



# COMPARATIVE ANALYSIS OF CHINA-UZBEKISTAN SERVICES TRADE UNDER THE BELT AND ROAD INITIATIVE

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## ABSTRACT

*With the successful convening of the Third Belt and Road Forum for International Cooperation, the construction of the Belt and Road will enter a golden period. Uzbekistan's unique location advantage plays an irreplaceable role in the construction of the Belt and Road. At the same time, Uzbekistan's stable political and economic environment and good trade complementarity with China will certainly push the economic and trade cooperation between the two countries to a new level.*

*As an important part of bilateral trade between China and Uzbekistan, service trade is of great significance for the development of economic and trade cooperation between the two countries. This paper provides a reference for the development of China-Uzbekistan trade in services cooperation by sorting out the current situation of the development of trade in services between the two countries, analysing the structure of trade in services between the two countries, understanding the degree of dependence of trade in services, the contribution rate of trade in services, the index of competitiveness of trade in services and the index of revealed comparative advantage of services trade in the two countries.*

**KEY WORDS:** *The Belt and Road Initiative; services trade competitiveness; services trade structure; services trade dependence*

## 1. INTRODUCTION

The European Commission (2005) concludes that about 20% of the rise in living standards in EU Member States over the past 50 years is attributable to the opening up of the world economy<sup>[1]</sup>. As a key hub of the Belt and Road Initiative and an important gateway from Asia to Europe, the economic and strategic significance of China-Uzbekistan economic and trade cooperation is becoming increasingly apparent. China and Uzbekistan have a long history of close cooperation. Since the establishment of diplomatic relations between Uzbekistan and China in 1992, economic and trade cooperation between the two countries has continued to progress, and the volume of bilateral trade has continued to increase, with a positive impact on the development of each other's economies.

With the successful convening of the Third Belt and Road International Cooperation Summit Forum, the construction of the Belt and Road will enter a golden period. Uzbekistan's unique location advantages, stable political and economic environment, and good trade complementarity with China will surely push the economic and trade cooperation between the two countries to a new level.

As an important part of bilateral trade, trade in services is of great significance for the development of economic and trade cooperation between the two countries. Hoping to provide a reference for the development of cooperation in services trade between the two countries, the paper analyses the development situation of China-Uzbekistan services trade, measures the degree of dependence of services trade, the contribution rate of services trade, the competitiveness index of services trade and the index of revealed comparative advantage of services trade in the two countries.

## 2. LITERATURE REVIEW

In January 1992, China and Uzbekistan formally established diplomatic relations and signed the Economic and Trade Agreement between the Governments of China and Uzbekistan, in which the two countries confirmed that they would grant each other most-favoured-nation treatment in trade<sup>[2]</sup>. Over the past 30 years since the establishment of diplomatic relations, bilateral ties have flourished, achieved fruitful results in the joint construction of the Belt and Road and the Shanghai Cooperation Organisation (SCO), further deepened strategic mutual trust, continuously expanded mutually beneficial cooperation and comprehensively promoted friendship



between the generations. This has elevated China-Uzbekistan relations to a new level of comprehensive strategic partnership.

The People's Republic of China is one of the key partners of Uzbekistan. Over the past years between Uzbekistan and the PRC signed 231 documents of a different nature. A high level of political dialogue has created a stable foundation for the development of trade and economic ties<sup>[3]</sup>.

Scholarly research has focused on discussing China-Uzbekistan political relations, trade in agricultural products, and educational and cultural exchanges, with less focused research on China-Uzbekistan trade in services.

Since the 1990s, researchers have carried out studies to assess the competitiveness of trade in services. Wyszowska-Kuna<sup>[4]</sup> analyzed the competitiveness of Polish trade in knowledge-intensive services using traditional indicators of international competitiveness such as: export performance, trade balance and RCA index. de la Guardia<sup>[5]</sup> compared China's services trade competitiveness with that of the European Union using two indicators, the TC index and the CA index, and found that China's services trade competitiveness is relatively weaker than that of the European Union.

Fixler et al<sup>[6]</sup>, looking at some specific industries, pointed out that the export of services trade in these industries is a catalyst for economic development and progress.

Ariu et al<sup>[7]</sup>, through an analysis of the connections between trading in merchandise and services at the firm level, it can be concluded that the liberalisation of services trade may have direct and indirect impacts on merchandise trade, while also benefiting the growth of services trade. Additionally, the liberalisation of merchandise trade can positively affect the development of services trade.

Various methods are available for evaluating the competitiveness of trade in services. In combination with research findings from related scholars, this study selects indicators such as the degree of dependence on trade in services, the contribution rate of trade in services, and the index of services competitiveness to evaluate the competitiveness of trade in services between China and Uzbekistan.

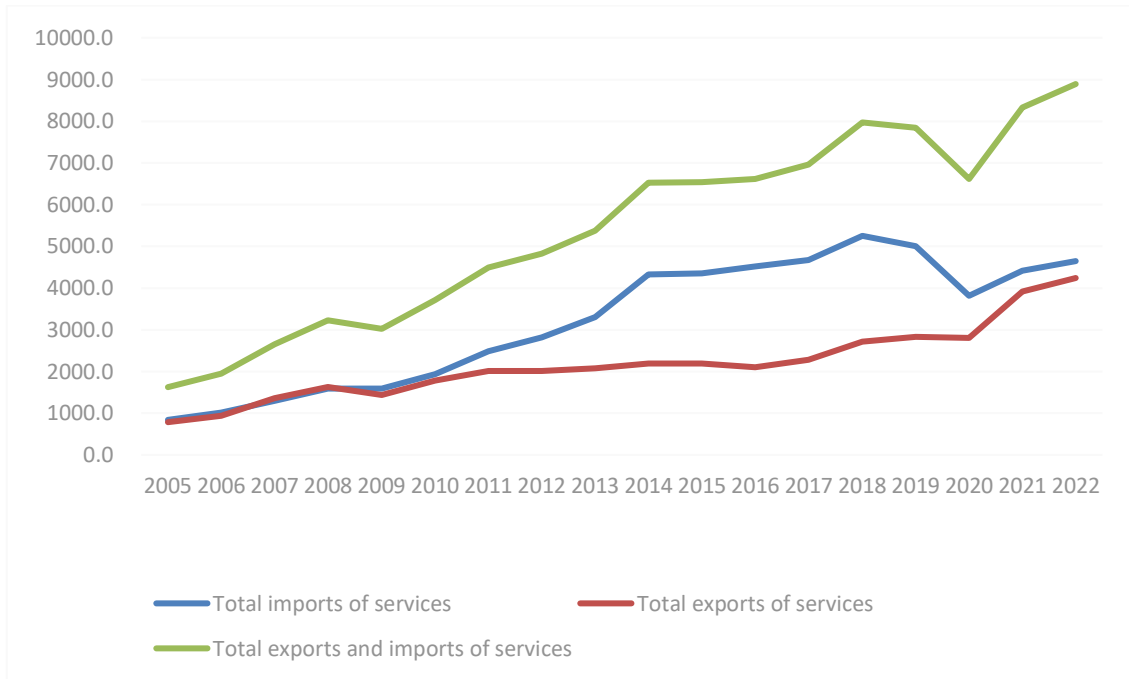
### 3. RESEARCH METHODS

By means of statistical analyses, the present status of trade service development between China and Uzbekistan has been evaluated to comprehend the alterations in services trade trends, the services trade structure and the services trade surplus of both nations. The service trade dependency index, service trade contribution ratio, service trade competitiveness index and revealed competitiveness advantage index of China and Uzbekistan are independently measured to assess service trade competitiveness between the two nations and guide the development of their service trade relationship.

### 4. ANALYSIS AND DISCUSSION

#### 4.1 Status of development of services trade in China

Since 2005, China has significantly increased its service trade, expanding at an annual average growth rate of 10.52%. According to data from the International Trade Centre, China's total import and export of services in 2022 reach \$889.109 billion, accounting for 6.51% of the global services trade. The total value of service exports is \$424.056 billion, representing 5.98% of the global service exports. The total value of imported services is \$465.053 billion, comprising 7.09% of all global service imports.

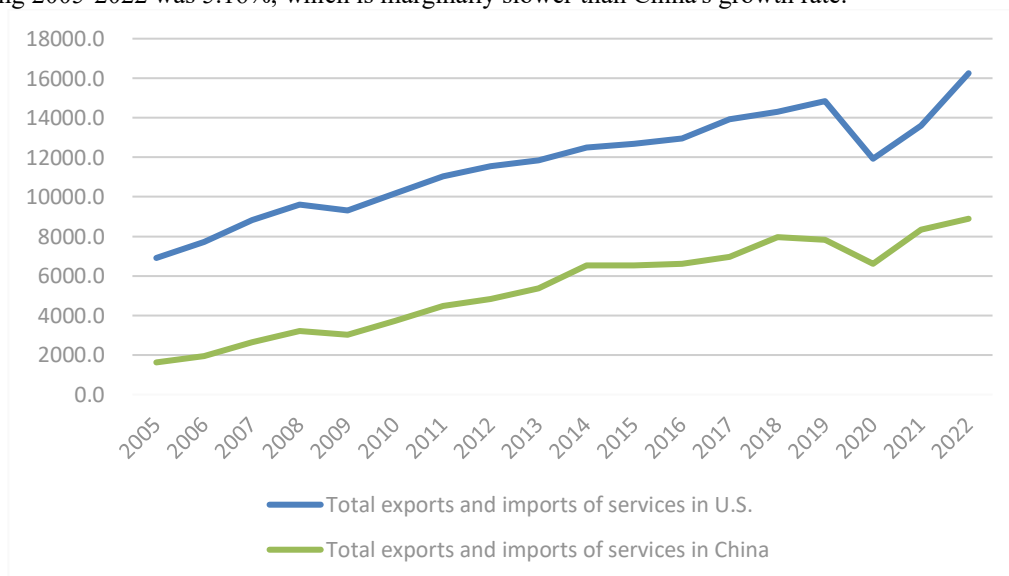


**Figure 1 China's import and export of trade in services, 2005-2022**

Based on the chart, it is evident that China's service imports have an average annual growth rate of 10.59%, while service exports have an average annual growth rate of 10.43%. Overall, service imports in China are growing slightly faster than service exports. However, the service trade in China suffered a significant decline in 2020 due to the epidemic prevention policy.

Alongside the adaptation of anti-epidemic policies, the government has proactively stimulated the progression of trade in services. It have implemented a range of supportive policies, including Pilot Free Trade Zone and Free Trade Port policies, intellectual property rights protection, and talent cultivation. As a result, China's trade in services is recovering swiftly.

In 2022, China ranked second globally in the scale of its services trade, yet it still lags behind the United States by a significant margin. The total import and export of services of China and the United States of America have undergone changes, as illustrated in Figure 2. Both countries exhibit a similar trend in the total volume of services import and export. However, the average annual growth rate of the United States of America's services trade during 2005-2022 was 5.16%, which is marginally slower than China's growth rate.



**Figure 2 Changes in total exports and imports of services in China and the United States, 2005-2022**

By comparison, China's total trade in services shows a deficit over the period 2005-2022, with imports exceeding exports. The United States has a trade surplus over this period, and it should be noted that the United States is the world's largest services trade surplus country. As shown in Figure 3.

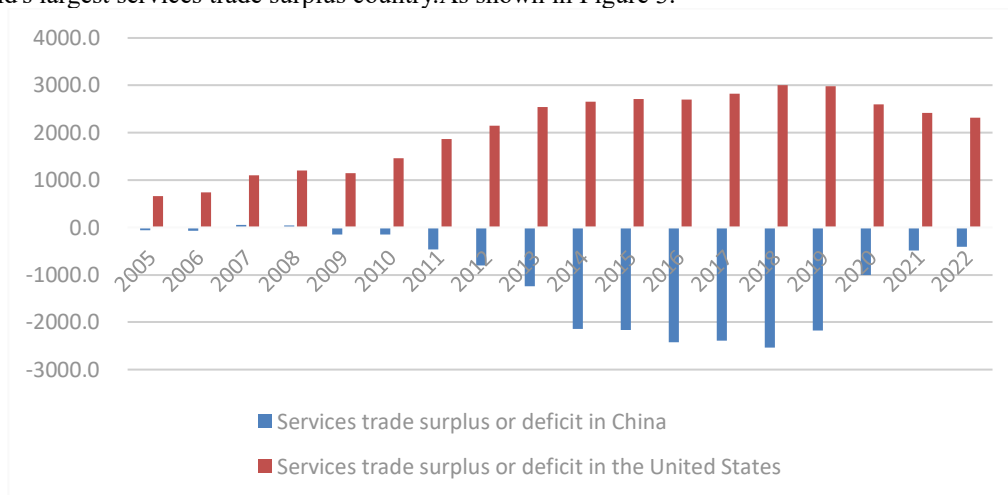


Figure 3 Surplus or deficit in the trade in services of China and the United States, 2005-2022

As for China's imports of services, during 2018-2022, travel fell from the first to the second place due to the greatest impact of the epidemic. Transport services are an important basic condition to support the operation of trade, and China, as a large global import-trading country, has relatively stable imports of transport services, with the first share. Imports of other types of services have remained basically stable. As shown in Figure 4.

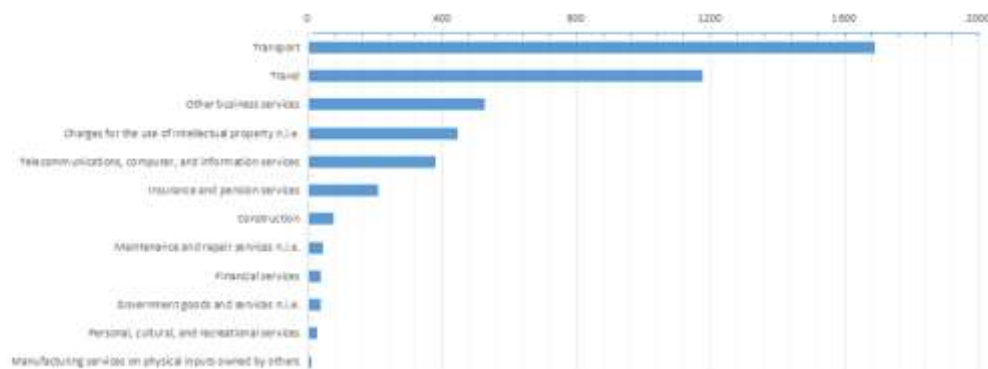


Figure 4 Distribution of imports of service products in China, 2022

As shown in the figure, transport, travel and other business services are the top three in imports, these three categories account for 72.89 percent of China's services imports in 2022.

As for China's service exports, the structure of China's service product exports will change significantly in 2018-2022. Influenced by the epidemic and the trade war between China and the United States, other business services fall from first to second place. Despite China's continued progress in the information technology sector, exports of communication, computer and information services products will fall from second place in 2018 to third place in 2022. Stimulated by China's foreign trade stabilisation policy, China has consolidated its position as a major global export trading nation. Meanwhile, cross-border e-commerce business has continued to break through, and Chinese express service companies have established themselves overseas, which has led to a rise in the share of transport services from third to first place. As shown in Figure 5.

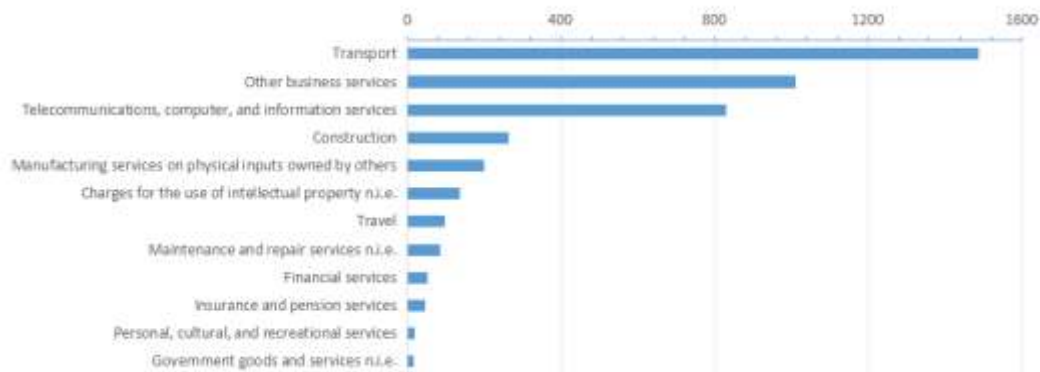


Figure 5 Distribution of China's exports of service products, 2022

As can be seen from the figure, transport, other business services and communication, computer and information services are the top three in terms of export value. Together, these three categories account for 78.45 percent of China's services exports in 2022.

#### 4.2 Current status of development of services trade in Uzbekistan

Uzbekistan's trade in services shows a trend of rapid growth, with the volume of trade in services increasing year on year. According to the International Trade Centre, Uzbekistan's total imports and exports of services will amount to \$12.116 billion in 2022. Of this, total exports of services will amount to \$4.815 billion and total imports of services will amount to \$7.301 billion. The share of total services exports and imports in GDP is 15.07 per cent. As shown in Figure 6.

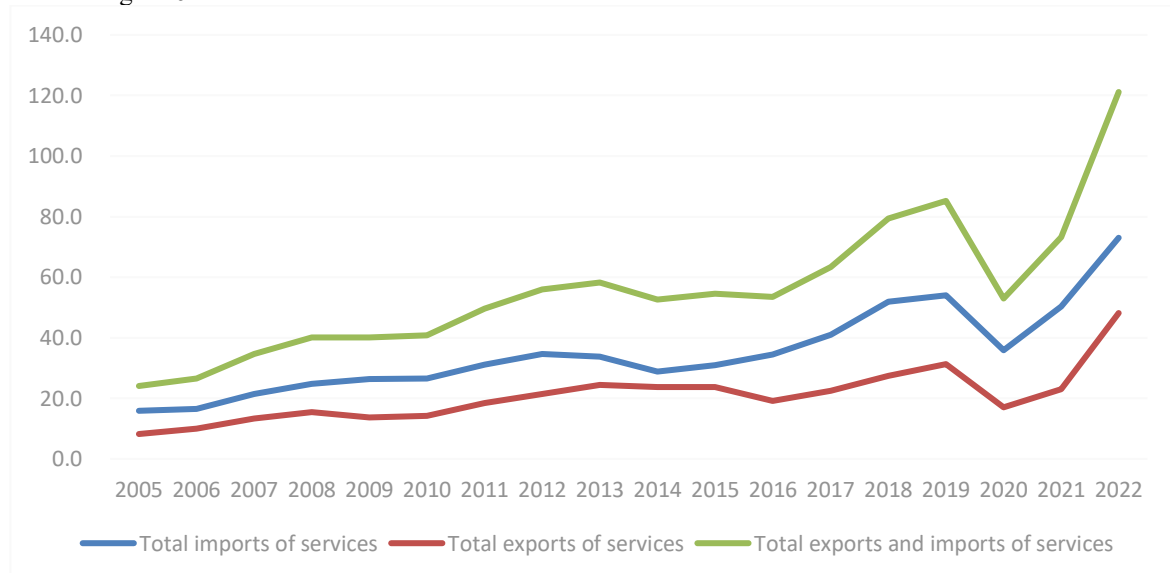
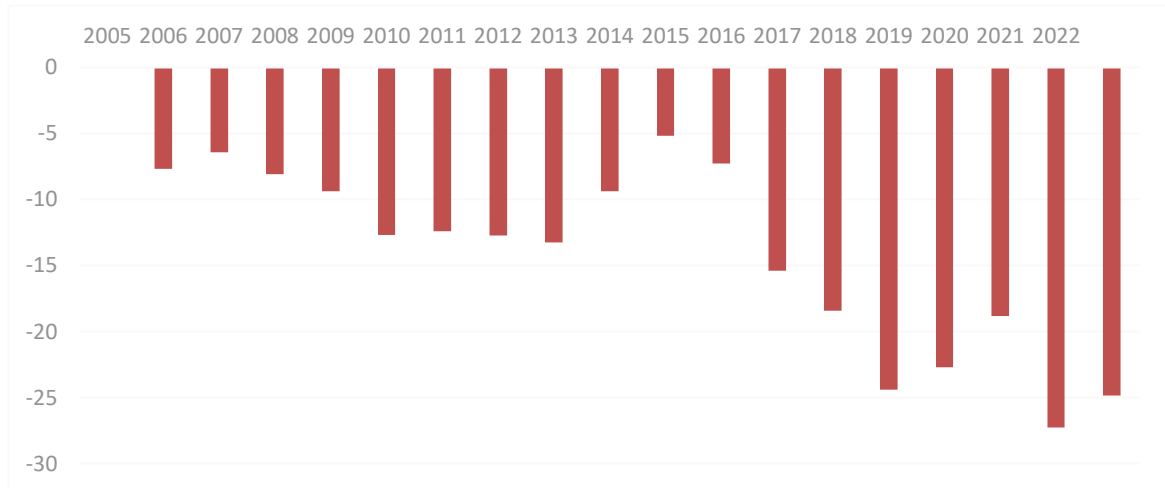


Fig.6. The share of total services exports and imports in GDP

As can be seen from the figure, the average annual growth rate of exports and imports of services in Uzbekistan for the period 2005-2022 reached 9.98%, of which the average annual growth rate of imports of services was 9.39% and the average annual growth rate of exports of services was 10.98%. Despite its relatively small size, it is growing rapidly. Also affected by the epidemic, Uzbekistan's exports and imports of services experienced a sharp decline in 2020, followed by a rapid recovery.

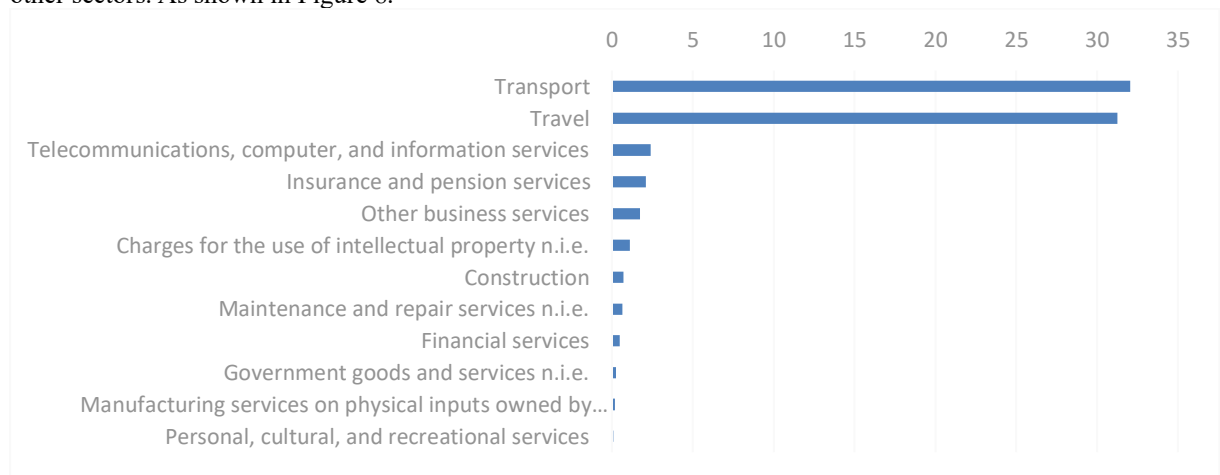
Over the period 2005-2022, Uzbekistan's total trade in services shows a deficit, i.e. imports of services are higher than exports of services. The size of the deficit is also growing. As shown in Figure 7. There is an urgent need to increase the modern scientific and technological content of the services sector, to increase the value-added capacity of the services sector and to improve the competitiveness of the services sector.



**Figure 7 Surplus or deficit of trade in services of Uzbekistan, 2005-2022**

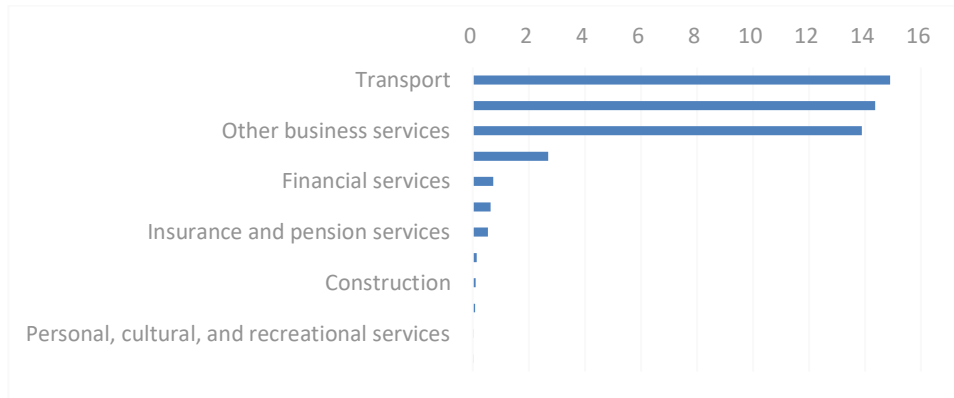
The Government of Uzbekistan has issued a number of documents, including the "Strategy for the Development of the New Uzbekistan for the Period 2022-2026", and has taken a number of measures, including the simplification of investment procedures and the provision of tax exemptions and incentives, to attract foreign companies to set up service businesses in Uzbekistan, as well as stepping up its efforts in the areas of intellectual property rights protection and human resources training, which have effectively improved the quality and competitiveness of the service sector.

Uzbekistan's imports of services are concentrated in transport, travel and information technology services, which account for 89.98% of Uzbekistan's imports of services in 2022. Transport and travel imports are well ahead of other sectors. As shown in Figure 8.



**Figure 8 Distribution of imports of services products in Uzbekistan, 2022**

Uzbekistan's service exports are mainly concentrated in transport, travel and other business services, which are relatively similar in size and account for 89.65% of Uzbekistan's service exports in 2022. As shown in Figure 9.

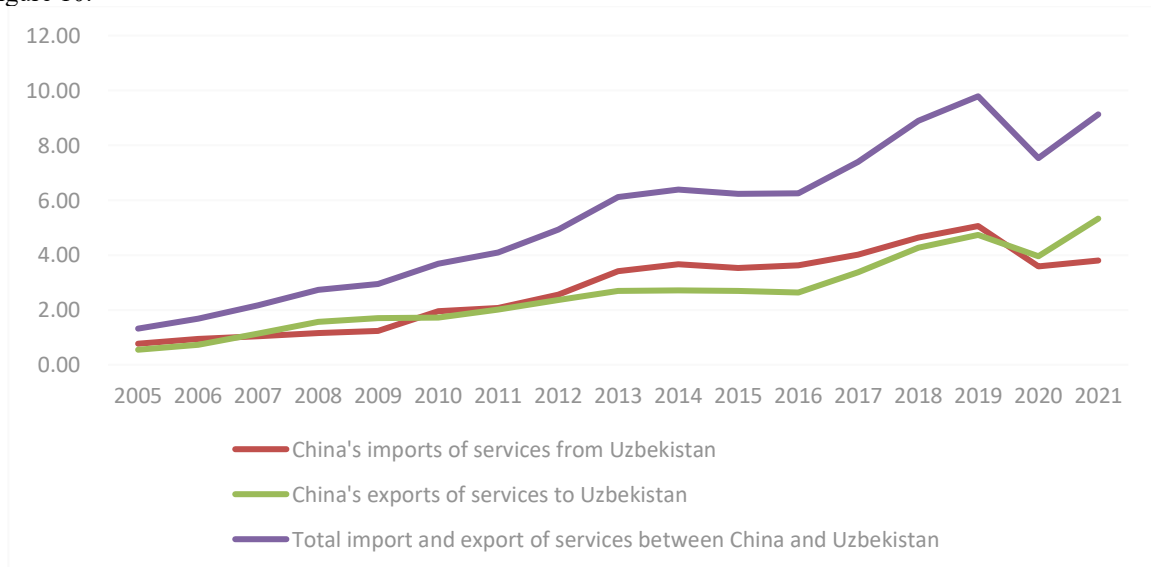


**Figure 9 Distribution of exports of services products in Uzbekistan, 2022**

Tourism is an important services export sector for Uzbekistan, attracting large numbers of international tourists. In order to provide more value-added services, it is also committed to the development of information technology and consultancy services.

#### 4.3 Status of bilateral trade in services between China and Uzbekistan

According to WTO statistics, China's trade in services with Uzbekistan has shown a trend of rapid growth, with the total value of China's trade in services with Uzbekistan increasing from \$132 million in 2005 to \$914 million in 2021, with an average annual growth rate of 12.86 per cent. Among these, China's exports to Uzbekistan will increase from \$55 million in 2005 to \$533 million in 2021, with an average annual growth rate of 15.25 per cent, and China's imports from Uzbekistan will increase from \$77 million in 2005 to \$381 million in 2021, with an average annual growth rate of 10.51 per cent. Both are higher than the average growth rate of Uzbekistan's imports and exports of services, reflecting the good momentum of services trade between Uzbekistan and China. As shown in Figure 10.



**Figure 10 China's exports and imports of services with Uzbekistan, 2005-2021**

China's trade in services with Uzbekistan also shows alternating deficits or surpluses, with China showing deficits in 2005-2006 and 2010-2019, and surpluses in 2007-2009 and 2020-2021. This is shown in Figure 11.



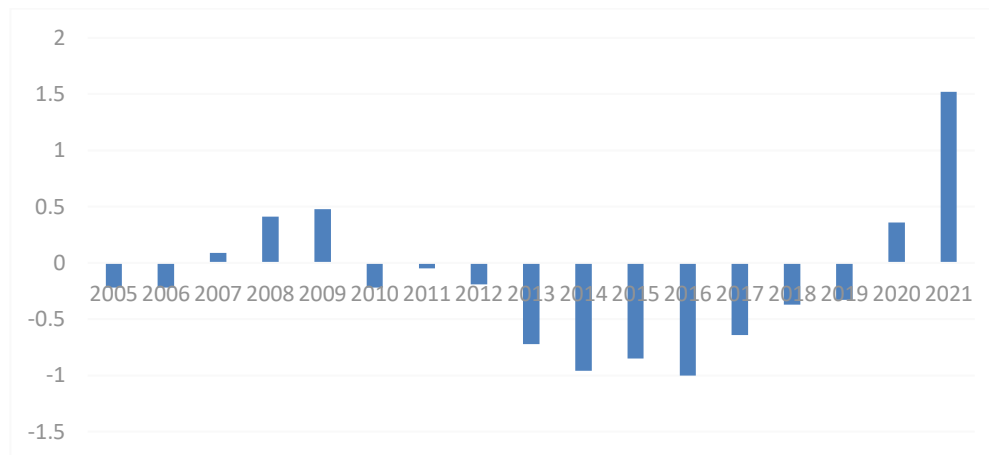


Figure 11 Changes in China's surplus or deficit in trade in services with Uzbekistan, 2005-2021

#### 4.4 Comparison of services trade competitiveness between China and Uzbekistan

By reviewing the relevant literature and drawing on the indicator systems used by most scholars to assess the competitiveness of trade in services exports, four appropriate indicators were selected: The dependence on trade in services, the contribution of trade in services to exports, the index of competitiveness of trade in services and the index of revealed comparative advantage, which are able to illustrate the competitiveness of Uzbekistan's trade in services exports from different perspectives in the years 2005-2021, in order to provide a correct understanding of the competitiveness of Uzbekistan's trade in services and to make a fair and objective assessment of its export competitiveness.

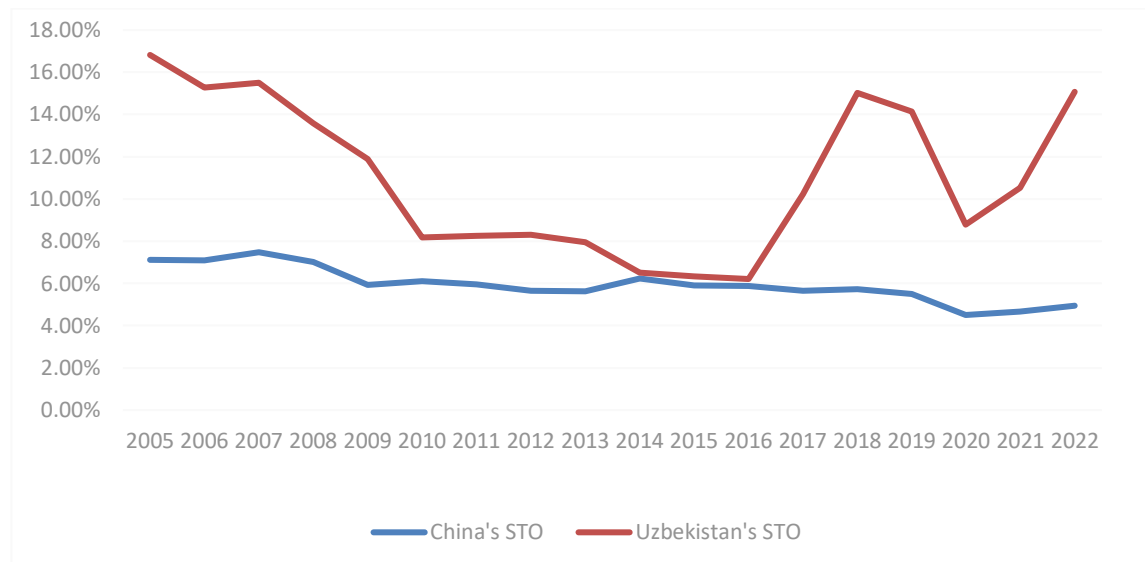
Services dependence refers to the share of the import and export value of services in the GDP of a country or region. Through this indicator, it can reflect the degree of dependence on trade in services in the overall level of economic development of the country or region, and the higher the dependence on trade in services, the more the trade in services contributes to the national economy of the country or region, and the specific calculation formula of dependence on trade in services is as follows:

$$STO = \frac{A_1 + A_2}{GDP} \quad (1)$$

where  $STO$  is the services dependence index,  $A_1$  is the value of the country's or region's exports of services,  $A_2$  is the value of the country's or region's imports of services, and  $GDP$  is the country's or region's gross domestic product.

In this paper, the total amount of services import and export of China and Uzbekistan is from the International Trade Centre, and the GDP data of China and Uzbekistan are from the World Bank, and the dependence of China-Uzbekistan services trade is measured from 2005 to 2022, as shown in the figure 12.





**Figure 12 Changes in the STO of services in China and Uzbekistan, 2005-2022**

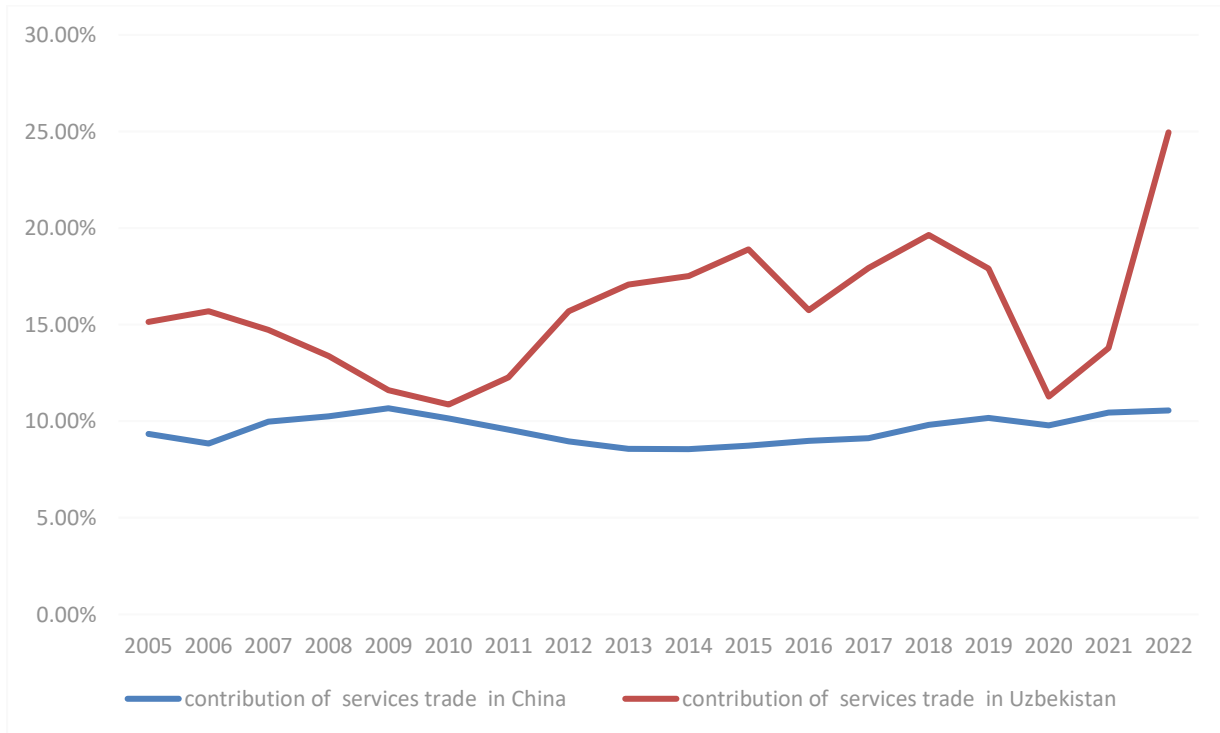
Overall, China's dependence on trade in services is relatively low compared with Uzbekistan, indicating that Uzbekistan's trade in services plays an important role in its economic development and that its services sector is more actively developed. China's dependence on trade in services shows a downward trend between 2005 and 2022, from 7.11% to 4.95%, and the relative importance of trade in services in the national economy has decreased. The reasons for this include the fact that China is building Dual Circulation Development Pattern, and the contribution of domestic trade to the economy is increasing.

Uzbekistan's overall dependence on trade in services is high, with a downward and then upward trend over the period 2005-2022, suggesting that Uzbekistan's relatively well-developed services sector is attracting more domestic and international trade in services.

The contribution ratio of trade in services is the ratio of a country's or region's services exports to the country's or region's total exports, which can reflect to a certain extent the level of development of the country's or region's trade in services exports, and the formula for this indicator is as follows:

$$C_j = \frac{B_j}{B} \quad (2)$$

In the expression,  $C_j$  represents the export contribution rate of industry  $j$ ,  $B_j$  represents the export value of industry  $j$ , and  $B$  represents the total export value of the country or the region, and the larger the value of the indicator, the more it can show that the export of industry  $j$  contributes more to the total export of the country or the region. In this paper, China's total exports come from International Trade centre, and Uzbekistan's total exports come from the country's statistical office, to measure the contribution of China-Uzbekistan services trade exports in 2005-2022, as shown in the figure 13.



**Figure 13 Changes contribution of services traded in China and Uzbekistan, 2005-2022**

From the data, The contribution of services trade in China generally shows a relatively stable trend over the period 2005-2022, and the share of services exports in its total exports has remained basically unchanged, indicating China's continued efforts in trade in services. The relatively low contribution rate of China's trade in services indicates that China's trade in services accounts for a relatively small share of its total exports. This may be due to the structure of China's economy, which is dominated by manufacturing and relatively less dependent on trade in services.

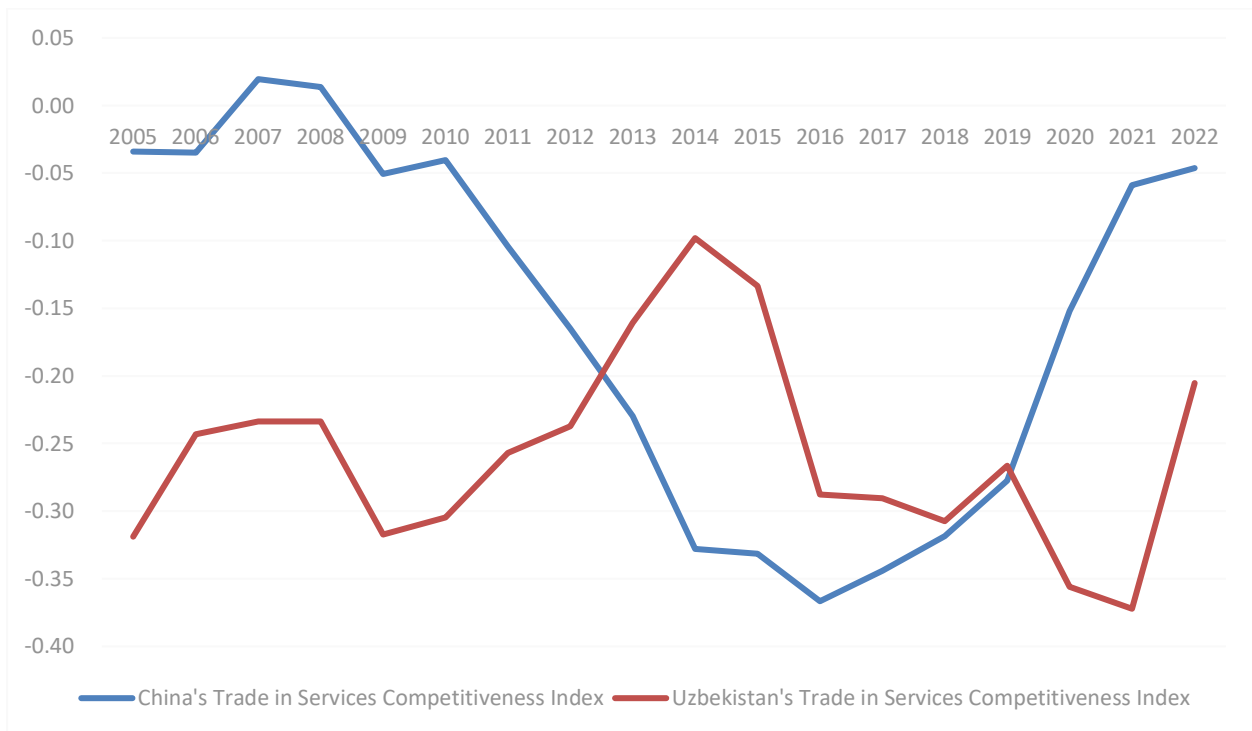
Over the period 2005-2022, The contribution of services trade in Uzbekistan generally shows an increasing trend, with the share of services exports in total exports rising from 15.15% to 24.96%. This indicates a significant increase in Uzbekistan's development and export capacity in services. It is noteworthy that the contribution of Uzbekistan's trade in services began to grow rapidly after 2014, reaching a peak of 24.96 per cent. This reflects the significant policy changes in Uzbekistan's trade in services during this period and the apparent results achieved.

The contribution of services trade in Uzbekistan is consistently higher than that in China, reflecting the different evolution of services trade in the two countries and the growing importance of Uzbekistan's exports of services.

The services trade competitiveness index represents the ratio of a country's or region's export/import trade balance to its total export/import trade, and is calculated using the formula:

$$TC = \frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}} \quad (3)$$

Where: TC represents the index of competitiveness of services trade,  $X_{ij}$  represents the export value of industry j in country i,  $M_{ij}$  represents the import value of industry j in country i. The value of TC is in the range [-1,1], when the TC index is closer to 0, it means that the comparative advantage of the industry is close to the industry average; when the TC index is greater than 0, the closer it is to 1, it indicates that the comparative advantage is stronger; when the TC index is less than 0, the closer it is to -1, it indicates that there is a more obvious comparative disadvantage.



**Figure 14 Changes in the index of competitiveness of services trade in China and Uzbekistan, 2005-2022**

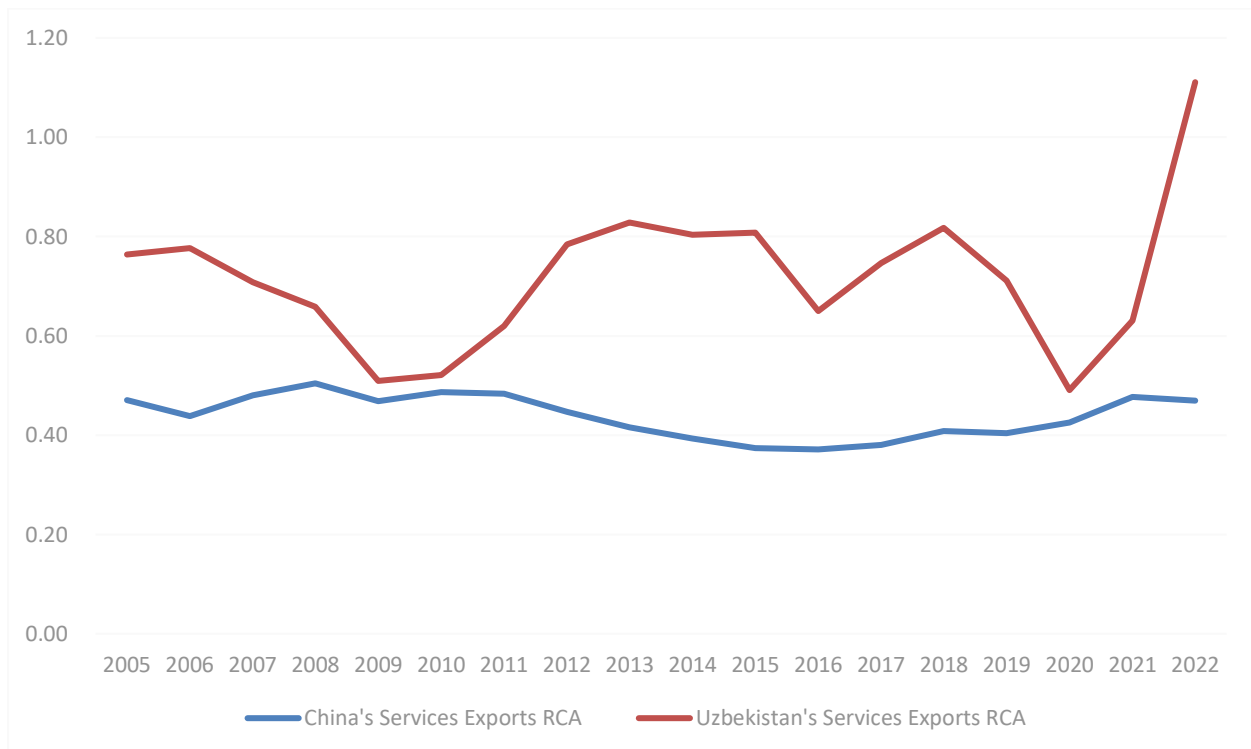
During the period 2005-2022, China's trade in services competitiveness index first declined and then grew, but the overall value is negative, indicating that China's service industry development is relatively backward and it is relatively disadvantaged in international competition in trade in services, and its overall competitiveness is weak.

Over the same period, Uzbekistan's trade in services competitiveness index changed more, but the overall negative value indicates that Uzbekistan's trade in services competitiveness is relatively weak. Compared to China, Uzbekistan's trade in services competitiveness index is lower, and China's trade in services competitiveness is slightly better than that of Uzbekistan.

The index of revealed comparative advantage was proposed by the US economist Balassa in the 1960s to measure the comparative advantage of a country or region in world trade in a particular sector. The index is the ratio of a country's or region's share of exports of a product or service in the region's total exports to the world's share of exports of a product or service in the world's total exports:

$$RCA = \frac{X_{ij}/X_{it}}{X_{wj}/X_{wt}} \quad (4)$$

where  $X_{ij}/X_{it}$  represents the share of country i's exports of product j or services in the country's total exports, and  $X_{wj}/X_{wt}$  represents the share of world exports of product j or services in the world's total exports. In this paper, International Trade centre data are selected and the measurement results are shown in Figure 15.



**Figure 15 Changes of services exports RCA in China and Uzbekistan, 2005-2022**

Over the period 2005-2022, the RCA of China's services exports fluctuates slightly between 0.37 and 0.50, well below the level of 0.8, indicating a very low level of competitiveness in services exports. The RCA of Uzbekistan's services exports fluctuates between 0.49 and 1.11, and the RCA of Uzbekistan's services exports is significantly higher than that of China. In some years, the RCA is above 0.8, indicating that Uzbekistan's competitiveness in services exports is relatively high.

## 5. CONCLUSIONS

Since 2005, trade in services between China and Uzbekistan has maintained a high level of growth, with China's trade in services ranking second in the world. However, we also need to note that China's and Uzbekistan's trade in services as a whole is larger in services exports than in imports, and has been in deficit for a long period of time, which increases the risks of economic operation.

In terms of the structure of services trade, transport, travel, other business services and computer information services account for a relatively high share of China's services trade, while transport and travel are also significantly higher than other sectors in Uzbekistan and play an important role in services trade.

In terms of bilateral trade in services between China and Uzbekistan, the growth rate is significantly higher than the average growth rate of trade in services between the two countries, indicating that the development of trade in services between the two countries has gained momentum. During the period 2005-2022, the two countries alternate between trade deficits, indicating a certain imbalance in trade in services. The reasons for this situation include changes in demand for services, differences in service quality and competitiveness, and changes in policies and market access conditions.

Finally, a comparative analysis of the competitiveness of trade in services between China and Uzbekistan was conducted by measuring the dependence on trade in services, the contribution of trade in services, the index of competitiveness of trade in services and the index of revealed competitive advantage of the two sides. Compared to China, Uzbekistan has a higher dependence on trade in services, a higher contribution of trade in services to exports and a higher index of revealed competitive advantage. China's competitiveness in trade in services is better than that of Uzbekistan.

Based on the above analysis, China and Uzbekistan should strengthen governmental and people-to-people



exchanges, enhance political mutual trust, promote the construction of the Belt and Road, realise the strategic docking between the two countries, improve service trade policies, create a good business environment and deepen service trade cooperation. Taking education and cultural exchanges as a link, they should innovate the mode of education cooperation to provide more human resources support for economic and trade cooperation between the two countries.

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