

Mutual Foreign Trade between China and the Visegrad Group

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Abstract

Foreign trade is very important in today's globalized world. China is currently the exporter number one and the importer number two in the world. The European Union is one of the largest economies in the world. International cooperation between China and EU regions is, therefore, very important. This text focuses on mutual foreign trade between China and the Visegrad Group. Visegrad Group is specialized in the production of whole cars and vehicle parts. There is a difference in origins of products for consumption and origins of products for investments in Visegrad Group. Chinese importers neglect the potential of V4 countries yet. There is necessary to liberalize the mutual foreign trade, cooperation, specialization and technology transfer in the future.

Keywords: Macroeconomic Indicators, Trade Indicators, Foreign Trade

Introduction

This paper seeks solutions to increase trade of goods and services between China and the Visegrad Group. There is a short description of analyzed countries, description of their macroeconomic and trade indicators in this paper. Based on the current state of trade are designed recommendations for the future. The purpose of this paper is to find the possibilities of deeper cooperation between the Visegrad Group and China.

Description of analyzed countries

China

The People's Republic of China (hereinafter referred to as CHN or PRC) is the world's most populous state with a population over 1.3 billion citizens and total area more than 9.5 million square kilometers.

Export commodities are electrical and other machinery and machines (including data processing equipment, computers, broadcasting equipment and integrated circuits), apparel, furniture and textiles (Central Intelligence Agency 2016, Observatory of Economic complexity 2016).

Chinese import commodities are electrical and other machinery (including integrated circuits), oil, crude petroleum and mineral fuels and others like nuclear reactors, soybeans and so on (Central Intelligence Agency 2016, Observatory of Economic complexity 2016).

Visegrad Group

The Visegrad Group (hereinafter referred to as Visegrad or V4) is an alliance of four Central European countries:

- Czechia (hereinafter referred to as CZ or CZE)
- Hungary (hereinafter referred to as HU or HUN)
- Poland (hereinafter referred to as PL or POL)
- Slovakia (hereinafter referred to as SK or SVK)

The population of these countries is 64 million citizens (circa 21 times smaller in comparison to China) and total area 533 thousand square kilometers (circa 18 times smaller than China). So it's similar to one of the Chinese provinces.

Export commodities of Central European region are especially machinery and transport equipment like cars and vehicle parts (Central Intelligence Agency 2016, Observatory of Economic complexity 2016). Some countries are also specialized. Czechia on chemicals like packaged medicaments, Poland on food and rolled tobacco, Hungary on raw material and Slovakia on electrical equipment especially video displays.

Import commodities are quite similar to export commodities: machinery equipment, vehicle parts, cars and crude petroleum (V4), computers (CZ), petroleum gas (HU), electrical and broadcasting equipment (SK) (Central Intelligence Agency 2016, Observatory of Economic complexity 2016).

Macroeconomic indicators of analyzed countries

It is necessary to measure the main economic indicators to understand the overall state of the economy properly. These main indicators are a gross domestic product (current state, growth rate and per capita), unemployment rate and inflation rate.

Table 1: Macroeconomic indicators of analyzed countries

Country	GDP (billion USD ¹ , 2015 est.)	GDP real growth rate, 2015 est.)	GDP per capita (USD, 2015 est.)	Unemployment rate (2015 est.)	Inflation rate (2015 est.)
China	19,390.0	6.9 %	14,100	4.2%	1.4%
V4	1,757.0	N/A	27,500	N/A	N/A
Czechia	332.5	4.2%	31,600	6.5%	0.3%
Poland	1,005.0	3.9%	26,500	10.6%	-0.9%
Hungary	258.4	2.9%	26,200	6.9%	-0.1%
Slovakia	161.0	3.6%	29,700	10.6%	-0.3%

Source: Central Intelligence Agency (2016); Author's calculations

The EU is more advanced economy than China. Also, V4 (as the new EU member states since 2004) have about twice higher GDP per capita than China. However, China is the much larger economy and its growth rate is much higher. Also, the unemployment rate is better in China. Even Chinese inflation rate achieves better values because the threat of deflation reduces the economic growth potential in V4 countries.

Trade indicators of analyzed countries

This paper focuses on foreign trade between China and V4 for this reason this part is devoted to trade indicators of analyzed countries. Trade indicators are export, import, openness index, the balance of trade (current state and share of GDP) and trade to GDP ratio.

¹ Purchasing power parity.

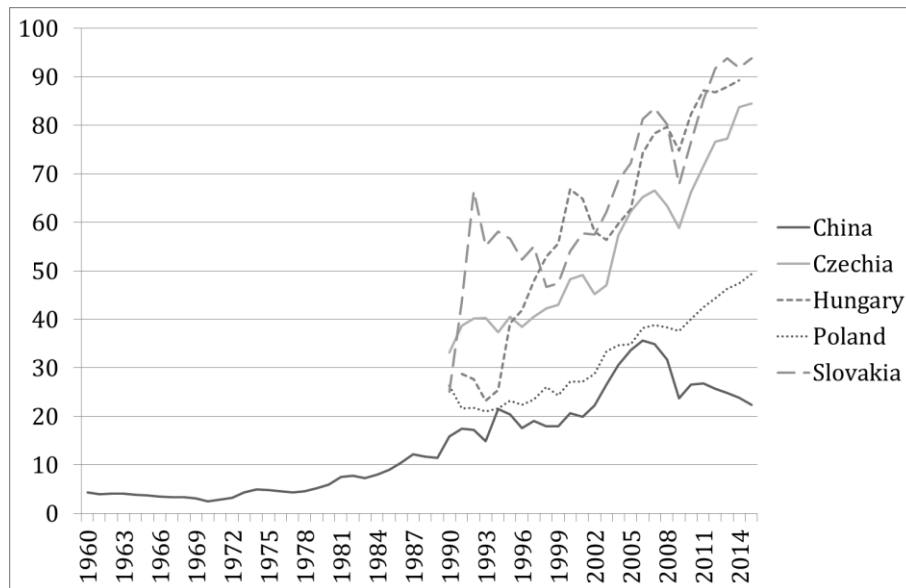
Table 2: Trade indicators of analyzed countries

Country	Export (billion USD, 2015 est.)	Import (billion USD, 2015 est.)	Openness Index ²	Balance of Trade (billion USD)	Balance of Trade (% of GDP)	Trade to GDP Ratio
China	2,270.0	1,596.0	19.9%	674.0	3.5%	46.9
V4	478.0	457.7	53.3%	20.2	1.1%	N/A
Czechia	133.8	124.0	77.5%	9.8	2.9%	152.6
Poland	190.2	187.5	37.6%	2.7	0.3%	91.1
Hungary	97.6	92.9	73.7%	4.7	1.8%	170.7
Slovakia	56.4	53.3	68.1%	3.1	1.9%	182.4

Source: Central Intelligence Agency (2016); World Trade Organization (2016); Author's calculations

According to the information above, V4 is circa twenty times smaller (21 times according to citizens, 18 times according to an area) than China. However, its export and import are larger than expected (export is circa five times smaller and import twelve times smaller). It means countries of V4 are more open economies. This situation is confirmed by openness index.

Fig. 1: Timeline of Export (% of GDP)



Source: Author, Data: World Bank (2016)

Data table of this chart is in appendix 1. There are few facts to see in the chart.

² The openness index is a ratio of total trade (export + import) to the GDP.

1. Countries of V4 have a similar history in the 20th century (Austria-Hungary, two world wars, plan economy, market economy). Also, they have similar export parameters, namely big changes between the late 1980s (plan economy) and the early 1990s (market economy).
 - a. There was a rapid increase of export in Czechoslovakia (Czechia and Slovakia) after the Velvet Revolution in 1990 and 1991.
 - b. There was also a slight decrease of import in Hungary and Poland in from 1990 to 1993.
2. Long-term growth of export in the whole world including China and V4 is caused by permanent globalization.
3. Massive export in the period from 2006 to 2008 and enormous decline in 2009 is caused by “the Great Recession”. The same phenomenon is also typical for the whole world not just for analyzed countries.

Foreign trade within analyzed countries

According to Observatory of Economic Complexity (2016), there is some special product imported and exported between China and V4 more than in the rest of the world. Let's have a look at these commodities.

Export from V4 to China

This part contains a detailed analysis of export from the Visegrad Group to China.

Table 3: Trade indicators of analyzed countries

Exporter and Importer	Export and Import (billion USD, 2014)	Importance for Exporter (% of Export)	Importance for Importer (% of Import)	Commodities
From V4 to China	9.42	1.69%	0.61%	Cars Vehicle parts Refined copper
From Czechia to China	2.26	1.4%	0.15%	Vehicle parts Liquid pumps El. accessories
From Poland to China	2.44	1.2%	0.16%	Refined copper Vehicle parts Furniture
From Hungary to China	2.52	2.4%	0.16%	Cars Engines Locomotive parts
From Slovakia to China	2.20	2.8%	0.14%	Cars Machinery Air pumps

Source: Observatory of Economic Complexity (2016); Author's calculations

Let's have a look at the differences in Chinese total import and Chinese import from V4. China imports cars, vehicle parts, and refined copper from V4 countries and other machinery, fossil fuels, and others from the rest of the world. As we can see, nothing is similar. It could have two different reasons:

- The little importance of V4 countries for Chinese importers.
- High specialization of V4 countries.

There are also some differences in Visegrad total export and Visegrad export to China. The main Central European product – cars and vehicle parts – is exported to China and the rest of the world as well. Little differences are in other products: medicaments vs. water pumps (CZ), food vs. copper (PL), video displays vs. air pump (SK). However, these secondary differences are not important. This means:

- High specialization of V4 countries in cars and vehicle parts.
- Specialization of Hungary and Slovakia in whole cars.
- Specialization of Czechia and Poland in vehicle parts.

Export from China to V4

This part contains a complete analysis of export from China to the Visegrad Group.

Table 4: Trade indicators of analyzed countries

Exporter and Importer	Export and Import (billion USD, 2014)	Importance for Exporter (% of Export)	Importance for Importer (% of Import)	Commodities
From China to V4	50.83	2.15	9.03	Broadcasting eq. Broadcasting acc. Computers
From China to Czechia	17.0	0.72	11.0	Computers Office machines Broadcasting eq.
From China to Poland	22.5	0.95	10.0	Computers Broadcasting eq. Broadcasting acc.
From China to Hungary	5.14	0.22	5.1	Telephones Broadcasting eq. Broadcasting acc.
From China to Slovakia	6.19	0.26	7.9	Broadcasting eq. Broadcasting acc. Computers

Source: Observatory of Economic Complexity (2016); Author's calculations

This part of text analyzes the differences in V4 total import and V4 import from China. V4 needs machines, vehicle parts and crude petroleum for its production of cars and complex vehicle parts (it is imported from the rest of the world). Visegrad consumption (broadcasting technology, computers, telephones) are imported mainly from China. The conclusion is:

- V4 consumption is covered by domestic production and imports from China.
- V4 investments are covered by domestic production imports from the rest of the world.

There are also differences in Chinese total export and Chinese export to V4. China produces and exports machines, information technology, and textiles to the world and broadcasting equipment and accessories and information technology to V4. It means:

- V4 imports from China mainly stuff for consumption (not all machines and IT, just machines and IT for free time).

Potential development of foreign trade of analyzed countries

According to the previous analysis, there are some recommendations for the progress of Sino-Visegrad trade. Application of these proposals for action could increase the effectiveness and the global competitiveness of analyzed regions. Development of foreign trade is depended on private sector and public sector as well. Measurement of private sector competitiveness and evaluation of public sector program efficiency is mentioned in many publications (Viturka 2007, Ochraňa et al. 2007, Ochraňa and Nekola 2009, Ochraňa and Půček 2011).

Recommendations

Liberalization of mutual foreign trade

Liberalization of cross-border movement of people, goods, and services could help increase the competitiveness of imported goods (Hong 2012).

Unfortunately, there are a number of legislative (prohibitive) measures by both sides. It means the government of China, the V4 governments, and EU leadership. Governments might consider, for example, some kind of Euro-Asian Free trade area or support of the One Belt, One Road project.

Cooperation and specialization

Due to historical developments, it is essential for deeper cooperation and international specialization. This will positively affect the efficiency level probably (Vysoká 2010). However, not only productivity is important, there is also necessary to follow the rules of corporate social responsibility (Tokarčíková 2011).

V4 countries are already specialized to cars and vehicle parts production. A huge opportunity is to use this potential in the Chinese market.

Cooperation and technology transfer

Creating of international conglomerates for transferring of technology could help promote the research development. Managers should not forget the impact of working conditions on the output of the production process (Hrubá and Švejďová 2011).

The possibility is the creation of the Visegrad-Chinese companies, which will have an economic interest in such technology transfer.

Limitations and risks

Of course, there are risks and limitations in the implementation of these recommendations. The main limitation lies in the fact that international trade is carried out by numerous independent entities. The influence can be provided mainly by indirect actions and motivations. However, it is still possible.

Conclusion

International trade is more affected by financial crisis and economic crisis than other parts of the four-sector economy (consumption, investment, government spending). Sino-Visegrad mutual foreign trade has some specifics:

1. **Export from V4 to China:** V4 countries are highly specialized in whole car production (Hungary and Slovakia) and vehicle parts production (Czechia and Poland).
2. **Export from China to V4:** V4 consumption is covered by domestic production and imports from China. V4 investments are covered by domestic production imports from the rest of the world.
3. **Comparison of export from V4 to China and export from China to V4:** Chinese importers neglect the potential of V4 countries yet.

In the past, there were some changes in V4 export policies caused by political reasons and by changes in the economy (transformation from plan system to market system). In the future, there will be possibilities for deeper cooperation. It will be necessary to follow current globalization trends. Globalization means, in this case, greater connectivity of economies and more trade between them. In foreign trade, it means especially liberalization of mutual foreign trade, cooperation, specialization and technology transfer.

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Appendix

App. 1: Timeline of Export (% of GDP)

	China	Czechia	Hungary	Poland	Slovakia
1990	15.90366	33.20981	N/A	26.30846	25.03167
1991	17.47893	38.76288	28.7628	21.60121	43.70764
1992	17.27593	40.20641	27.60968	21.76421	66.47422
1993	14.87658	40.2864	23.18756	21.06431	55.13739
1994	21.50616	37.42116	25.39613	21.71112	58.15444
1995	20.36944	40.56148	39.18139	23.29951	56.68491
1996	17.5716	38.43774	41.89898	22.40459	52.28678
1997	19.08699	40.57362	47.93901	23.50889	55.06735
1998	17.93466	42.28342	52.92875	26.09322	46.65717
1999	17.91796	43.0185	55.59998	24.29575	47.47853
2000	20.68066	48.32966	66.8103	27.21293	54.06572
2001	19.97308	49.13565	64.87457	27.22676	57.79478
2002	22.27062	45.24241	58.09572	28.75822	57.48239
2003	26.57197	47.0617	56.4241	33.3913	62.19285
2004	30.55314	57.43016	59.74382	34.64164	68.71248
2005	33.70065	62.31478	62.79331	34.92439	72.28141
2006	35.65157	65.29163	74.30538	38.20039	81.2658
2007	34.93292	66.55278	78.32867	38.82419	83.50006
2008	31.69515	63.36448	79.693	38.31837	80.24342
2009	23.73344	58.81272	74.82264	37.57616	67.82594
2010	26.53255	66.17671	82.3007	40.03232	76.5507
2011	26.77764	71.61544	87.2262	42.53966	85.26876
2012	25.70524	76.63401	86.82261	44.42244	91.78804
2013	24.8061	77.26725	87.95944	46.30284	93.84019
2014	23.91723	83.81754	89.25425	47.45694	91.85315
2015	22.37405	84.48578	N/A	49.36179	93.79512

Source: World Bank (2016)

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