

The impact of Globalization on International Trade

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Abstract: A phenomenon of globalization of world economy leads to diminishing of the borders between states. There is an important role of international trade in this process, which appears in much more heterogeneous forms than in the past. While the classical theory of foreign trade basically assumed commodity trade with the final products, due to fragmentation of production chains the major part of trade is performed with intermediate goods and also the trade in services becomes more and more dynamic. Increasing volume of the trade between countries is carried out without changing the ownership of traded goods, and vice versa - changing the ownership of goods without crossing the border of the country. There is important role of multinational enterprises, which are currently behind most of the economic operations. The major implication of these phenomena is increasingly difficult possibility to capture the statistical data correctly and therefore to obtain objective data on the behaviour of the economy for analytical purposes and economic policy.

Keywords: Heckscher-Ohlin theory, intra-industry trade, global value chain, Rotterdam effect

1. Introduction

In recent years there have been significant changes in the position of national economies to global value chains. Due to the strong growth of foreign direct investment in virtually all countries there is a strong connection between their economies. In conjunction with the removal of tariff barriers and the creation of free trade zones to international trade by its nature close of trading within the state and often even intra-corporate operations. While classical economic theory focused on trading with the final product and trade explained on the basis of efficiency of production factors, are currently sought theoretical approaches that would be able to interpret new phenomena in the economy. Dynamically growing trade in intermediate products, which account for the majority of traded goods. It is also the cause of a massive increase in foreign trade turnover in proportion to the value-added. This is related to a significant increase vertical specialization and outsourcing, as side effects of economic globalization. Changes to organizational charts business relations, when manufacturing companies involved in international chains often do not decide who their suppliers or customers, and at what prices buy from them or sell them. The aim of this paper is to show the relationship between economic theory and practice of international trade in the context of the environment of global value chains. At the same time indicated the consequences of changes in the global environment for consistency and explanatory power of macroeconomic indicators, which describe the relationship of foreign trade transactions, economic growth and financial position of each country.

2. Theoretical and methodological basis of international trade

International Economics defines foreign trade as the economic transactions between foreign and domestic entities associated with the buying and selling of goods and services (see Cihelková et al., 2008). The basic assertion for the constitution of the classical theories is the existence of foreign trade advantages in external relations on the basis of self-determination of economic entities. The cause of the existence of foreign trade can be found in three basic moments:

- lack of goods which are not produced in the domestic economy or is not available in the required quality;
- price difference in internationally tradable goods;
- personal, material or spatial preference of buyers for foreign products.

The lack of goods in the economy may be due to a variety of causes, such as equipment earth materials, natural climatic conditions, mismanagement of certain production technology, workforce skills, etc.. Price differences are due to differences in either factor productivity in comparable production sectors, countries or different equipment manufacturing factors or external influences on commodity markets that prevent free pricing dumping, cartels, tariff and non-tariff policies, etc.). Arguments arising from shortages and price differences explain why the goods enter either only export or only import. In this case, the cross-sectoral trade. If the country simultaneously exports and imports certain commodities, we are talking about inter-sectoral trade. Its cause is the existence of personal, material or spatial preferences. In addition, inter-sectoral trade seen as an indicator of the degree of specialization or technological progress also in the particular country. Countries which focused its development strategy on exports (eg . Southeast Asia), show a rapid and significant increase in the level of intra-sectoral trade. This explains why the intra-sectoral trade is used as an indicator of a country's capacity to compete in a changing environment (see Havrylyshyn , Kunzel , 1997).

Among the first modern theory of foreign trade was one of modifications of classical Ricardian theory Eli Heckscher and Bertil Ohlin (see Leamer, 1995), which built its functioning at different levels of country production factors. This allowed to integrate theory of foreign trade in the neoclassical economic theory. Relationship of foreign trade and economic growth in this approach is seen as a change in equipment production factors. If there is an increase in capital and workforce will change, increase production possibility frontier. However, due to increasing the supply of capital cost of this factor decreases, which results in faster output growth capital demanding goods.

At the same time increase the demand for labor, leading to an increase in prices of goods and demanding work on his home production falls. After demanding capital goods abroad will increase demand and thus economic growth leads to the growth of bilateral trade. International trade in this concept was understood as a substitute for factor mobility between countries. After World War II, gradually began to take shape changes in concepts of foreign trade. She began to show a need to refine and modify the theoretical assumptions upon which the whole concept of classical thought. In particular, it showed the need qualitatively new hold dominating factors in foreign trade, especially the role of technology and technical progress. There has been gradually to criticism Heckscher-Ohlin model where, although it was largely in recognition of his confirmation facts, but also failed to explain trade between countries with similar equipment production factors. It was argued that specialization of countries in a particular type of commodity leads mainly in developing countries to stagnation and growth potential rather arise when specialization in products and services for demanding skilled labor. Furthermore, he was accused of unsustainability assumptions, such as the international immobility of factors of production or lack of transportation costs. Classical theory has proved to be static, aimed at achieving a stable balance without significant changes to production systems. Some economists were looking for a way out of the classical theory limit its dynamic nature, which would allow to explain changes in trade patterns and flows over time.

The beginning of the new concept is related to the acquisition of the Schumpeterian approach and the inclusion of the factor of technological progress. The concept Possner (1961) leads the technical progress of a country to produce new or improved products. This creates a time-limited monopoly on technological development and therefore ahead of other countries, where emerging demand in these countries can only be met by imports. Therefore, foreign trade also works with the same equipment production factors. Fundamentally new perspective on the theory of foreign trade, the Swedish economist Linder (1961). Its concept is based on the central role of demand and is focused on trading with the final products. Alleging that potential export such goods for which there is domestic market. The items that are traded to is determined by the level of income per capita, which largely determines consumer preference.

This theory explains why the critical volumes of trade takes place among developed countries, but still lacks the detailed empirical testing.

Inter-sectoral trade

Gradually growing interest in the theoretical literature on the so-called. Intra- sectoral trade, is the description of the flows between the same fields. In this context, highlighted the importance of qualitative differences and the degree of competence of the workforce. Model of comparative advantage, the same technologies and preferences of different factors of production equipment began to be a gradual development of economic thought crossed. The "new" theory of foreign trade is based on the assumption of increasing returns to scale, which is a consequence of wider changes in economic thinking in the 80s in connection with the "new " theories of growth (see Fagerberg, 2000). Traditional Heckscher-Ohlin theory states that the structure of foreign trade corresponds to the relative scarcity of factors of production of each country and the intensity of their use in the production process. This implies that trade with and place in a mutually complementary products. Grubel and Lloyd (1975) first observed and described the anomaly that did not fit this theory. It was the fact that a high proportion of industrial trade accounted for two-way exchange of products within the same category of goods and therefore

probably the same structure factor. This business, which they called intra-sectoral trade takes place with similar, only slightly different products in an environment of imperfect competition, respectively with close substitutes that require customers with different preferences in different countries. Criticism initially rejected this theory, arguing that it is a bias Heckscher - Ohlin theory. This means that if we look at a more detailed level of commodity classification, we would find that commodities are traded with a different structure factors of production. Theoretical and empirical validity has been demonstrated Grubel - Lloyd's observation (Havrylyshyn, Kunzel, 1997).

Explanation of the new theory is the existence of economies of scale at the firm level and the existence of imperfect competition, which is contrary to the assumptions of the Heckscher - Ohlin theory. Empirical studies have shown that the extent of intra-sectoral trade is the greater, more developed and more developed is not the economy. The significant growth of intra-sectoral trade was recorded in export-oriented countries in Southeast Asia. It can be concluded that the higher rate of intra-sectoral trade reflects greater ability to compete in a changing environment and adapt to it. Inter-sectoral trade is the result of increased specialization, not its cause.

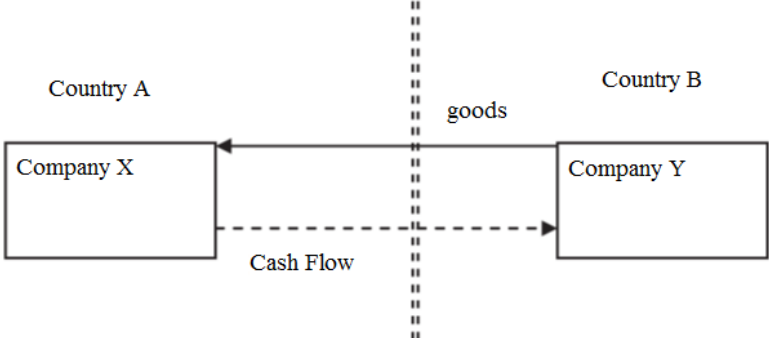
Prerequisites country's readiness to compete internationally and adapt to a changing environment are influenced by various factors such as monetary and fiscal policy, factor markets, the investment rate or tariff and non-tariff barriers in foreign trade. Trade liberalization while offering a significant opportunity for specialization.

In particular, within each sector can be a less expensive solution than the new investment. At the same time, this solution due to lower requirements on the mobility of factors of production brings lower social costs.

Models of trade relations

Economic theory implicitly assumes that trade works on the basis of traditional market relations, the seller (exporter) delivers the goods to the buyer (importer) at the market price and the exchange of goods at the same time there is a change of ownership. For this model, also based on macroeconomic statistics, the basic principle for the compilation of national accounts and balance of payments cross-border transactions are based on a change of economic ownership usually approximated customs border crossing.

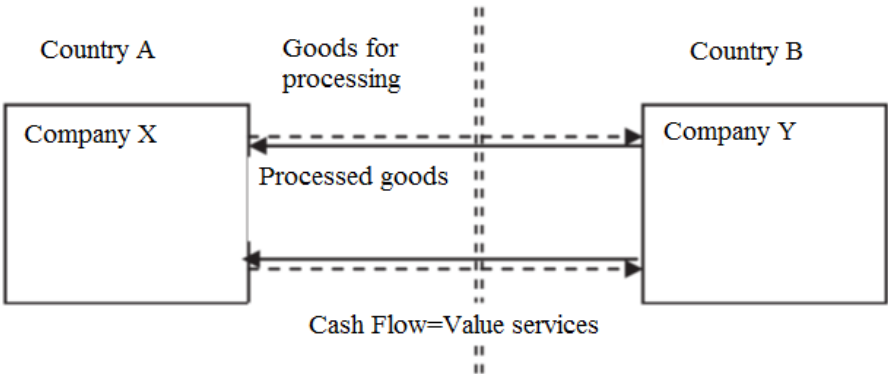
Figure 1: Diagram of the traditional model of trading



Source: own processing

In this simple case, the subject goods from subject A to B and at the same time there is a cash flow in the opposite direction (see Figure 1). When exactly will change ownership between A and B will depend on the commercial contract and payment terms. Economic statistics used as a border crossing point, the change of ownership of the goods. From this model essentially based on the classical theory of international trade.

Figure 2 : Diagram of trading without change of ownership



Source: own processing

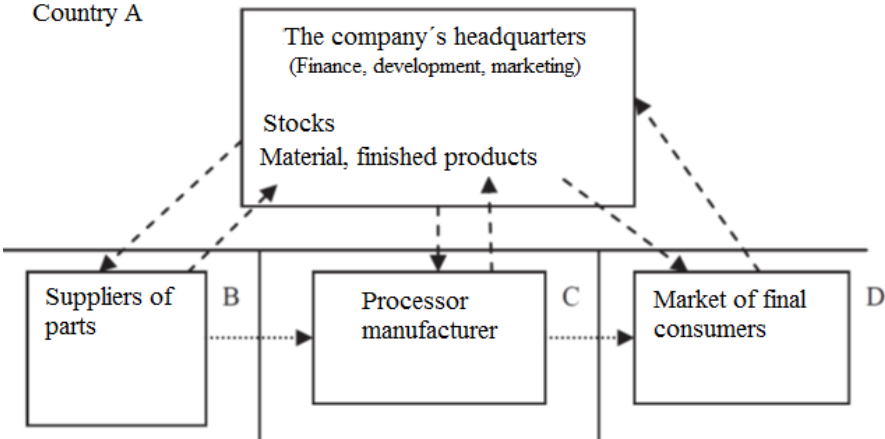
In the real world, however, it is never so simple, most transactions take place through an intermediary, which may affect the timing of the transaction and, last but not least, to record this transaction. The timing of the payments may fluctuate and may occur between the buyer and the seller to a liability that will pass with time of payment for goods or vice versa is paid prior to delivery. Goods often crosses borders, but does not change its owner. A classic example is the so-called. Processing operations, where goods (components) are exported from one country to another, so there has been assembled and subsequently re-exported (see Figure 2). In fact, the only equitable service, but the statistics of foreign trade transaction involves as import and export of goods according to the principle of crossing the border. The accounting processor (ie . firm that performs processing), however, will only sales service provided.

In terms of capturing the right balance of payments and national accounts, which is a key moment of change of economic ownership, is the need to quantify the value of imported components. Then you need this value (according to the current approach) impute to the volume of production and consumption in - between the domestic economy, or (forthcoming revision of the standard national accounts and balance of payments) of the value of imports and exports excluded. This ensures consistency between resources and uses in the economy.

Trading in multinational companies

A situation where the movement of goods does not correspond with the change of ownership of the goods is becoming more and more applicable model when dealing with how a growing part of the transactions carried out within multinational groups (intra- firm trade). In this case, moreover there is a misrepresentation of financial data based on contractual prices and service fees for the use of profit allocation with respect to the tax burden. The individual "players " in the whole process of production and trade are located in different countries, and these cases thus affecting the external trade statistics (see Fig. 3).

Figure 3: Diagram of intra - firm trade



Source: own processing

Trade in services

While the classical theory of international trade thinking in particular of transactions in goods, in the last few decades have increased significantly transactions intangible character, especially in services. Improving technology, standardization, infrastructure and reducing the cost of data transfer allowed the many activities in the service nature is increasingly produced and consumed in different locations. The progress of ICT has increased the tradability of many types of services and created their new species. This is especially so on. Knowledge-based services, such as data acquisition and processing, research and consulting services that can be performed through the internet. To cheaper destinations in the form of off-shoring are also redeployed services such as call centers (see OECD, 2008).

Services is currently comprised of more than 60% of world GDP and it is not only a phenomenon in developed countries. Services account for over half of the number of countries with very low levels of economic growth (see World Bank, 2010). There is now not the case that services are by their nature illiquid. Equally true that most services are provided through dealerships and that it therefore can not be compared to commodity trade. Unlike trade in goods, there are still significant barriers to imports and exports of services. This is primarily a regulatory measure that differs from the traditional barriers in the form of tariffs and quotas. The effect of removing these barriers could have been very significant, according to some estimates, compared to

repeal all existing barriers to trade in agricultural and industrial commodities and helped especially by developing countries (see Dee, 2001).

Another reason why you need to pay attention to trade in services, are blurring the differences between "commodity" and "services" business. Although the boundary between goods and services is seemingly obvious, in fact it is not. This applies in particular transactions which do not involve the physical movement of goods in the change of ownership. For example: for operations in which the goods (components) imported into a country for processing (assembly) and finished products are re-exported without change of ownership, the question is whether being imported and export goods (components and finished products) or made only export services (nobility operations). It differs traditional approach of external trade statistics based on crossing the border (customs declaration) and approaches the balance of payments, which is a key change ownership (see IMF, 1993).

Analogously include merchatingu example, when goods are physically within the limits (as traded abroad), but there are changes of ownership. The concept of processing operations is a widely discussed topic in the context of the forthcoming revision of the standard national accounts and balance of payments, which significantly alters the structure of trade of some countries in favor of services. This applies for instance. China, where the share of processing accounts for nearly half of the commodity trade (see WTO, 2010).

3. Globalization phenomena in international trade

Structure and dynamics of international trade is currently heavily influenced by the globalization of production chains and the associated trade within multinational corporations (see eg . Arndt, 2001). While economic theory is mainly engaged in trading with the final product, the emergence of global value chains has resulted in addition to increasing the volume of international trade in particular, change its structure in favor of intermediates (ie. materials, components and unfinished products).

Currently, intermediates roughly 60 % of global non-fuel imports (see OECD, 2008). Based on data from the input-output tables OECD countries can be observed increasing the share of imported intermediates in most of them. Increasingly smaller part of the production is carried out within the boundaries of nation-states, reducing the share of value added in volume production. The globalization of value chains has resulted in an increasing intra-sectoral trade. This is particularly evident in small economies with high FDI inflows.

The concept of global value chains

The traditional question of economists, with whom (territorial structure) as the (commodity structure) dealing with the concept of becoming a global value chain of the past. It has to do with the relativization of the term "country of origin" of the goods in a situation where the products in the production and distribution trespass borders several times. It does not refer to a greater extent commodities, such as minerals or food, but in many manufacturing industries, globalization is a major phenomenon of the value chain. Most is fragmented production chain for products electrotechnical industry, especially computers and mobile phones. Important factors is the relatively high price of these products in relation to their weight, which minimizes the unit transaction costs associated with the fragmentation of production. Benefits associated with the allocation of individual links in the value chain in different countries according to their competitive advantage and exceeds the transportation costs associated with it.

The value chain encompasses the entire spectrum of activities that take place starting companies proposing a specific product to its final use. Includes design, production, marketing, distribution and support. These activities may be performed within a single company or divided among different suppliers. The value chain can produce goods or services and operate within a certain territory or be geographically widely distributed. The concept of global value chain (GVC - Global Value Chain) deals specifically with cases where the entire process is distributed among various companies and takes place in a global environment.

GVC concept represents one possible approach to studying the structure and dynamics of the global industry at the micro level (see Gereffi, 1994). Historically earlier, the concept of "global commodity chains" where dominant operators act as buyers. This concept focused mainly on the role of large retail chains such. Wal-Mart or traders branded goods such as Nike. Although the typical "global shoppers" are the owners (if at all) only a few factories, volume purchases gaining significant influence on their suppliers. Indeed decide on what, how, when and who will produce the goods they sell. Extreme market power enables shoppers to create a strong global price pressure on suppliers who respond to the relocation of production to countries with low production costs and transferring pressure to reduce costs further down the supply chain.

The strings pulled by manufacturers other hand, is dominated by large industrial companies such as General Motors or IBM. Basically, the strings pulled by producers have more links between branches of multinational

companies, while strings drawn buyers have more links between legally independent entities. The explanation for this difference is that the strings pulled by buyers produce relatively simple products, such as clothing, equipment or toys to the homes. Innovation of these products is based more on product design and marketing than in the industrial know-how and for dominant firms in this chain is relatively easy to get to outsource production.

In the technology and capital intensive industries that dominate the strings pulled by the manufacturer must be knowledge developed and deployed within the ownership structures to prevent their escape to the competition. Typical examples of such industries as automotive and electronics industries.

Over time, however, is the integration of both approaches, which on the one hand, the producers get into the role of buyers through outsourcing and greatly increased demands on the ability of suppliers. Currently has a global network of producers do not pay on the production of simple products, but supplying technology and capital intensive products and sophisticated services.

The impact of vertical specialization in international trade

There is a strong link between the internationalization of production, ie. Placement of production to other countries through FDI and growth in foreign trade, but this is not always the case. For example, if a certain company will supply the markets of the countries of certain products through the production capacity in the countries concerned, instead there is exported, on the contrary, there is a growing internationalization of the decline of foreign trade (Hummels, 1998). Binding internationalization of production and trade growth will be only if the countries are interconnected vertical ties, ie. Country to specialize in a certain stage of the production chain. In this case, there is the sequential type output when one country importing goods from another country, it is used as an intermediate for the production of further consumption of the intermediate, and the process of fragmentation of the production chain ends when the product is intended for final use. Then we talk about "vertical specialization".

Vertical specialization is closely related to the concept of "outsourcing", but not the same phenomena. Outsourcing can be defined as "the placing of one or more stages of production of goods outside the domestic economy" (Hummels, 1998, p. 82). Consider, for example, when a Japanese company placed the production of computer components from Japan to Taiwan, where it made imported parts and assembles them from computers that are intended only for the domestic market. In this case, there was outsourced, but there is no vertical specialization. However, if Japan will export manufactured PCs, there is both outsourcing and vertical specialization also.

The globalization of value chains is driven by many factors. This includes efforts to increase efficiency under the pressure of growing competition in domestic and global markets. One way to counter this is to use the resources from productive inputs manufacturers, whether domestic or foreign. Another important impetus of globalization is to enter new markets and acquiring strategic assets. Fragmentation of the production process across different countries accelerate corporate restructuring, including outsourcing and offshoring for certain activities. Offshoring understand the transactions carried out via intermediate boundaries, ie. Use of foreign suppliers for the purchase of material inputs and services, which may also include a property-linked entities (foreign branches).

The increasing use of foreign sources has also led to the relocation of activities to other countries, which meant, in some cases, total or partial closure of production in the domestic economy and simultaneously expand production in foreign branches. Often it is only by moving certain production process when the products manufactured are exported back to the home country. Reallocation may not always be understood as follows strictly, often involves different forms of internationalization, such as the opening of new foreign affiliates to promote the participation of the local market. While the definitions of the various concepts are simple, their measurement is more complicated because companies usually reveal any details about their decisions in outsourcing or offshoring. This has resulted in a great diversity of views on the size and impact of internationalization. From a certain perspective, the globalization of value chains of innovation unto itself (change the organization of business practice). Multinational companies are adopting this innovation in order to increase its efficiency, to enter new markets and acquire strategic assets.

There is a shift from vertically to horizontally integrated structures. While in vertically structured firms within the same company integrate all stages of the production chain, horizontal structure means that at each stage of the production chain involved in another company. This can be clearly illustrated by the computer manufacturing industry, which has undergone this development.

Around the year 1980 the production of computers heavily vertically integrated. Computers were presented dominant mainframe computer, the hardware and software was developed within a single company. The company also operated a sales and marketing and was therefore not possible to buy computer equipment or software in a store. With the invention of personal computers assembled from standardized components for mass consumer market, the computer industry has moved toward horizontal structure. One such company thus

produced. Drives, additional graphics card, the third offers software, etc.. Shift towards horizontal structure of the production chain strengthened contract manufacturing in the electronics industry. Among the contract manufacturer (Contract Manufacturers) are companies that manufacture products sold under other brands (OEM - Original Equipment Manufacturer).

Contract manufacturers are focused on improving the production of products, while the company under whose brand name it is sold, can devote their product design and sales. Fragmentation of production processes and changes in the structure of global production networks mean that companies no longer need to excel in a wide range of activities that create added value. They can concentrate on those activities that they can produce the highest efficiency, and buy components and services from specialist manufacturers. Global value chains provide small and medium-sized enterprises (SME - Small and Medium Enterprises) a chance to participate in the creation of value-added manufactured goods specializing in part of the value chain. These sub-segments are produced continuously and enable SMEs to benefit from its flexibility and ability to respond quickly. The key for successful participation in global chains is the ability to innovate, therefore, companies trading with multinational companies have higher innovation performance than others (see Love, Lattimore, 2009).

The degree of vertical specialization in different countries can be investigated by direct methods, such as analysis of trade in intermediate products or case studies. Recently receiving forward modeling methods based on the use of international input-output tables (e.g., WTO, 2010). These methods are more based on estimates and require certain assumptions¹, however, allow analysis of the impact of international trade on macroeconomic aggregates such as gross domestic product or employment. Using input-output tables can quantify the share of imports contained in exports and thus to assess the actual contribution of foreign trade to the country, regardless of how many times the goods pass through the border. Using the Leontief inverse matrix can take into account all the feedback between countries and sectors and capture the value of imports of inputs used directly or indirectly in all stages of production of goods destined for export in various countries (see Leontief, 1951).

Based on the model constructed for nine Asian countries and the USA, the share of imports destined for export in 2008 ranged from 14% (Indonesia) to 58 % (Singapore) in the USA was 15%. It follows that while the United States accounted for the contribution of the domestic economy to export 85 %, in Singapore it was only 42 %. Among the less developed countries except Indonesia because of the structure of their exports focused mainly on agricultural products. In most countries, import intensity of exports between 2000 and 2008 increased in some but declined (see WTO, 2010). Growth was especially noticeable in most advanced economies (USA, Japan) due to expansion offshore and intra-company activities of multinational companies based in these countries. The decline in some countries, in turn, may be associated with the expansion of the base of local subcontractors. In China, the import demand estimated at more than a third, with a prominent role called. Specific export zones from where nearly half of exports. The concept of trading with added value affects the measurement of bilateral trade balances between countries. While the overall trade balance is the difference between exports and imports, the contributions of individual trading partners differ depending on whether they are measured by the gross (standard) or a clean way. Deficit with China by the concept of trading by value added decreased by more than 40 %.

Trading by non-residents

As mentioned above, there are basically two concepts capture commodity transactions in international trade. One is based on the principle of the movement of goods and captures transactions where goods cross the border. It is essential, whether there was a change of ownership between residents trading countries. Cases where goods cross the border without a change in ownership, a growing trend. The problem arises when these operations are properly is detected in individual statistics. The difference balance of exports and imports can vary greatly depending on the difference in the prices of imported and exported goods declared "on the border" and the value of transactions between resident and non-resident.

Improper recording these transactions in macroeconomic statistics can have a real impact on the economy, because individual players get distorted information to make decisions, whether it is the government and the central bank or market operators. A key role in weakening the ability to move goods approximate changes in ownership represents the inflow of foreign investment and the resulting rise of multinational companies. With the increasing share of multinationals in the economy is increasing the share of trading undertaken among related companies ownership, which has a number of implications for statistics. One of them is the use of transfer prices that multinational companies are set to optimize costs and tax burden in the context of the whole group. The

¹ Eg. homogeneity of production for the domestic and foreign market, linearity interbranch relations, etc.. compilation of input-output tables is also difficult to source data and requires addressing a number of challenges, such as the alignment of product and industry classifications, valuation of imports and exports in relation to producer prices asymmetry of foreign trade between the partner countries, reexport, and many others.

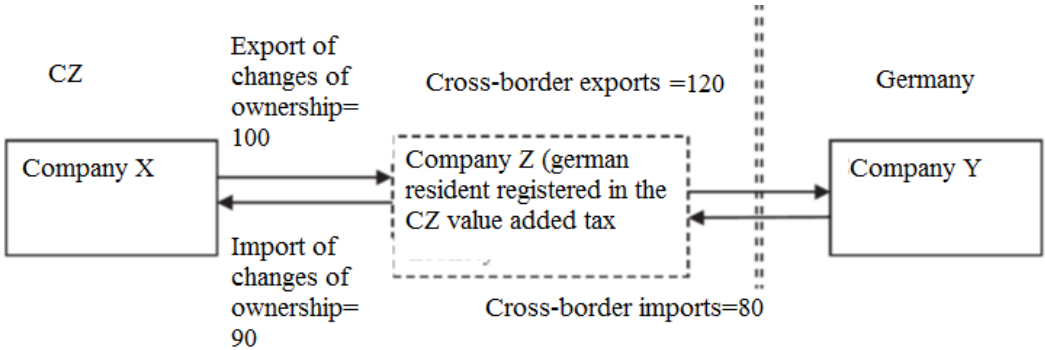
price at which the goods are transferred between residents and non-residents, so may significantly differ from prices "at the border", which reduces the ability of foreign trade statistics testify about the outcome of the exchange of goods between countries.

Another important factor that contributes to more difficult economic interpretation of the movement of goods is advantageous geographical position - which is the case in the Czech Republic. This is reflected in recent years in the vast expansion of warehouse space and transit truck traffic in recent years. Goods are imported to the Czech Republic, in the warehouse, then there will be minor operations (eg. package) and then travels further through the Czech border with a new cover and a higher price. If trading is realized through residents of the country, it is a classic re-export and trading margin value appears in the value added of domestic intermediaries. However, if the foreign trade conducted by foreign companies, which is not established in the Czech Republic and does not apply here either income tax (that operates while in the Czech Republic, but is a non-resident), the value of mediation appear in the accounts of other countries and there is an inconsistency value of foreign tradeCzech Republic (on the principle of crossing the border) and the added value realized in the Czech Republic.

Its impact on the trade balance can be illustrated by a simplified example (see Figure 4). Let's say that Czech firms sell goods to foreign firms in 100, that these firms subsequently physically exported from the Czech Republic and sell it for 120 German companies similar situation is in the opposite direction, when foreign companies importing goods into the Czech Republic from Germany of 80, but they sell it for 90 Czech companies trade balance valued on the principle of crossing the border is 40, but the actual balance of Czech national companies to foreign countries is the appreciation of the time and the change of ownership is significantly lower (in our case only 10).

The above example shows an intermediate country (Czech Republic) significant volumes of imports and exports and the impact on the trade balance depends on its share of the transactions. If trading was carried out by residents of the country, it is a classic re-export brokerage services and value will appear in the value added of domestic intermediaries. In this case, there is no consistency issues between the party and the use of resources in the economy.

Figure 4 : Illustration trading by non-resident



Source: own processing

However, if the foreign trade conducted by the company, not being a resident of the Czech Republic, the value of mediation appear in the accounts of the country where the seat of the firm (eg., Germany) and leads to inconsistent values Czech foreign trade (the principle of the movement of goods) and value added implemented in the country of Czech Republic. For these operations also uses the term "quasi - transit trade."

The boundaries between re-exports and quasi - transit is not always clear. In the context of the globalization of production and the fragmentation of the production chain multinationals often move goods from one country to another, and it is difficult to distinguish whether there was a change of ownership. Ownership of the goods can be transferred from one country to another completely independent of the physical movement of goods. A typical case is both called. "Rotterdam effect"², but there is growing quasi - transit operations also in trade within the European Union (including the Czech Republic)³. While the classical "Rotterdam effect" goods only

² "Rotterdam effect" means that a foreign trade transaction is reported for the first EU statistics as imports from outside the EU to an EU Member State in which the goods have crossed the borders of the EU and has been released for free circulation. The statistical record is part of Extrastat. Further movement of goods from the EU Member State to Member State of the EU, which is the final real importing country is then recorded as a dispatch (export) and arrival (import) between these two EU Member States within Intrastat. "Rotterdam effect" exists even in the case of exports from the Community, but to a lesser

passes through transit countries, in the case of "quasi - internal Community transit" transactions take very diverse forms. Purification of foreign trade transactions from the quasi - transit trade is far more concerned EU border countries, especially those with major ports (Netherlands, Belgium). The fundamental problem is to quantify this type of trading in a situation where the customs statistics exists only at the external border of the EU and its further movement between Member States is collected only statistically.

Vast majority of these transactions take place between ownership-related subjects, the motivation is different (see table 1). It can be a logistical reasons, when a country has a geographically strategic location and serves as a gateway to export to other countries (particularly the countries of Central Europe, including the Czech Republic). It may also be the case described above, the processing operations or strategy of multinational firms in the distribution market. The range of themes is diverse, but is based on cost reduction and tax optimization.

Table 1: Types of activities and motivations of non-resident companies trading

| Activity | Motivation |
|--|--|
| Distribution of activity - rental of warehouses, logistics operations, purchase import / export, domestic sales | Logistics |
| Sales Channels - export gateways (eg. West to east Europe) | Organizational / Cost reduction / Tax benefits |
| Active nobility - import / export, purchase processing services at home | Cost reduction |
| Mediation between residents - purchase by residents of the nobility sale to residents | Dominate the market/ Agreement between foreign companies |

Source: own processing on the basis of a presentation Statistical Office of Hungary

Possible solutions to these inconsistencies is essentially twofold. Either imputed to imports of services item called "branding"⁴ or data on commodity trade between borders adjusted for changes in the concept of ownership. While officially within the EU preferred the first way that ensures consistency with the commodity trade statistics and customs treatment is performed in the services balance, and methodically correct for analytical purposes it is preferable to finish the commodity trade. On the non-resident (resident of another country) then it is called. Merchanting, is commercial services abroad, entering into exports of services. In terms of the impact of the above phenomena on macroeconomic aggregates is particularly serious disproportion between supply and demand in the economy. By definition, the total offer (value added and imports) equals aggregate demand (consumption, investment, exports and supplies). Balance imbalance that is artificially created by the rigidity of external trade statistics, the mainly distorts the demand side.

Another problem arises in terms of consistency of current and financial account balance. Basically, the mass flow (movement of goods) do not cash flows.

Consider the following very often the case when the Czech company (resident) sells goods to its parent company at a set price yet on the country. Parent company represented here by entities registered for VAT only then will transport goods across the border and reports statisticians completely different value (usually higher), for which the goods are sold on the western market. At first glance, the domestic firm achieves high export performance, in fact, has significantly lower yields. When aggregating these data so there is disproportion between the current and financial account of balance of payments, movements of goods exceeds the movements of money.

4. The impact of globalization on foreign trade of the Czech Republic

After the Czech Republic joined the European Union in 2004, the system was borderline statistics based on customs declarations replaced for transactions within the EU statistical data collection called "Intrastat". Due to the change detection system was also newly defined circuit respondents foreign trade statistics. Respondents

extent. It leads to an overestimation of the volume of exports and imports in the EU Member States that are exposed to this phenomenon (see EC, 2007).

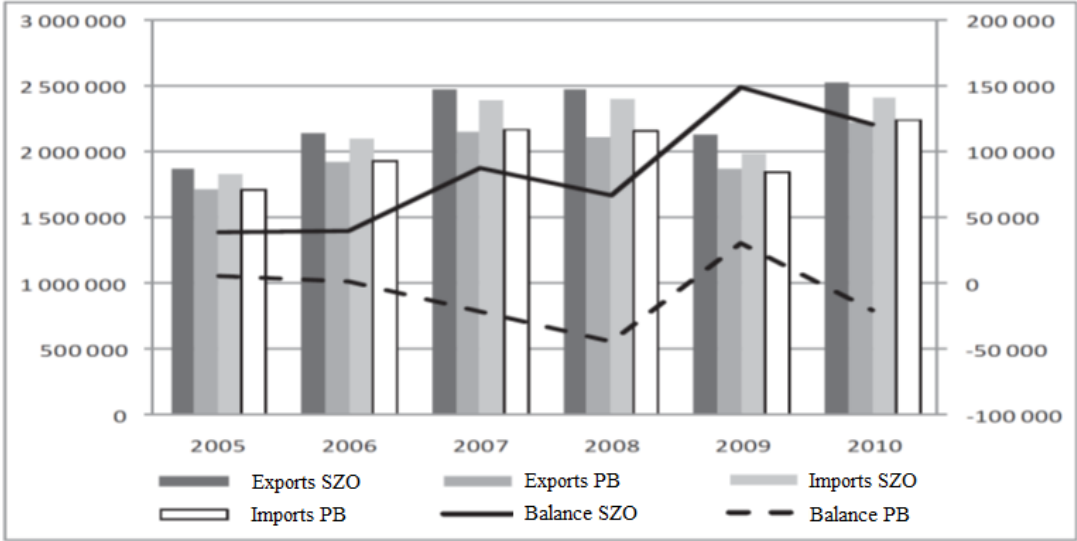
³ The first known case. "Inner-union quasi - transit" described in Hungary (see UNECE, 2010).

⁴ Entry into account price differences in foreign trade turnover resulting from intra-group cross-border operations of multinational companies in the Czech Republic registered for VAT (see CNB, 2010).

have become all the bodies that were in the Czech Republic payers of value added tax (VAT) and exceeded the specified value of exports and imports of goods. In addition, there were also significant changes in the VAT Act. A newly established obligation to register for VAT in the Czech Republic and foreign entities that do business in the Czech Republic (and despite the fact that there are not established, ie). Herein do not seat or any other physical representation and do not pay income tax here). From these changes showed that although foreign entities registered for VAT are Czech residents, completed in accordance with relevant EU regulation in the Czech Republic and Intrastat reporting Extrastat, and they declared exports and imports are recorded in external trade statistics of the Czech Republic.

The data structure and rules for their reporting Intrastat are consistent with international standards of commodity statistics (IMTS) and are strictly regulated by EU regulations. However, it is possible to adjust the data for national needs based on national specifics. One of them is the aforementioned "Rotterdam effect", which in some form occurs also in intra-EU trade. Apart from Hungary, this problem has been independently identified in the Czech Republic, where the first signs of inconsistency in macroeconomic aggregates appeared in 2009 in the compilation of commodity flows for the year 2007 exports of certain commodities several times exceeded their domestic production.

Figure 5 : Differences in cross-border flow of goods by statistics and balance of payments



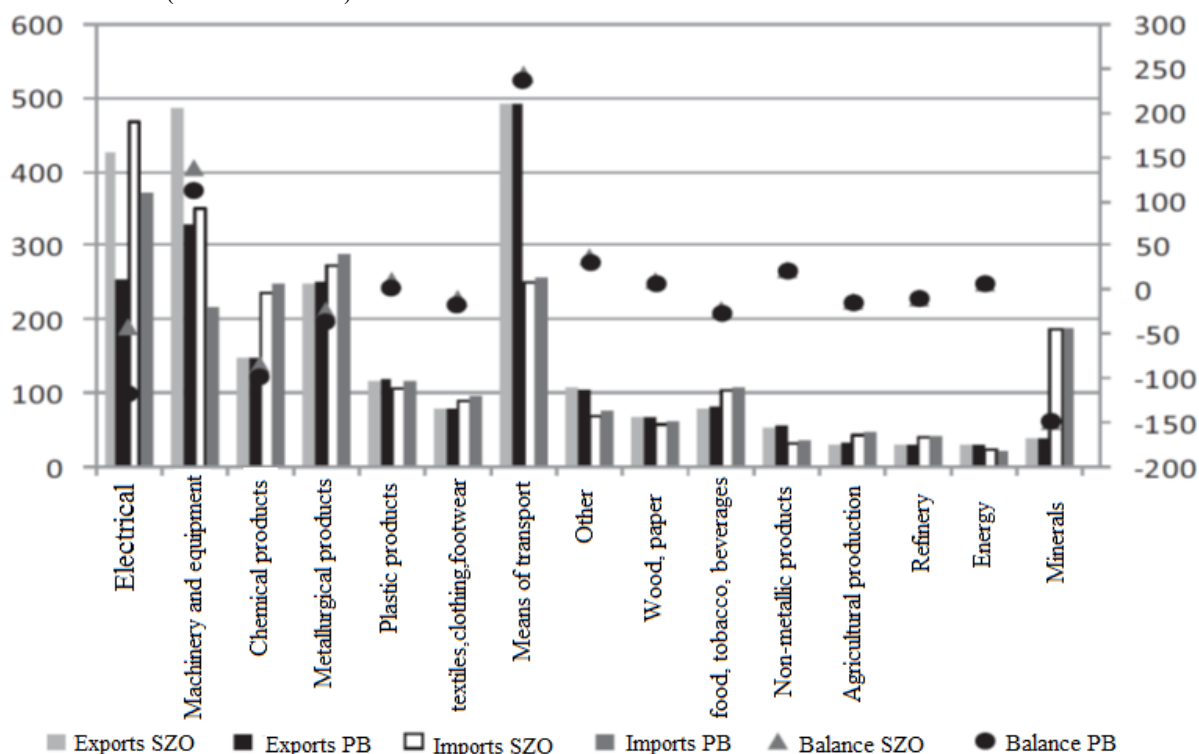
Source: ČSÚ, time series of foreign trade

In the same year he began to be clear this problem when compiling the quarterly gross domestic product and balance of payments, because the sharp annual increase in the trade balance was not accompanied by a corresponding development of value-added domestic enterprises and foreign receivables against. The existence of this phenomenon and the prepared solution Czech Statistical Office reported in March 2010 during the next twelve months was prepared in cooperation with the Czech National Bank as a new approach in capturing foreign trade transactions, which better reflects the principle of the change of ownership and means realistic view of the structure of the Czech economy. In March 2011, the CSO published the first comprehensive data on imports and exports in the national concept for the years 2009 and 2010 and in September of the same year published a revised time series data since 2005 (see Figure 5).

Exports of non-residents in 2009 amounted to 20 % of the value of total exports to imports, it was 14%. It is essential to their impact on the trade surplus, which the majority of this group of subjects creates. From the data published by the CSO show that after adjusting for the added value of non Czech economy has significantly lower trade surplus than it seems according to the data of border statistics, the difference in recent years exceeds 100 billion CZK. Commodity balance and published since 2007, except in 2009 when adjusted for the effects of that negative.

The difference between the cross-border exports and balance of payments statistics is about 14 % of imports is around 8 %. The explanation is, first mentioned revaluation of goods produced and sold in the Czech Republic by foreign entities (so-called. Branding), but also cross-border flows of goods, which in fact have very weak binding of the Czech economy (re-export). Part of the border statistics, imports of goods in the tens of billions of crowns, whose final destination is Czech Republic. This product passes through a central distribution warehouses, which passes through the logistics operations (eg. Packing, marking the brand name, etc.). And then travels to markets in other countries.

Figure 6 : Differences in cross-border flow of goods by a balance of payments statistics by commodity groups CPA (2010 CZK mil.)



Note: WHO = cross-border foreign trade statistics, PB = balance of payments statistics .
 Source: ČSÚ, time series of foreign trade

In terms of commodities are the biggest differences in the electrical industry products, machinery and equipment, which are the most concentrated non-resident business entities. These two commodity groups account for 60 % of the difference between the balance of trade in the concept of border statistics and balance of payments. Of key importance is growing while the number of central warehouses and logistics centers (Central) European markets located in the Czech Republic⁵. These warehouses are linked considerable flow of goods across the borders of the Czech Republic, a large part of these operations are performed by non-resident entities. The effect of this phenomenon can not be strictly time-uniting with accession to the EU, but the integration of CR into a single economic space these activities in the Czech Republic significantly strengthened.

Figure 6 shows that the largest difference in the balance of electrical products (especially office and consumer electronics), and to 75 billion CZK. The data suggests that the differences are on the side of imports and exports. While exports of electrical engineering across borders was recorded in the amount of 425 billion, ownership changed only goods worth 254 billion CZK. Considerably smaller difference is largest export item Trade, and the means of transport. The value of exports in both statistics do not differ (492 billion CZK). Some difference (about 8 billion CZK) is only on imports. This is due to the fact that the two largest automakers in the Czech Republic (Skoda Auto and Hyundai) exported without a foreign intermediary, the value of branding is relatively insignificant.

⁵ An example is the company Tech Data Distribution, a company with international operations and headquarters in the United States. To serve customers' Tech Data operates worldwide, tens of logistics centers, of which the largest, most important and one of the most advanced center in Bor u Tachova. This warehouse serves Czech Republic, Slovakia, Hungary, Germany and Austria and distributor uses it also for internal logistics. Center in Bor daily store goods worth several billion. The company uses it as a European central skald for key products, including consumables such as HP, Intel products, Xerox or WD. Azlan, Tech data division focused on added value here has the largest Czech Cisco storage products and plans to expand it to include other brands.

5. Conclusion

Effects of globalization of the world economy is the blurring of boundaries between nation states. Important role it plays in international trade, which in form and at the same time become increasingly diverse forms. In the last few decades have seen enormous changes in its structure, volume and dynamics. While the classical theory of foreign trade considered in principle only commodity trade with the final product, currently is due to fragmentation of production are the dominant form of trade in intermediates and the dynamics becomes more and more trade in services. Increasingly Trade between the two countries, without changing the ownership of traded goods, and vice versa - thus changing the ownership of goods without crossing the borders of the country. Key in this process is the role of multinational companies. The dynamic evolution of FDI flows are rising influence of transnational corporations on economic activity in each country.

The most visible manifestation of globalization in international trade is the so-called boom. Vertical specialization, which plays a dominant role in sophisticated products, especially electronics. A related concept of relativization country of origin and increasing interest in measuring the import share of domestic consumption and value added in exports. While the theoretical concepts that reflect the need for new approaches to the measurement of international trade there, faced in the practical implementation of a number of barriers. This is particularly the availability of data sources, the time lag and consistency between countries. The use of model approaches and the pressure to reduce administrative burdens at the same time do not allow the level of detail to which users were from traditional data sources used. Another problem is the resolution of trade flows that are not linked to the domestic economy, causing discrepancies in macroeconomic aggregates.

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