

Renáta MADZINOVÁ

Vysoká škola medzinárodného podnikania ISM Slovakia v Prešove

The analysis of import and export relations

Introduction

Globalization is accompanied by the deepening international division of labour and is associated with countries specializing in production of selected goods or their components. Specialization of production gives rise to corporate multinationals moving goods and services from country to country in order to take advantage of the host country. In international trade, then the movements of goods and services between countries are not the net trade, but it is more or less an in-house trade in goods and services within the corporation.

Globalization, international division of labour and specialization are the reasons for rising global importance and role of international trade. World exports increased between 1948 and 2009 the amount of 59 billion USD to 12 178 billion USD, which is more than 206-fold increase. The similar situation is in import. In 1948, all countries of the world imported goods and services worth 62 billion. USD in 2009 this amount was increased to 200 times the amount of 12 421 billion USD. The largest increase in international trade compared to 1948 was recorded at the beginning of the 21st century. While the 1993 increase in trade compared to 1948 rose about 60 times, a decade later, the increase in world trade was more than 120 times of the trade of 1948. The increase in trade was not only due to increased volume of buying and selling goods and services, but also by the increased value of traded goods and services, as well as changes in the commodity structure of the trade. The world trade coupled at the end of 20th and the early 21st century due to increased globalization connected with mergers and acquisitions, as well as the establishment of multinational companies and mutual integration of economies.

Despite the increase in exports and imports, many countries have tended to create a negative trade balance. The value of exports lower than the import value has had a negative impact on national GDP, but also on the need of a country to

pay for imported goods and services abroad. It concerns the financial cost of economic entities of the country, which could be used for purposes other than consumption, and could generate future income.

Table 1. Balance of trade in selected countries in the years 2001 to 2012 in million €

	2001	2002	2003	2004	2005	2006	2007	2008
CR	-1726,3	-1667,8	-1846,2	60	3180,1	3893	6331,5	6734,6
HU	-607,8	-1305,5	-2839,3	-2956,5	-1956,2	-998,2	1150,1	564,9
PL	-7780	-7259,3	-5156,6	-4801,2	-1811,6	-4615,7	-8938,1	-14417
SR	-1905,8	-1890,6	-563,7	-944,9	-1795,5	-1795,3	-605,65	-1534,8
EU27	73106,1	147747,3	123197,5	127887,5	77516,7	48450,1	73089,5	39747,2
USA	-414247,4	-451776,6	-445632,9	-497387,2	-580901,9	-612695,2	-520977,7	-483002,5
JP	29206,9	54310,5	60895,6	71600,7	50829,4	43488	53534,3	4825,2

	2009	2010	2011	2012
CR	76222,2	6915,3	-49,2	8933,1
HU	4844,5	7215,7	8127,8	9539,8
PL	233,2	-2752,9	-6422,9	-5999,5
SR	-278,6	-671,9	-322,2	96
EU27	117586,5	105506	134214	196920,4
USA	-276957,2	-389525,1	-459625,9	-49774,2
JP	11021,2	47251,9	52903,3	-48795,6

Note: 2011 and 2012, according to Eurostat as estimated values

Source: Eurostat, own arrangements.

Table 1 displays the trade balance of selected countries of V4, the EU 27, U.S. and Japan. Due to its cultural and historical traditions and application of economic policy Japan has tended to maintain a positive balance of trade (11021,2 in 2009 and 71600,7 in 2004). At the same time, Japan is one of the biggest exporters of goods with high added value, which is also reflected in the trade balance. On the other hand, the U.S. has had the highest trade deficit among the selected countries (-612695,2 in 2006 and -276957,2 in 2009).

For all countries assessed under the Customs Tariff, the most traded commodity is the group designated as goods SITC 7, which are machinery and transport equipment. However compared with other countries, export of products in Japan in SITC 7 group is almost double as the same goods imported into the country. For the V4 countries, imported goods into the country are almost at the same level as the export of these products from the country. Countries V4 reported zero or negative trade balance for the group of goods included in the SITC 7, while Japan has achieved a high surplus. In a situation similar to the V4

countries are the U.S. and they reported in the SITC 7 group only a slight excess of export over import.

Figure 1 shows the comparison of Japanese and Slovak exports and imports of goods in group SITC 7th. The situation in other V4 countries is similar to the situation in the SR.



Figure 1. Imports and exports of goods groups SITC 7 in Japan and SR

Source: own processing.

Although each country of EU-27 shows different figures in the trade balance, the whole group has had a positive trade balance in the long term. Examples of different levels of trade are the V4 countries. The Czech Republic and

Hungary changed their trade balance from minus values to positive values, but the Slovak Republic and Poland show a still higher value of import than export.

International integration of economies, globalization and interdependency are associated with rising nationalism and efforts to find domestic specialization on the world market. In counterpoint to globalization, M. Svatos indicates deepening regionalism [3]. Regionalism is of great importance for the economy, which importance in the global market is small or negligible. Creating different groups is important for geographically small economies, but also for the economically less developed countries or for countries with the same production. Businesses find out on the market not only their position against competitors, but they look for and acquire new business partners for short term or long-term cooperation. Small economies are linked to the particular geographical proximity in order to higher market and bargaining power in international trade.

The paper deals with the evaluation of selected V4 countries through selected indicators of foreign trade. Values of selected indicators are assessed not only in time but in space and compared with indicators for the European Union as a whole and the biggest competitors of EU 27 – U.S. and Japan. *Based on the analysis and comparison of countries the aim is to determine the contribution of V4 competitiveness in foreign and international trade.*

1. Methodology

The Slovak Republic is a member of several international and regional groupings. The SR is geographically closest to the neighboring countries – Poland (PL), Czech Republic (CR), Austria, Hungary (HU) and Ukraine. It belongs to regional V4 countries along with the PL, CR, and HU. Until 1989, all V4 countries were in the Eastern bloc of centrally managed economies. International trade and division of labour among these countries focused on Eastern Bloc and economic grouping of the Council for Mutual Economic Assistance. After 1989, becoming independent from the Eastern bloc countries, the V4 countries jointly sought to join the European Union (EU), which they succeeded in 2004. Foreign Trade of the V4 countries changed after 1989. Countries began to focus mainly on the western EU markets. This approach is reflected in the quality, quantity of trade and the commodity structure of foreign trade. Largest trading partner for the V4 countries become EU 27 countries, to which V4 exported almost 80% of their export, and from where they import more than half of all import. Substantially lower share of export and import of the V4 countries comes from the Russian Federation, USA, Japan and China.

Given the scale of contribution, but also on data obtained from the EU statistical office, analysis and comparison of selected countries is focused on the years 2000–2010. In these years, the V4 countries entered the EU and the end of the

reporting period economic crisis is reflected in their economy and its impacts are still visible. The comparison is focused on the V4 countries, the economic and political grouping of 27 countries of the EU and its biggest trading partners – Japan and the USA.

Foreign trade and international trade, as well as other economic variables are subject to review. To evaluate the involvement of a country in international trade there are used more standardized indicators. The most analysis of foreign trade of the country begins with the assessment of the magnitude of export, import and trade balance. Comparison of the economic units can be based on absolute values of export, import and trade balance. Given the size of the country, its economic maturity, the availability of scarce resources and many other factors, it is necessary to supplement the indicators by relative indicators. In addition to absolute indicators there are often used ratio indicators. To assess the country's foreign trade, there is used a combination of several indicators, which complement each other. We evaluate the country's *share on total export/import* in regional grouping or in the world. Country's share on international trade highlights the importance of the country for the international division of labour and specialization.

The most commonly used ratio, which reflects the degree of involvement of the country to foreign trade is *openness of the economy*. It is expressed by several indicators. Typically, it is the export/import ratio to other macroeconomic measure. The most commonly used indicator is GDP. In addition to GDP, we calculate openness as a ratio to total production, created and used resources [4]. The indicator reflecting the openness of the economy shows, how many percent of the export/import are in GDP. The importance of this indicator is particularly in relative of the geographic size of the country and its foreign trade to GDP.

In pursuing the country's foreign trade, it is not only important to know the *degree of openness of the country*. Equally important variable to monitor is TRC, which expresses the degree of coverage of import by export. The indicator shows how many percent of export is covered by import. If import exceeds export, the value of the indicator is less than 100% and vice versa. Value of the indicator below 100% can occur even if the imported products are cost-consuming, or have a higher added value. Therefore, it is not only important to pursue proportional variable, but also commodity and price composition of import and export.

The assessment of country's export and import demands is also possible by using an indicator *ratio of trade deficit*. "The level of trade deficit (RTD) expresses the competitiveness as a ratio of the deficit to GDP; $RTD = (TD/GDP) * 100$, where TD is the trade deficit [1]". Negative value of this indicator indicates that the value of import into the country is higher than value of export from the country. The value of RTD then expresses how much of GDP would be needed to cover the deficit in trade balance. The lower the value, the higher is the competitiveness of the country. Conversely, a positive value indicates how

many times the trade balance is in the GDP. Although the value of this variable may be partially distorted due to the price level of imported and exported products and the manner of calculating GDP, RTD can serve as indicators of a country's competitiveness in the international market.

For the evaluation of foreign trade of the country and its competitiveness on the international market, it is also possible to use other indicators. There belong import intensity and export performance of countries, but also indicators of the type of comparative advantage. Especially due to length of the contribution, we have been limited to examine foreign trade of the country on the basis of four indicators described above.

2. Country's share on world export/import

The world's largest importer and exporter is a group of EU countries.

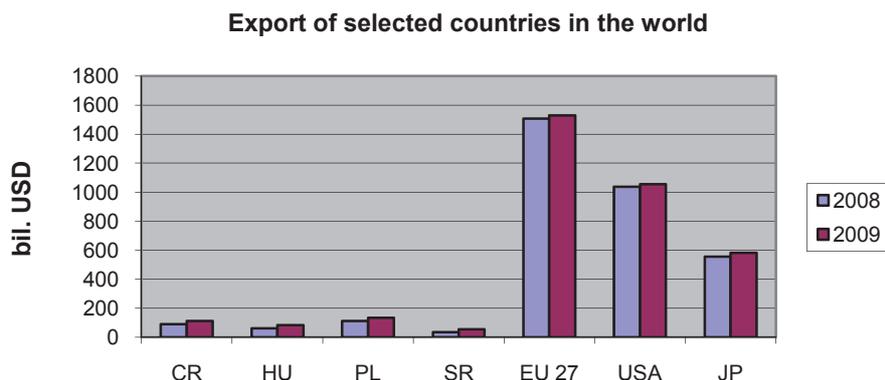


Figure 2. Exports of selected countries in the world between 2008 and 2009 billion USD

Source: own processing on the basis of WTO.

The EU 27, in 2009, contributed by 16,2% to the global export and its share in world import was 17,4%. Second largest exporter is China. Its share on world export in 2009 was 12,7%. Third largest exporter is the U.S. with share on world export of 11,2%. Another exporter – Japan – had the world share of 6,2%. The share of other countries is under 4%. With the exception of Japan, all countries or groups are regarded as geographically large. Therefore, their share on world export is high. For a geographically small country its share in world trade is small or negligible. The same situation is found in those countries that do not reach global consumers with their products. To increase the share of a country in global trade is to find the country's comparative advantage and concentrate all its energies to its development.

On the import side, following the EU 27 the USA are the second largest importer with 16,7%, followed by China with 10,5% share. Together they participate in the global import by more than half the value.

Japan is involved in global import by 5,7%. As for import, there is a share of other countries under 4%. The availability of resources and their price demand are reflected in import. Countries usually import such products, which are difficult to produce, due to country's lack of resources or expensiveness. To balance import the products should be provided for export.

Currently, the EU consists of 27 states. If we do not consider the EU as a whole and we evaluate each EU country separately, then the ranking of countries in the import and export changes. The major exporters are China (9,6%), Germany (9,0%), USA (8,5%) and Japan (4,6%). The biggest importers are the U.S. (12,7%), China (7,9%), Germany (7,4%) and France with Japan (4,4%).

Among the V4, the world's largest exporter is Poland in the 27th place (1,1%), the Czech Republic in the 32nd place (0,9%), Hungary (0,7%) in the 35th place and the Slovak Republic with 0,4% in the 41st place. The situation is similar import. Poland is in the 20th place (1,2%), the 29th is the Czech Republic with a share of 0,8%, the 32nd is Hungary (0,6%) and the SR is in the 41st place with a share of 0,4% in the global import.

Although Poland has a high share of global trade, its trade size, in comparison with economic groupings (e.g. EU) or the larger countries, is negligible. If we count the value of imported/exported products throughout the V4, then just the regionalization will be positive. The proportion of all V4 countries on export and import, despite the grouping is still lower than that of Japan, but the V4 countries would become one of the first 10 world exporters and importers.

World Economic Forum (WTO) publishes regular reports on export and import of various countries and economic groupings. For the originated economic units is typical in trade that the largest part of the business currently focuses on the region forming the group. For economic grouping of countries then, it is convenient to transact with countries which have limited or completely eliminated tariff and non-tariff barriers. Also, geographical proximity to countries in the grouping is an equal incentive for cooperation in the international business.

Table 2. Proportion of regional trade flows as a % share of the total export trade in 2009

Destination	Destination							
	North America	South and Central America	Europe	CIS	Africa	Middle East	Asia	World
World	16,6	3,6	41,9	2,6	3,2	4,2	26,3	100,0
North America	48,0	8,0	18,2	0,6	1,8	3,1	20,2	100,0
South and Central Amerika	25,0	26,1	19,6	1,3	2,8	2,5	20,8	100,0

Table 2. Proportion of regional trade flows... (cont.)

Destination	Destination							
	North America	South and Central America	Europe	CIS	Africa	Middle East	Asia	World
Europe	7,3	1,5	72,2	2,9	3,2	3,1	8,5	100,0
CIS	5,2	1,1	52,9	19,2	1,6	3,2	13,9	100,0
Africa	17,1	2,4	38,8	0,3	11,7	3,0	22,2	100,0
Middle East	8,7	0,7	11,0	0,5	4,9	15,5	51,8	100,0
Asia	17,5	2,7	17,9	1,6	2,8	4,6	51,6	100,0

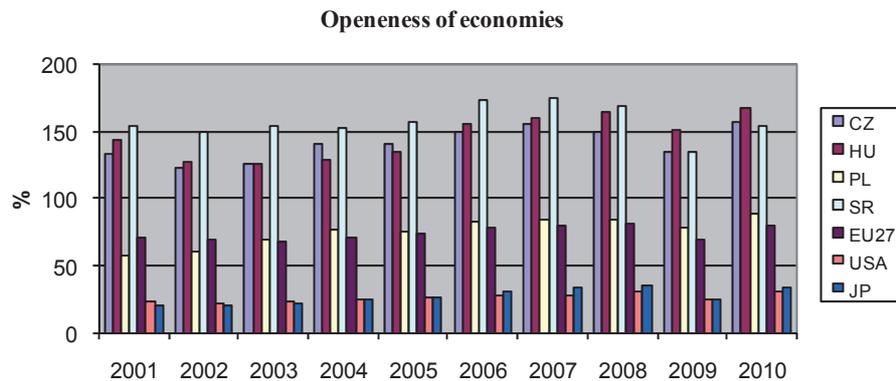
Note: CIS – Commonwealth of Independent States

Source: World Trade Organization.

Commodity flows in export are reflected in this table. With the exception of the Middle East, the largest percentage of export is made between countries or economic groupings. This confirms that the countries are linked to larger economic units, not only in order to obtain a stronger commercial position in the global market but also to their mutual trade and the deepening division of labour. Then the division of labour is more concentrated on clusters of countries forming a common group than on the countries outside this group.

3. Openness of the economy

In addition to the absolute value of the export/import it is also important for the country to monitor its openness. When expressing the openness of the economy as a proportion of import/export to GDP, then Slovakia is among the most open economies. Its openness is almost 130%. The graph captures the share of exports and imports to GDP.

**Figure 3.** Openness of selected economies

Source: Eurostat, own arrangements.

A geographically large country has a sufficiently large market to sell their products mainly to local inhabitants. Likewise a big country is self-sufficient in raw materials. But small countries join together into large units to remove their handicap of the “smallness”. Geographic clusters behave in international markets as a big country. They trade mostly among themselves, their market is a market with large numbers of inhabitants, as well consumers. The possibility of obtaining raw materials increases significantly, together with opportunities to move production to areas that are for the trader most convenient.

The most open economy is one of The Slovak Republic, which is geographically the smallest one among the rated economies. SR needs many resources but also goods and services to be imported. On the other hand, production of the country needs a sufficiently large market and many consumers, what the domestic market cannot provide. Thus, the export of the country is high.

With the exception of the years 2009 and 2010, the second place in the openness of the economy belongs to CR and HU. These countries compared with the SR have substantially larger markets, though the size of imports and exports to produced GDP is high. Both countries are faced in a milder form with the same problems in foreign trade as the SR does. Domestic consumption (production and final) is difficult for imported products and thus the country is forced to export production to obtain sufficient funds to cover import. It also obliges countries to increase the competitiveness of their products.

Among the less open economies include PL but also an economic integration of EU 27. Their openness is at 60 to 80%. This shows the sufficiency of the country and the integration.

The least open economies are the U.S. and Japan. The share of export and import to created GDP is below 30%.

Countries that have the largest percentage share of the global trade are often among the economically developed countries that produce high GDP. Economically less developed countries whose GDP is not high try to bring the total foreign trade closer to the economically developed countries and therefore their trade often exceeds GDP produced at home. An example is the trinity of the V4 countries. The exception is Poland, which can consume a high volume production on its own market.

The export/import coverage ratio

An incentive for companies to start international business is often a need to expand their production because the domestic markets are not sufficient for them. This applies both to low-cost production and for production, and, subsequent sale of those goods and services that have high added value.

On the other hand, consumer demand for products from abroad may be motivated by different reasons. These include the lack of most goods and services on the domestic market, low quality of domestic production, expansion of con-

sumed products. Enterprises import materials from abroad if the country is poor in them, as well as, final products and products that are part of the goods and services produced domestically.

Value of imported and exported production is captured in the trade balance, which is part of the country's balance of payments. In the case the total amount of exported goods and services is more than 1 (or 100%), the country has a positive trade balance. Otherwise, if, for example, import is financially demanding, or if the country imports more than it exports, the country head towards a foreign debt. Then the country is obliged to pay the resulting debt from its reserves or loans, thus indebtedness deepens. For economy it is, therefore, the most optimal situation in which the value of imports and exports equal.

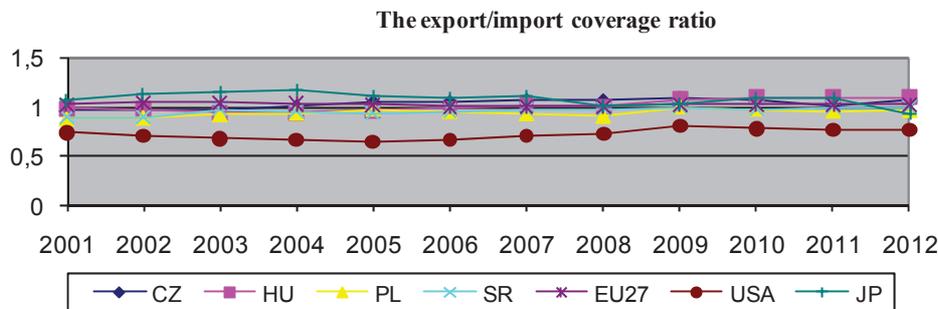


Figure 4. The export/import coverage ratio in the selected economies in the years 2001–2012

Note: Data for the years 2011–2012 are estimated figures of Eurostat

Source: Eurostat, own arrangements.

A country with the high export/import ratio is Japan. Export of goods from the country with the exception of two years (2008 and forecasts for the year 2012) is above the value 1. This situation is set by both the conservative management of Japan and by the commodity composition of export and import. Almost all the V4 countries have been trying for the balance of import and export, their values in particular, in recent years, have been climbing to the value of 1 or very close to it. The exception is PL, which import exceeds export and, although, the situation changed in 2009, Eurostat forecasts for 2011 and 2012 are slightly below the equilibrium value. Also, the whole EU-27 tends to maintain equilibrium or slight overflow of the indicator. An exception among the analysed countries forms the U.S., whose import into the country has been covering below 80% in the long term. Again, this situation is given by commodity structure of U.S. foreign trade.

While for the group of goods of group SITC 7, as well as, for the groups SITC 6 and 8, the situation is assessed almost the same in all countries, for the

U.S. is specific situation for the commodity group of products classified in SITC 3 (mineral fuels, lubricants and related materials). The value of imported goods is significantly higher than the value of export production, which is reflected in the negative trade balance of that component.

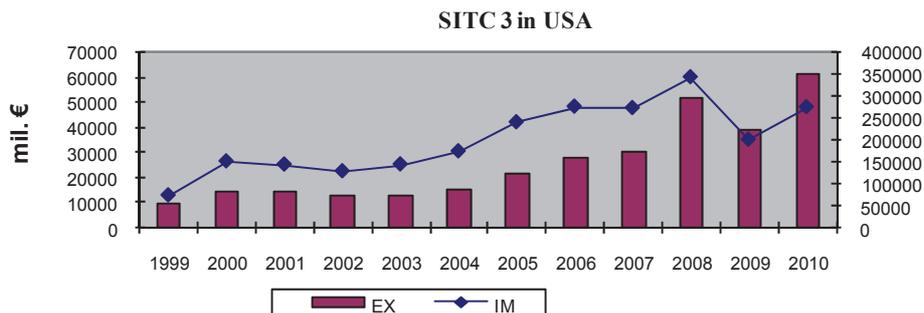


Figure 4: Export and import of goods SITC 3 in the USA in million € in the years 1999–2010

Source: Eurostat, own arrangements.

4. Ratio of trade deficit

Currently there is no need to address the question of whether competition applies only to businesses or includes also countries as competing entities. In international trade competitiveness of countries is manifested on several levels. Countries with developing economies and a lack of own free capital have been trying to create such a business environment to make as many foreign investors who bring with them not only sufficient available funds, but also new technologies and jobs penetrate into the country. Economically developed countries have been looking not only for cheap sources for the production of their goods but also sufficiently large sales market in which they could realize their production. Many businesses opt for a foreign destination on the basis of its economic performance and debt. Especially in times of imminent default country entrepreneurs pay attention to which countries place their foreign investment in any form.

The last indicator discussed in the contribution is share of the trade deficit to GDP produced by country.

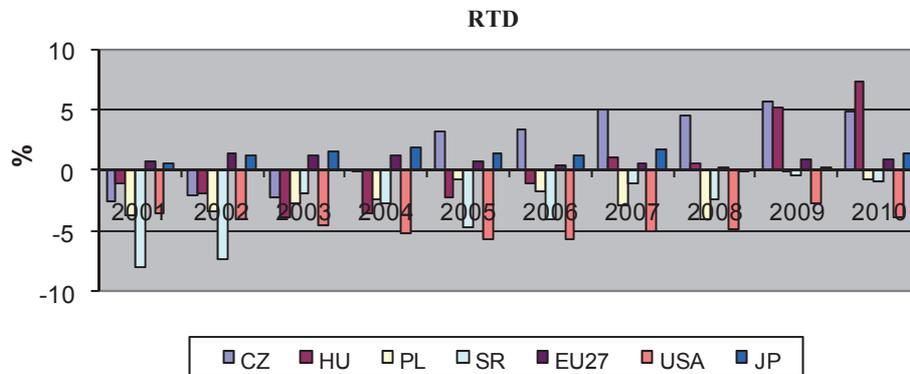


Figure 5. RTD in selected countries in the years 2001 to 2010

Source: Eurostat, own arrangements.

While at the beginning of the period almost all countries except Japan and the EU-27 economic integration were deficit and RTD amounted to a negative value, over ten years the situation has changed dramatically. Besides Japan and the EU 27, since 2004 CZ has been in positive values and its share of trade balance to GDP continues to grow. Similarly, a high proportion of trade balance to GDP has recently been reached by HU. If we omit the U.S., which over the entire period, reached high negative values, an interesting situation is in the SR. In the years 2001 and 2002 SR amounted to highest negative values in the trade deficit to GDP. Since 2003 the situation has improved. It is mainly a consequence of significantly increasing GDP but also of reduction of the trade deficit. Among V4 countries only PL has negative RTD, which is the result of large trade deficits.

Conclusion

Mutual interdependence of economies intensifies international cooperation between companies, countries and country integrations. There are more reasons for engaging countries in international trade. According to Rojíčka the causes of the existence of foreign trade are as follows:

- “Lack of goods in the domestic economy, and its quality does not match the required quality of goods,
- Price differentiation for internationally traded goods,
- Personal, material or spatial preferences of buyers to foreign products” [2].

The share of small countries in total world trade is low. If countries want to gain market power or negotiation power in the international area, they often join into economic or political integrations. Cooperation brings for countries a bigger

chance to promote their interests on international trade. With interests not only of an economic concern but often motivated by non-economic objectives. After the formation of clusters there is the tendency for particular groups of countries to trade among member countries.

Open economies that wish to have a balanced trade balance, need export a part of their production to foreign markets. Therefore, goods and services destined for export should be competitive on the international market. Often, production for export is adapted to the particularities of the market to which output is directed.

International trade has an impact on the competitiveness of countries. Balance of export/import means that goods and services produced in the domestic economy should also apply to foreign markets. Balance of trade or its surplus reflects positively on the financial situation of the country, the size of GDP, which is subsequently reflected in the foreign investment flowing into the country. At present there is no need to address the question whether to or not to deal with foreign trade, but to deal with how to carry out foreign trade in order the country could receive as much as possible from foreign trade.

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Streszczenie

Analiza powiązań w handlu zagranicznym

Artykuł obejmuje krótką analizę handlu zagranicznego w krajach grupy wyszehradzkiej, Unii Europejskiej oraz w dwóch rywalizujących z nią krajach – Japonii i Stanach Zjednoczonych. Kraje, które odniosły sukces w handlu zagranicznym posiadają duże wpływy na rynkach międzynarodowych. Referat opisuje cztery główne wskaźniki wykorzystywane w handlu międzynarodowym.