        | 74,877                  |
| 2009 | 167,349              | 23,116        | 96,677                  |
| 2019 | 354,430              | 34,794        | 204,656                 |

Source: US Patent and Trademark Office.

against ZTE for failing to comply with relevant terms of commitment and prohibited US enterprises from exporting relevant products and technologies to ZTE, which directly restricted ZTE's product production. As can be seen from the Catalogue of Industries to Encourage Foreign Investment 2020 edition, raw materials, parts and components, end products and producer services have all been added and changed, and foreign capital has been utilized to improve and upgrade China's industrial and supply chains. These are areas where Chinese manufacturing is lacking. Due to the technology protection and blockade of developed countries, China can only rely on independent research and development to develop high-end technology industry, which means a huge investment in scientific research and education, and it takes time to accumulate, which is not something that can be accomplished overnight. However, with the improvement of economic development level and the need for industrial transformation and upgrading, China has gradually strengthened its emphasis on and investment in scientific and technological innovation, which can be seen from the number of patents accepted and granted in China over the years. From 2000 to 2020, the number of patents granted increased year after year, and the number of patents granted annually also increased 25-fold (Table 3). This shows that although there is a big gap between China and the United States in terms of scientific and technological level, China's investment in and emphasis on independent innovation is still improving.

### 3.2. The United States Has the Hegemony of the World Currency

Since the end of World War II, the world monetary and trade system centered

**Table 3.** Number of patents accepted and granted in Past years in China.

| Year | Number of Patent Acceptance<br>(Thousands) | Number of Patents Granted<br>(Thousands) |
|------|--|--|
| 2000 | 170.68                                     | 105.35                                   |
| 2001 | 203.57                                     | 114.25                                   |
| 2002 | 252.63                                     | 132.40                                   |
| 2003 | 308.49                                     | 182.23                                   |
| 2004 | 353.81                                     | 190.24                                   |
| 2005 | 476.26                                     | 214.00                                   |
| 2006 | 573.18                                     | 268.00                                   |
| 2007 | 693.92                                     | 351.78                                   |
| 2008 | 828.33                                     | 411.98                                   |
| 2009 | 976.69                                     | 581.99                                   |
| 2010 | 1222.29                                    | 814.83                                   |
| 2011 | 1633.35                                    | 960.51                                   |
| 2012 | 2050.65                                    | 1255.14                                  |
| 2013 | 2377.06                                    | 1313.00                                  |
| 2014 | 2361.24                                    | 1302.69                                  |
| 2015 | 2798.50                                    | 1718.19                                  |
| 2016 | 3464.82                                    | 1753.76                                  |
| 2017 | 3697.85                                    | 1836.43                                  |
| 2018 | 4323.11                                    | 2447.46                                  |
| 2019 | 4380.47                                    | 2591.61                                  |
| 2020 | 5194.15                                    | 3639.27                                  |

Source: National Bureau of Statistics.

on the United States has gradually established, and the leading role of the United States in the global economy has been further strengthened. The agreement of international Monetary Fund made the international gold exchange standard with us dollar as the center established formally, and the influence of US dollar was greatly enhanced. Today's monetary system is dominated by the DOLLAR. The dollar is used in more than 40% of international settlements; The dollar accounts for more than 60 percent of the world's reserve currencies. However, SWIFT, which provides transaction services for more than 11,000 banks, securities institutions, enterprises and customers in more than 200 countries and regions, and CHIPS, which complete most of the global cross-border us dollar payments, are both controlled by the US in essence (Tao, 2020). Therefore, by issuing dollars, the United States can stimulate economic development and has a great advantage in regulating the exchange rate, which helps it maintain a high

level of consumption and thus stabilize the development of internal circulation. But the fed's money spamming has led to large fiscal deficits and inflation. As an important reserve currency in the world, the US can stimulate economic growth by issuing dollars. But the Fed's excessive money printing will only create false growth and further inflation in the United States and around the world. In particular, the multi-trillion dollar money-printing program in the United States since the pandemic has directly pushed up inflation. According to the Bureau of Labor Statistics, the CPI hit a 40-year high of 281.933 in February 2022, up about 8% from a year earlier. Moreover, the excessive financialization of American economy is easy to lead to economic bubble, which has great risks to economic operation.

And China's currency status of the RMB and the dollar has a huge gap. In 2021, the yuan will hold just 2 percent of the world's official currency reserves, compared with nearly 60 percent for the dollar, and the gap has widened even earlier. In 2015 joined the SDR basket currency, after the RMB internationalization process is accelerated, the position in the world monetary system also has improved, but this is mainly based on China's powerful trade level status of the RMB, the RMB foreign direct investment scale pull function on the status of the RMB is still insufficient, is far less than the United States.

### **3.3. The US Enjoys a More Favorable External Environment for Development**

America's internal economic cycle has been transformed without economic and political oppression by other countries. However, China's development of dual circular economy has been politically suppressed by western countries. First of all, the United States belongs to the capitalist bloc and is ideologically the same as European countries, so there is no political oppression caused by ideological differences. Secondly, since 1914, due to the outbreak of The First world War and the Second World War, the European economy was severely damaged, while the American economy developed rapidly, and the existing political and economic pattern in the world underwent fundamental changes. After World War II, the United States replaced Britain as the world's dominant power. Subsequently, the United States helped European countries rebuild through a series of international assistance measures such as the Marshall Plan, and its voice in the world reached an unprecedented height. In this context, the United States has a strong economic strength and political status, the national strength is unprecedented, no country can impose political oppression on the United States. Therefore, the internal economic cycle of the United States is an independent process of transformation, without political oppression by other countries.

The international environment faced by China in the development of dual circular economy is completely different from that of the United States. Since 2018, the United States has officially initiated trade frictions against China, imposing high tariffs on Chinese exports to the United States. For example, in 2018,

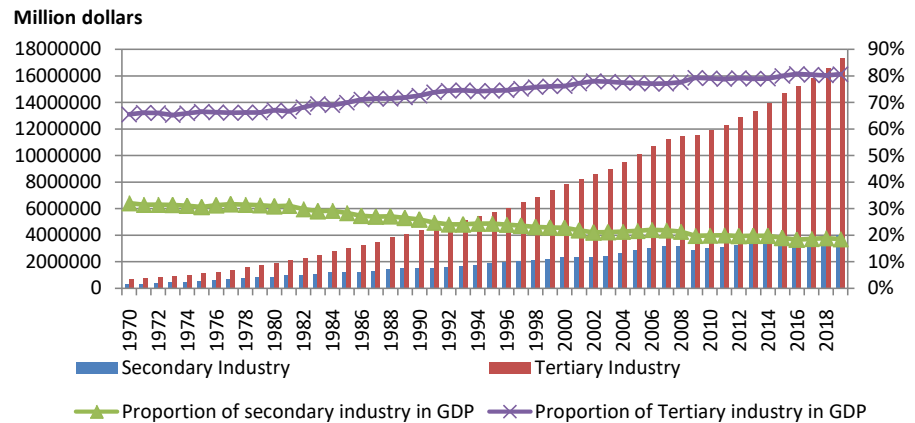
the US imposed additional tariffs on us \$50 billion, US \$200 billion and US \$300 billion of Chinese exports respectively. In 2019, the US further increased the tariff rates from 10% and 25% to 15% and 30%. In addition to the trade sanctions, many Chinese enterprises are facing sanctions from the United States, mainly involving aerospace engineering, mechanical research, electronic science and technology research, communications technology, artificial intelligence and other information technology companies. In August 2018, the sanctioned enterprises had 8 entities and 36 affiliates; In 2019, Huawei and more than 100 affiliated companies and China General Nuclear Power Group and three of its subsidiaries were sanctioned. In 2020, 38 branches of Huawei were sanctioned, along with more than 70 enterprises in other industries (Li & Shi, 2022).

Therefore, at that time, the United States was already the world's largest economic power, and the status of the DOLLAR in the world monetary system made all countries in the world highly dependent on the United States, and the United States was not subjected to large-scale sanctions. But China has faced many trade frictions and boycotts in the past five years. In order to cope with new contradictions and challenges brought by complex environmental changes, such as the rise of trade protectionism, anti-globalization trend and COVID-19 epidemic, China's external circulation development has made a series of adjustments to maintain the stability of national economic development (Wang & Niu, 2021).

### 3.4. China's Real Economy Has Become More Solid

In the second industrial Revolution, the Manufacturing industry developed in the United States, and the secondary industry was an important pillar of the national economy. However, since 1913, the Economic development of the United States has shown a characteristic of "shifting from real to virtual", that is, the contribution of the tertiary industry to the economy is higher than that of the secondary industry (Figure 3), among which the virtual economy accounts for a large proportion in the national economy. This will lead to the increase in the import demand for consumer goods, thus expanding the trade deficit. Moreover, it will also produce financial bubbles, and excessive bubbles will lead to the outbreak of economic crisis. This "out of the virtual to the real" economy is an unstable factor in the American dual circulation economy. And this kind of characteristic appears behind especially internal reason. The United States leads the world in high-tech development, but lacks the development of middle and low-end industrial chains. Due to the high cost of labor in the United States, many manufacturing enterprises are transferred to developing countries, which lead to the problem of industrial hollowing in the United States and incomplete manufacturing industry chain.

On the other hand, the United States has made great efforts to develop the financial sector and other service industries, which lack support for the development of the real economy. All of these jointly lead to the decline of the Real



**Figure 3.** Output value of the US secondary and tertiary industries and proportion in GDP (1970-2020). Source: United Nations Conference on Trade and Development (UNCTAD).

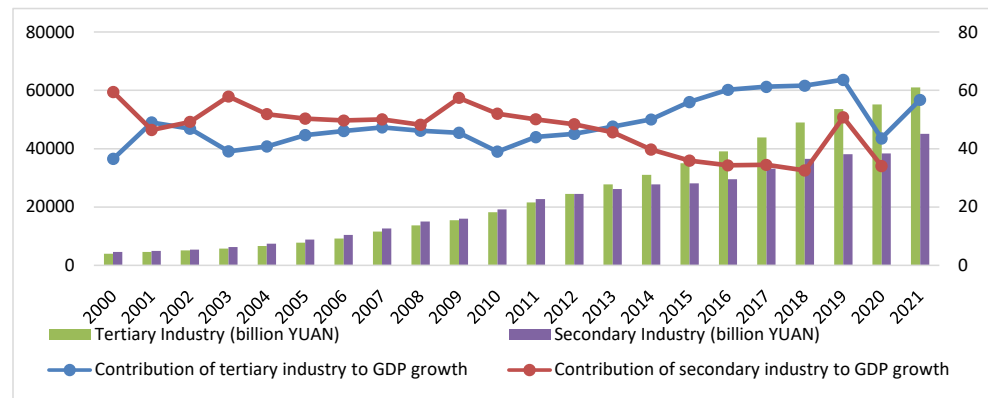
economy of the United States, which is mainly manifested in the reduction of industrial scale and the abandonment of low value-added manufacturing (Wu, 2021). According to the research, compared with 2012, the productivity of various sub-industries in the US manufacturing industry varies greatly in 2002. Among them, the labor productivity of computer and electronic industry is as high as 79.58%, while that of clothing manufacturing industry decreases by 46.91% (Adkisson & Ricketts, 2016).

It is very important to master and control the development of a country's real economy. It is true that the production added value of the low-end industrial chain is much lower than that of the high-end industrial chain, but long-term dependence on the supply of low-end overseas industries is prone to problems. One is the loss of jobs. Middle and low-end manufacturing enterprises need a large number of labor and can provide many jobs for the society. When these middle and low-end manufacturing enterprises move to developing countries for cheaper labor costs, domestic employment opportunities will decrease, unemployment rate will rise, and household consumption will be affected. Second, the lack of a complete industrial chain system in response to emergencies is difficult to ensure stable social supply. Take the COVID-19 pandemic as an example. Normally, the US relies on Imports of Chinese goods to meet its domestic market demand. However, due to the disruption of transportation and production, trade has decreased and many products cannot be imported, which has affected the supply of goods in the US and left domestic demand unmet. The lack of low-end industrial chain in the United States is mainly due to the high cost of these low-end industries in the United States, so they move to countries with cheaper production factors to set up factories and produce, resulting in the outflow of low-end manufacturing in the United States. In the first half of the 20th century, the United States was the "factory of the world", with a relatively complete industrial chain. At its peak, the manufacturing output value accounted for nearly 50% of the world. But later, with the international industrial transfer, the hollowing out of the American industry became more and more serious. In or-

der to find cheaper labor and land, the middle and low-end manufacturing industries moved to developing countries (Jiang, 2021). The importance of the real economy can also be seen from the problems of the US economy. It is necessary to prevent economic development from “shifting from real to virtual” and avoid massive investment in stocks, real estate and other fields, resulting in a lot of economic bubbles (Guo, 2020).

Different from the United States, in China’s industrial structure, the tertiary industry began to surpass the output value of the secondary industry from 2012, and the output value difference between the secondary industry and the tertiary industry is smaller than that of the United States. As a major manufacturing country with a complete industrial chain, China still attaches great importance to the development of the real economy. Therefore, China’s dual-circulation economy was still dominated by external circulation in the early stage, and even before and after 2008, China’s external circulation economy still played a dominant role in economic development, but the degree of dependence on foreign trade is gradually decreasing, and the economic structure is in the stage of adjustment. This is because since the reform and opening up, China has adhered to the development of export-oriented economy. Export-oriented economy makes China highly dependent on foreign trade, processing trade accounts for the majority of foreign trade, and it lacks attention to the development of service industry (Qian & Pei, 2021). Since the outbreak of the financial crisis in 2008, the international economy was depressed and the demand in foreign markets declined. China adopted the policy of expanding domestic demand, adjusting structure, stabilizing growth and promoting reform to expand domestic demand (Jiao & Shi, 2021). Therefore, China began to transform and upgrade its economic structure, vigorously supporting the development of the service industry, and improving its industrial structure. Meanwhile, China’s dependence on foreign trade began to decline year by year, the proportion of import and export in GDP continued to decline, and the output value of the secondary industry was gradually lower than that of the tertiary industry (Figure 4).

In the development process of China’s secondary industry, it mainly benefits from international industrial transfer and has the characteristics of low added value. However, in the process of developing internal circular economy, China’s manufacturing industry is faced with the problem of lack of high-end industry, but the development of high-end industry needs more investment in scientific and technological innovation. In the past, China’s economic development faced the problem of insufficient production, and the focus of development was on expanding the quantity of production and not enough on the quality of growth. Since the beginning of reform and opening up, China has introduced many middle and low-end manufacturing industries transferred from developed countries. These industries are in essence backward production capacity of developed countries. China has always relied on international industrial transfer to develop its economy. In the early stage of China’s reform and opening up, its



**Figure 4.** Output value of china's secondary and tertiary industries and proportion to GDP growth (2000-2021). Source: National Bureau of Statistics.

role in promoting the economy was obvious, but problems would arise in the long run. These backward production capacity and low-end value chain industries could not bring more added value to China's economic growth.

## 4. Conclusion

### 4.1. The Early Export-Oriented Economic Development Provides the Economic Foundation for the Dual Circulation

The transformation of the external circulation economy in China and the United States from external circulation to internal circulation relies on the economic foundation accumulated in the early export-oriented economy. Through the second Industrial Revolution, the United States vigorously developed heavy industry and exported it to other parts of the world, thus accumulating capital reserve, which is an important foundation for the development of internal circular economy. Similarly, China developed an export-oriented economy through reform and opening up, took advantage of its labor force to undertake international industrial transfer, achieved trade surplus through manufacturing and foreign trade, obtained foreign exchange, and provided basic guarantee for the development of domestic circulation. Export-oriented economy gives full play to the advantages of national economic development, such as labor, resources, capital and technology, so as to use the international market for trade to obtain the scarce capital, resources and technology of the country, which plays a key role in the development and perfection of a country's industrial structure and supply chain.

### 4.2. Industrial Foundation Is the Prerequisite for the Positive Interaction between Internal and External Circulation

The strong industrial bases of China and the United States provide the conditions for the shift in the center of gravity of internal and external circulation. After the Industrial revolution, the Productivity of the United States increased unprecedentedly. Its manufactured products occupied a large international market share in the process of export, and its GNP increased. This greatly improves the residents' income and consumption level, thus increasing the consumption po-



tential, and the huge domestic consumption market, which provides the prerequisite for the development of internal circular economy. Through industrial development, China has formed a complete industrial system and production chain, which can to the greatest extent avoid monopoly or sanctions imposed on its national economy. Therefore, the industrial base is an important material basis for a country to improve its initiative in independent development. A complete industrial production system can meet the needs of People's Daily life and international trade exchange. On the premise of increasing consumption power, China further transforms its industrial structure to meet the needs of domestic upgrading. Therefore, the industrial base of a country is the precondition of benign interaction between internal and external circulation.

### **4.3. The Huge Domestic Consumption Demand Is the Driving Force for the Development of Internal Circulation**

The huge consumption demand in China and the US is the driving force for the development of the internal circular economy. The rapid increase of THE GROSS national product and per capita disposable income in the United States promotes the formation of a huge consumer market, while China has 1.4 billion people and 400 million middle-income groups, which also shows the huge consumer demand in China. The increase of income means the upgrade of national demand, so the increase of domestic consumption potential is an inevitable trend. The domestic market will further expand with the upgrading of production, so as to absorb and consume most of the goods produced in the country, and achieve a better connection between domestic consumption and production. Although the supply side and the demand side of China are not fully matched, but the huge consumer market will inevitably force the reform of the supply side, so domestic consumer demand is a driving force for the development of domestic circular economy.

## **5. Suggestions**

### **5.1. We Will Strive to Improve the Scientific and Technological Level and Increase the Efficiency of Dual-Cycle Development**

At present, China has the most complete industrial system and industry chain in the world, and the traditional manufacturing industry is still the main body of China's industrial economy. However, at the low end of the global industrial chain and value chain, China exports labor—and capital-intensive products and imports knowledge—and technology-intensive products, facing the dual pressure of resources and technology (Fan & Cai, 2021). Studies by scholars have proved that technological innovation, product innovation and system innovation have a significant positive driving effect on the upgrading of manufacturing industry (Xie, Zhang, & Wu, 2019). In the long run, China needs to improve the level of science and technology, attach importance to the research and development of basic technologies, promote innovation-driven economic development,

increase investment in emerging industries, and the government should guide social resources to focus on the important industrial areas that affect national development and security, and concentrate core resources on the development of strategic emerging industries. The development efficiency of the dual circulation can be effectively improved by taking the emerging industries as the dominant industries to drive the national economic growth in the future and allowing the emerging industries to take a leading position in the world development level. In addition, the technological level of regional industries can be improved by building growth engines of strategic emerging industries and strengthening cooperation of regional advantageous industries. We will strengthen information technology, new energy, green environmental protection, biotechnology, high-end equipment and other industries to enhance competitiveness. Taking the Greater Bay Area as an example, the Bay Area should give full play to the role of central cities such as Guangzhou and Shenzhen, promote the coordinated development of cities in Guangdong, Hong Kong and Macao, and jointly build world-class cash manufacturing clusters such as electronic information, smart home appliances and industrial robots.

### **5.2. Vigorously Promote RMB Internationalization and Smooth Development of External Circulation**

According to the different functions of currency and market, the direction of RMB internationalization should be to improve the status and role of RMB in trade settlement, international investment, international reserves, foreign exchange transactions, offshore credit and offshore bonds (Liu & Li, 2016). The use of RMB in trade settlement can effectively strengthen the stability of foreign trade and investment and participate in the world economy and financial system more deeply. In particular, with the improvement of China's comprehensive national strength and the enhancement of RMB's international competitiveness, other countries in the world can be attracted to use RMB for settlement and reduce their dependence on the US dollar. This will effectively avoid exchange rate risks and promote the stability of foreign trade and smooth development of external circulation.

### **5.3. Strengthen Foreign Economic and Trade Cooperation to Create a Favorable External Environment for the Dual Circulation**

As a manufacturing power, China must continue to strengthen its foreign trade. In recent years, China has faced the economic sanctions and a series of trade wars imposed by the United States, which have caused great damage to the import and export trade between China and the United States. The external environment for the dual circulation development is unfavorable. However, China can shift the object of foreign trade development, shift the focus of foreign economic and trade cooperation to ASEAN and countries along the Belt and Road,

enhance the facilitation of economic and trade cooperation by formulating a series of cooperation mechanisms, and establish an economic communication mechanism for win-win cooperation and shared development (Zhang, 2021). At the same time, platforms such as the International Science and Technology Cooperation Base, the “Belt and Road” Science and Technology Innovation Action Plan and the Regional Comprehensive Economic Partnership Agreement can be actively used to realize inter-regional science and technology cooperation and industrial linkage development (Wen et al., 2021), promote mutual benefit and create a good external environment for China’s dual circulation economy.

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### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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