The assessment of the manifestation of economic globalization: the international trade factor

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Abstract

International trade is not only one of the major driving forces of economic globalization, but also one of the most conspicuous manifestations of globalization process, i.e. the country's international trade development has a direct impact on the level of economic globalization of the country. The article examines the indicators of international trade in this context, and discusses which ones best reflect the level of economic globalization of the country or individual sector of economy.

Keywords: International trade; economic globalization; assessment of economic globalization.

1. Introduction

The scientific problem. In recent decades, the processes taking place in the global economy are very often associated with globalization. The most prominent aspect of globalization process is growing interdependence of national economies entailed by increasing integration of trade, finance, people and ideas in the global market. Economic globalization manifests through connectivity and interdependence of individual national economies. Participation in the globalization process induces the development of trade, technology diffusion and innovation, gives opportunities to expand markets and to participate in the exchange of knowledge and experience, to increase and improve production and well-being of nation. The main drivers of economic globalization are international trade, foreign direct investment, activity of international companies and transfer of technology.
International trade is one of the most important economic activities in the world and a major factor of international cooperation between the national economies. International trade volumes are growing faster than the gross output in the most countries of the world, and the importance of international trade for the countries’ economy is getting more and more significant. With the increasing liberalization of trade and capital markets, governments reduce the protectionist measures such as import tariffs and non-tariff barriers (import quotas, export restrictions, prohibitions) which are meant to protect their economies from foreign competition.

Traditionally the indicators of international trade are used to assess the level of the process of globalization. Morrison and Roth (1990), Kobrin (1991), Gersbach (2002), Juscius (2004), Pekarskiene and Susniene (2012) and other authors used the indicators of international trade to measure the level of globalization. However, there is some disagreement how to assess the volumes and trends of the international trade development, because the tendencies of international trade may be treated differently depending on the choice of the indicators. Therefore, selection of the set of international trade indicators is a very important issue, because the indicators of international trade are of big importance for measuring economic globalization. There is a debate among scientists: whether globalization is increasing, or decreasing? Perraton (2003) emphasizes that international trade and gross output ratio reached an unprecedented scale. These changes led to the formation of the global markets of goods and services and led to changes in product and labor markets. By submitting an analytical approach to globalization, author argues that there is a clear evidence of ongoing unprecedented fundamental transformation of the world economy, and these changes affect the development of states and their citizens' well-being. Soubbotina and Sheram (2000) present an opinion based on empirical research that the process of globalization expands rapidly through the channel of international trade. Bernatonyte and Normantiene (2009) assert that globalization and integration processes have had a significant impact on the development of international trade. International trade is now a rapidly growing activity of global economy. And it is an international trade specifically which is one of the key factors of globalization that formed the assumptions for globalization spread.

On the other hand, some authors (Neves, 2012; Hirst & Thompson, 2003) argue that international trade is not growing unprecedentedly and the global economy is far from being fully integrated and interdependent as it is defined and large regions and big sectors remain behind the ongoing dynamic process. They emphasize that in today's turbulent international environment the importance of the state’s national policies, which are meant to protect from the global governance of international forces, may increase. Growth of international trade can be affected by the limitations resulting from the influence of national borders. Thus, the distance remains a very important factor influencing the decline in the volume of international trade.

Different authors (Kobrin, 1991; Gersbach, 2002; Dreher, 2007; Kearney, 2007; Juscius & Lekaviciene, 2007; Pekarskiene & Susniene, 2012) in their conducted quantitative researches find that the level of globalization is increasing. However, Sutcliffe and Glyn (2003) point that the extent and the importance of globalization is overestimated due to the use of inappropriate statistical indicators, and upward trends are attributed to variables with a very small number of reliable data. Authors motivate their opinion with empirical research which proves that globalization is a consistent, not a sudden process, and it is far from exceptional unprecedented level. There is also a lack of consensus in evaluation the extent of the diffusion and rate of economic globalization. There is a disagreement regarding which quantitative indicators more accurately assess the extent and the speed of the economic globalization. The adequate set of indicators would provide an opportunity to assess the impact of globalization on economic development of the country or its individual sector.

The purpose of the article is to systemize the efforts of the scientists to assess the level of globalization in the aspect of international trade and to base a methodology ascertaining the international trade indicators best reflecting the level of economic globalization.

The article is theoretical, and its research methodology is a systematic comparative analysis of concepts and findings published in academic literature, and logical generation of conclusions.

2. Results

New theories of international trade opposed to classical approach in the context of globalization

An accelerating process of globalization has a direct impact on the structure of international trade and inevitably leads to new theories of international trade. Classical theories of international trade (the theories of absolute and
comparative advantage, Heckscher-Ohlin factor endowments model) focused on the movement of goods between countries, as the main international trade has traditionally consisted of export and import of goods. While developing the international trade patterns, it was assumed that the main factors of production - labor and capital - were immobile, i.e. they didn’t move between countries. However, in recent decades the movement of other objects of international trade - services and factors of production (labor, capital, and technology) are more and more discussed.

Traditionally, natural resources and raw materials dominated in international trade. Developing countries exported natural resources and raw materials, and developed countries imported them in this way supporting local industries. Final products have been manufactured and sold in the local market, with the surplus exported, and only minimum of consumer products, which were not supplied by local manufacturers, were imported. After the Second World War, the multilateral agreements in the regulation of international trade were adopted and the General Agreement on Tariffs and Trade (GATT) was established in 1947. The second half of the 20th century was characterized by the liberalization of international trade, significant decrease of import tariffs and the growth of trade in manufactured goods.

One of the most prominent new trends of international trade is trade between the foreign affiliates of one parent company, known as intra-firm trade. Intra-firm trade represents one third of international trade in goods (WTO-OECD-UNCTAD, 2013). The policy of modern transnational companies is to optimize production resources in the global market. Therefore, they acquire raw materials at the places, where they are cheapest, then turn them into intermediate products for further manufacturing, transport them to their affiliates abroad, where finish their production, and, ultimately, sell them in developed markets. Vertical integration and outsourcing promotes the formation of the global chains of production. Manufacturing of the product is divided into several stages, and each stage takes place in a different location. From the beginning of the 21st century the structure of international trade has changed significantly. The main part of international trade consists of intermediate goods rather than input for production or final industrial products.

John W. Williams was one of the first economists in the early 20th century who justified the need to modify the classical theory of international trade (as cited in Bjelic, 2013). The classical international trade theories explain trade in final goods, but recently these flows represent only a marginal part of the total international trade flows. The new trade theories dealing with the diffusion of technology and monopolistic competition are able to explain trade in high-tech industrial products inside the industry. Mundell (1957) argues, that an increase in trade impediments stimulates factor movements and that an increase in restrictions to factor movements stimulates trade. Dunning (1995) noted that the theory of international trade should be complemented by the theories of organizations and location of economic activity. Helpman (1984) has developed a general equilibrium theory of international trade in which multinational corporations play an essential role and used his general equilibrium model for forecasting international trade flows. The theory explains the simultaneous existence of intersectoral trade, intra-industry trade and intra-firm trade, and it also explains cross-country penetration of multinational corporations as a result of impediments to trade (such as transport costs or tariffs).

The problems of selection of international trade indicators measuring the level of economic globalization

For an assessment of the level of globalization it is important to choose appropriate indicators which reflect the main features of international trade. The indicators should be suitable for analysis of the aspects of trade globalization in general, on the country level, on economic sector level, on the company’s level and on the level of individual product. Traditionally, the trends of international trade were analyzed using the indicators of total trade flows, export and import flows, in relation with basic economic indicators (GDP, GNP, gross output, demand, etc.). The authors (Feenstra, 2008; Sutcliffe & Glyn, 2003; Xu, 2012; Bjelic, 2013) propose to take into account the new tendencies of international trade and the ongoing changes in the global markets in recent decades. They emphasize the need to modify the indicators used and to add new dimensions - value added and intra-firm trade statistics.

The share of exports in GDP and the ratio of total trade flows and gross output are most frequently used indicators of trade integration. The other way of measuring globalization of international trade is to compare the growth rates of exports and GDP. The difference in growth rates shows the speed of trade globalization process.

It is generally accepted that the country's economy and the sector is increasingly globalized, the larger share of GDP is accounted by exports. The share of exports in GDP provides a measure of the degree of dependence of
domestic producers on foreign markets and their trade orientation. However, it should be noted that a simple ratio indicator, especially if it represents the whole economy of the country (total exports to GDP ratio) should be treated with great caution, because it reflects not only the actual volume, but also the price changes and it does not reflect the relation of imports to exports. Maddison (1995) measures the degree of trade integration by the ratio of merchandise exports to GDP at constant prices. By opinion of Sutcliffe and Glyn (2003), such constant price comparisons exaggerate changes in weight of exports in the economy and suggest to use the share of exports at current prices, which better reflects productivity gains and thus the share of resources devoted to exporting activity.

The impact of international integration on international trade is increasing mostly due to the penetration of imports to the domestic producers' market. Sutcliffe and Glyn (2003) consider the best way to measure the impact of globalization by the indicator of import penetration of the domestic market, which, in their opinion, best reflects the impact of international competition within domestic economies. The figure represents imports as a share of apparent consumption (production plus imports less exports). In developed countries with the classical structure of imports (the main imported products are raw materials, food products and petroleum products) imported products are linked together, but do not compete with domestic industry. However, recently, the imports are making pressure on the most important sectors of economy of the country, not only for those directly involved in foreign markets. Imports of raw materials and food products decreases, and according to Feenstra (1998), an increasing part of imported products are intermediate goods – semi-finished and components. The share of intermediate products in international trade is increasing and varies in individual country, but in average it is about 56% for goods and 70% for services (Xu, 2012). The growth of the share of intermediate products is induced by international fragmentation of the production chain, the global spread of the sources of international manufacturing companies and dissemination of foreign direct investment. Traditional trade statistics data, which measures the value of trade flows each time the products cross the border, becomes irrelevant in measuring the impact of international trade on economic development.

In global production chain, individual stages of production are located in different countries. At each stage, the manufacturer acquires certain input and creates value added, which is included in the price of stocks in the next stage of production. Intermediate products cross borders several times and enters into further production, and its value are indirectly accounted in international trade statistics. Statistics capture the general flow of international trade in gross value, except of value added. Such a "double-counting" problem refers to the fact, that the officially presented trade statistics system artificially increases the extent of value added created by the country's exports and imports. In this way statistics incorrectly evaluate the bilateral trade balance and the level of competition between trading partners. Xu (2012) has proved empirically that gross international trade volume significantly exceeds the volume of international trade in terms of value added, which is an average of only 74% of total international trade. This gap differs according to individual country, depending on what part of the global production chain the country is located. Many scientists (Xu, 2012; Bjelic, 2013; at al.) consider indicators based on value-added to better reflect the share of local and foreign production and disclose the impact of international trade. However, use of these indicators requires detailed data for each country, which is made available only in recent years.

Since 2009 OECD started cooperation with World Trade Organization (WTO) on this matter. Four international organizations - the United Nations Statistics Division (UNSD), Eurostat, the World Trade Organization and the United Nations Conference on Trade and Development (UNCTAD) - are planning for 2020 to develop global trade statistics based on value added. In June 2013 OECD and WTO first published co-developed data in international trade based on value added (OECD-WTO-UNCTAD, 2013).

Spreading the global chain of production requires management and organized layout, and it increases the share of services in value of the global production. Some services are directly related to international trade. It is mainly specialized services, such as international transportation, international finance, consulting activities, marketing, distribution, etc. These services have very little relation to the local service market. Xu (2012) emphasizes, that services, being an integral part of products for foreign trade, are not reflected in international trade statistics. In this way, the official trade statistics do not reflect precisely, which economic sector creates a value added of product or service. On the other hand, many sectors of the international integration are related indirectly. The retail sector largely sells imported products or provides services for imported products. In opinion of Sutcliffe & Glyn (2003), as there is no ability to define, which part of the services is internationalized, whatever the reliable evaluation be, it will
not include a part (possibly very large and growing part) of employed workers who are involved in international integration.

International companies spread their production chain across different countries, and this process leads to a new form of international trade - intra-firm trade. Disintegration of production chain increases the extent of international trade, because intermediate products cross the borders several times during the manufacturing process (Feenstra, 1998).

The indicator of intra-firm trade may have different meanings, depending on whether it analyzes: 1) imports; 2) exports; 3) investment coming to the country; 4) investment of the country overseas. These figures should consider the trade between operating affiliates and their parent companies abroad, or trade between local parent companies and their affiliates abroad, or trade among affiliates of the same group located in different countries. The ratio of the extent of intra-firm trade and total exports of the sector depends a lot on the number and size of the affiliates abroad, on the location in production chain (final or intermediate products), and the company's organizational structure. It depends very much on the nature of the investments, the duration of investments, the economic sector in which the group of companies operates, and the companies’ business strategy.

3. Conclusions

In qualitative aspect, international trade is the most important form of integration into the global economy. It is one of the drivers of globalization and one of its manifestations at the same time. The indicators of international trade are used to assess the level of globalization. However, the assessment of impact of globalization through international trade factor is quite complicated. A lack of uniform criteria for the appropriate assessment on theoretical level complicates the practical use of international trade indicators in assessment of impact of globalization on the level of country or individual sector.

Following in the footsteps of the classical theories, the level of globalization traditionally is measured by regular indicators of international trade: by ratio of total trade and gross production, by exports and imports share of GDP, by share of domestic total demand met by total imports etc. Considering rapid economic development in recent decades, dissemination of vertical integration and disintegration of the production chain, the classical theories of international trade are not suitable to fully reflect dynamic processes of international trade. The set of international trade indicators for an assessment of the level of globalization should be reviewed in order to adequately highlight the intensity and trends of globalization process. New aspects of international trade theories and empirical studies suggest that indicators of international trade based on value-added approach would more accurately reflect the level of economic globalization. In recent decades, due to spreading of the global business chain a new phenomenon in international trade requires to be taken into account, it’s an intra-firm trade. The indicators reflecting the export and import flows between the parent companies and their subsidiaries would be able to adjust the values of the level of economic globalization and their interpretation.

Summarizing, the level of economic globalization cannot be assessed by one or several indicators of international trade. Measuring the degree of globalization requires a comprehensive assessment of all groups of indicators reflecting international trade. Moreover, in a dynamic international market, when more and more countries involve into the global production chain, the weights of groups and individual indicators may vary in a complex assessment of globalization level. There are no strict rules of what set of international trade indicators is better to use in assessing the level of globalization. Therefore, the structure of the set and specific weights of individual indicators may depend on the peculiarities of individual country - the structure of international trade, the number of foreign-controlled companies and the intensity of its activity, and the level of penetration of transnational companies into country's economy.

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