PART II: ACTUAL ISSUES
OF MACRO AND MICROECONOMICS

JEL: F13, O11
ECONOMIC EFFECTS OF TARIFFS ON THE CURRENT ACCOUNT BALANCE

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Abstract: Nowadays, international trade became more complicated. Trade attitudes between the countries depend on mutual benefits. However, tariffs are still the main tool used in the protectionism. Country are using them sometimes carefully, sometimes beneficial, and sometimes for purpose. The aim is to examine tariff restrictions in international trade, their economic consequences and effects to the current account balance of some advanced, emerging and developing OECD economies and their partners.

Keywords: tariffs, OECD, tariff effects, current account balance, consequences

INTRODUCTION

In the history of international economic relations, trade agreements based on mutual benefits are very important. Therefore, different trade forms, alliances and unions, bilateral and multi-trade agreements in the global world increase the efficiency of industrial and trade relations of the countries participating in international economic relations on a mutually beneficial basis. Since the main macroeconomic goal of advanced, emerging and developing countries is the economic growth providing, the setting of various mutually-beneficial trade agreements simplifies and encourage their dynamic development. However, both economic shocks and financial crises caused by unforeseen circumstances often occur and harm the deep interdependence of actual international

economic relations. Such shocks and distresses can arise from natural disasters, environmental change, climate change, crises and military conflicts. Due to the unpredictability of such events and their effects, it becomes necessary to ensure economic security on the national and international level. It should be based on economic protectionism in international trade relations. Therefore, the issue of restrictions as a main part of protectionism policy is relevant at the present stage of the development of international economic relations due to intensifying economic shocks, the demonstrative example of which is a world pandemic situation.

The pandemic, which has been officially declared by WHO on March, 11, 2020 (WHO, 2020) and continues until now, has reshaped the global economy shifting it from traditional contractual international trade relations towards the digital economy (Cucinotta and Vanelli, 2020). This led to devastating consequences for almost all manufacturing industries producing physical products and material-based services due to countries lockdowns, but less hit digital spheres and Internet-based businesses, i.e. digital marketing, banking and other Internet-based high-tech industries (Zimmerling, and Chen, 2021). The most significant impact was on the supply-chain and logistics sector since countries found themselves in a forced isolation situation during the pandemic based on the government directives (Gereffi, Lim, and Lee, 2021). Thus, the one of the main macroeconomic goals pursued by each country in the world – the economic growth – has turned into the economic recession all world economies. With differences in a time lag, each country faced the need to revise all previously negotiated agreements and reorient domestic economy to a localization (where it was maximally possible) in production and trade. As a result, this situation caused countries to strengthen restrictive measures concerning foreign trade partners.

The theory of international economic relations evidences, restrictive trading methods are considered controversially both in the scientific community, among economists-practitioners and politicians or policy-makers. On the one hand, the support of domestic producers strengthens the production and trade capacity of the country (Salvatore, 2012). On the other hand, it leads to inefficiency in the resource use and welfare loss (Krugman, and Obstfeld, 2015; Mankiw, 2016).

Therefore, our *aim* is to examine tariff restrictions in international trade, their economic consequences and effects to the current account balance of some advanced, emerging and developing OECD economies and their partners.

To achieve the goal, it is necessary to solve the following *tasks*: (1) to review the theories of free trade and protectionism in international trade; (2) to analyse statistical data reflecting the influence of trade restrictions on the current account balance of some advanced, emerging and developing OECD economies and their partners; (3) to make conclusions on the influential significance of tariff restrictions in international trade, their economic consequences and effects to the current account balance of some advanced, emerging and developing OECD economies and their partners.

METHODOLOGY

Secondary sources have been employed during the research. They include academic literature, research papers, analytical reports and presentations, datasets from world statistical services (OECD, 2021; IMF, 2021; WEF, 2021; HDI, 2021).

Theoretical methods used in this research include content-analysis of research papers and documents; comparative and logical-structural analyses of scientific and academic literature.

Critic analysis has been used to justify scientific opinions and authorial points of view. Evidential analysis has been implemented for making own conclusions and justifications based on scholars' opinions and findings. The systematic approach has been applied in the selection, systematization and analysis of scientific literature, as well as when expressing own thoughts.

Empirical methods employed in this research cover economic description, tabular and graphical interpretation of statistical data, times series analysis.

RESULTS

The most important type of trade restriction is historically been the tariff, which is considered as a tax or duty imposed on the goods and services that cross a national border. There are import and export duties, however, an attention is concentrated on the import tariffs due

to their world domination. The well-known classification of tariffs covers ad-valorem, specific, and compound. According to Salvatore (2012), all tariff policies effect on consumption, the product of trade and social outcomes. Tariffs on import lead to the strengthening of domestic producers' position giving the possibilities to be more competitive and rising their potential producer surplus. Nevertheless, consumers benefit decrease significantly because of domestic prices rising. Accordingly, consumer surplus decreases and as well as a choice of goods and services. Such restrictions limit import flow and have opportunity costs leading to a welfare loss. It happened because the domestic product which is costing higher in production causes inefficient resource employment destroying not only country trade efficiency but a world efficiency in a common.

In this connection, important is the Theory of Effective Protection. This theory states that tariff structure must be effective and based on the rate of effective protection calculated on the domestic value-added, or processing, that takes place in the concrete country. In turn, domestic value-added equals the price of the final goods minus the cost of the imported inputs going into the production of these goods (Gunnella, and Quaglietti, 2019). The nominal tariff rate is important to consumers (because it shows by how much the price of the final good increases as a result of the tariff imposition), the effective tariff rate is important to producers (because it indicates how much protection is actually provided to the domestic processing of the import-competing goods).

The information received from this calculation of formula (1) gives the possibility to estimate the percentage of trade protection decision-makers (Salvatore, 2012).

$$g = \frac{t - a_i t_i}{1 - a_i} \qquad (1)$$

where g is the rate of effective protection to producers of the final commodity; t is the nominal tariff rate on consumers of the final commodity; a_i is the ratio of the cost of the imported input to the price of final commodity in the absence of tariffs; t_i is the nominal tariff rate on the imported input. The more this index is, the higher protection level for economy, who is following protective (defensive) policy.

Following this model, it is worth to mention destroying influence of rising tariffs, for example, in trade attitudes between the US and China (for these countries g calculation is over 50%). International trade between the US and China becomes less and less effective (Gunnella, and Quaglietti, 2019; Albertoni, and Wise, 2021).

Under the current world economic development, it is interesting the conclusion received by Stolper–Samuelson theorem, which postulates that increase in the relative price of goods as a result of tariff policy raises the return of the factor used in the production (Samuelson, and Nordhaus, 2012). It means the real return to the country's scarce factor of production will rise with the imposition of a tariff. These findings were verified by Barattieri, Cacciatore, and Ghironi (2018) on the bases of VAR model, who statistically proved results of international trade in Eurasian zone and South-African countries.

In practice, it is important to find the optimal tariff t^* using formula (2), which will maximize the net benefit resulting from the involvement of the countries' terms of trade against the negative effect resulting from a decrease in volume of trade possible (Salvatore, 2012).

$$t^* = \frac{1}{e-1} \tag{2}$$

where e is the absolute value of the elasticity of the trade partner's offer curve.

The gain to a country from the optimum tariff comes at the expense of the trade partner, who is likely to retaliate starting a "tariff war". The retaliation process may continue until both countries will lose all or almost will lose from international trade. The risk is, however, that the trade volume may shrink to zero.

Interesting is methodology proposed by Anderson, and Neary (2004), who summarized existing models of measurements for restrictions in international trade and classified them into specific groups: trade-weighted average tariff, tariff dispersion, welfare-equivalent uniform tariff, import-volume-equivalent uniform tariff, trade restrictiveness index, true cost-of-living index. As well, they described domestic and foreign firms' behaviour in international trade with the help of math simulation, found the trade expenditure function,

offered method to highlight the influence of shadow prices and estimate the marginal cost of tariffs, welfare-improving tariff changes. The math principles and received equations enrich the protectionism theory from the point of its optimization in international economic attitudes.

Nowadays, in a globalized world, countries, being in isolation caused by the pandemic, are forced to defend their interests, sovereignty and provide the safety and well-being for own populations. Therefore, they are moving from a global economic model to an autarky model based on localization. In this regard, governments of many countries decide in favour of "strict protectionism", in particular in international trade. The main mechanisms of protectionism are customs policy, quotas policy, subsidization of export-oriented productions; establishment of administrative barriers, the adoption of restrictive measures at the legislative level (the most severe method is known as embargo) and establishment of trade barriers through standardization or certification of goods and services (WTO, 2020; Albertoni, and Wise, 2020).

However, in the modern world, China, as an emerging country (IMF, 2018) has globalized the economic world over the past 20 years by creating global supply chains while minimizing costs and optimizing logistics. This means that 82% of countries (Okubo, and Turkki, 2021) that represent advanced economies worldwide depend on Chinese outputs. Therefore, such a demonstrative dependence of advanced economies on promptly emerging China makes all production and service industries dependent, forcing countries to make trade agreements on cooperation for the long term (Melatos, Raimondos, and Gibson, 2019).

Nevertheless, as the global pandemic has shown in the event of force-majeure unforeseen circumstances, the supply chain disruptions and the slowing down of production and services led to a partial collapse of economy and financial distresses. In such conditions, unfortunately, immediate reprofiling and initiation of own supply chain are impossible. Moreover, this is an inevitable measure. Since the Chinese economy "capturing the economic value the world economies" is facing opposition and counter-forces, the situation aggravates in international trade and international relations forcing governments to take "hard" decisions and restrictive measures. One of the top-excesses observed in international relations is the so-called

"trade war" that has been going on for 5 years between China and the US. Although the term "trade war" is not scientific and legitimized, many scientific works are devoted to this topic with a discussion of various factors and consequences of its impact on the economic world (Li Sheng, Dmitri Felix do Nascimento, 2021).

In our opinion, the most exact and correct scientific definition of a "trade war" is given that it provides an economic rationale for the existence of barriers to trade (Melatos, Raimondos, and Gibson, 2019). Continuing the thought of scientists, it should be noted that a "trade war" is most likely manifested in active actions leading to restrictive measures in international trade, and the rigidity of these economic restrictions determines its status, which is similar to the term "war" from military science. For the US, the so-called "trade war" policy is not new, but rather a fairly traditional solution, which has a history of about 100 years (Mitchener, Wandschneider, and Hjortshøj O'Rourke, 2021).

Full history of trade wars with hierarchical consequences has been summarised in scientific book (Li Sheng, Dmitri Felix do Nascimento, 2021). Their work justifies all economic conflicts and their solutions. One of the demonstrative examples of such a war is the trade war after the US adopted the Smoot-Hawley tariff (1930). The legislation raised the average US tariff on dutiable imports by around 6 pp. In addition to strategically targeted tariffs, retaliation involved such non-tariff measures as quotas, boycotts and increased sales resistance to US goods. An example of the impact is a 33% decline in exports of automobiles and the retaliators' welfare gains from trade fell by roughly 8-17% (ibid).

Thus, in the framework of regional trade agreements described in the economic studies (Titievskaia, 2019), the history of severe restrictive measures is called "tariff wars". Possible outcomes and gains as a result of "tariff wars" are assessed using game theory in scientific publication of Lloyd (1992). He recognised "tariff war" equilibrium as the solution of a two-person non-zero-sum game in which the countries or blocs are the players. As well, he analysed the optimal tariff for two countries (or two trading blocs) to maximise the welfare of members when each can retaliate repeatedly in a "tariff war". This produced the result that both countries normally lose from

a tariff war, although the country initiating the war can gain. Moreover, Thompson (2013) found that if one country is substantially bigger than the other, it can expect to gain from retaliation – big countries win trade wars. They extended the model to three players. This introduces the possibility of different coalitions of two players (there are three possibilities with three players). The game becomes a two-stage game, the first stage being the choice of partner and the second the choice of optimal tariff for each player. The prospects of countries gaining from the formation of customs unions are greater with three players, and again the larger the union the more likely it is to gain (Titievskaia, 2019).

These game theory models can also be used to compare free trade areas, which do not have a common external tariff policy, with customs union which do. authors compare the advantages to two countries of forming either a free trade area or a customs union when there is a third country. They show that a customs union has two advantages in this context. It is a larger bloc for the purpose of setting optimal tariffs, and it internalises a "tariff externality" which exists when both members import the same good. The latter effect is due to the induced improvement in the terms of trade which benefits both countries when only one imposes a tariff on imports from the third outside country (Mann, 1987; Martins, Pinto, and Passamani-Zubelli, 2017; Freund, Maliszewska, Mattoo, and Ruta, 2020).

The problem of "tariff wars" in a history of international economic relations is a part of highest confrontations which happened due to misunderstanding of economic preferences from free trade and not realised capacity domestically used resources. However, referring to the modern scientific findings, sometimes tariff wars are the only mechanism possible to protect domestic economy from foreign intervention. Analysis of trade restrictions typically includes analysis of the main macroeconomic indicators belonging to the part of international trade. There are many methods and modern researches dedicated to the international trade effectiveness analysis, but statistically correct and relevant are given by WTO, IMF, OECD and The World Bank (2021).

WTO economic analysis of international trade is based on analytical indexes with an accent on international jurisprudence and

trade practices (WTO, 2012). Moreover, WTO gives the complete picture of international trade mapping with the help based on the WTO trade barometers methodology (WTO, 2019). These indicators are grouped into the following branches, viz. (a) Goods Trade Barometer and (b) Services Trade Barometer. Both branches indicate exports and imports flows, as well as financial and investment flows. Separate parts present statistic indicators in the following dimensions: (1) Merchandise trade; (2) Trade in services; (3) Tariffs; (4) Non-tariffs measures; and (5) Global value chains (WTO, 2019).

With developed scale, such barometer indicators are signalling about normal and dangerous trends, giving a forecast for international trade development in the short-run.

OECD statistics dedicated to the international trade, considers BoP (including current account balance, financial account and investment account). In addition, it visualizes the merchandise trade price index (MTPI), trade in value-added (TVA) and international trade in the services index (ITSI). Such grouping of international trade indicators in specific clusters gives a full picture of international trade development with retrospective and perspective analyses. In addition, OECD statistics widespread the information on trade restrictions. In particular, there are trade restrictiveness index (TRI), services restrictiveness index (SRI), tariff index and non-tariff restrictiveness index (OECD, 2019). This methodology includes the following restrictions: restrictions on foreign entry, restrictions to the movement of people, discriminatory measures, barriers to market competition and regulatory transparency. Despite deep and justified methodology of estimations and a wide range of data, these indexes have limitations in use, because they demonstrate only countries who are OECD-members and they are identified by using survey procedures.

In our opinion, The World Bank database is most filled with information available on international trade. It is obvious because The World Bank collects all important macroeconomic indicators, which reflect reliable information of economic health for each country (The World Bank, 2021). In particular, its data includes access to the economic and financial data in international trade, including comparative advantages of nations, ranking countries by export goods and services etc. Furthermore, The World Bank provides international

finance statistics indicating the financial sustainability of countries (The World Bank, 2021). And finally, there are many tables and charts dedicated to the tariff policy and specific visualization of the tariff and non-tariff barriers including currency forecast and dynamic changes are in FOREX market. Its statistic database includes a wide range of indicators (quarterly and annually, belonging to international energy indexes, fuel indexes, HighTech indexes, international tourism indexes, logistic performance index and terms of trade (World Bank, 2021). At the same time, its data include a set of tariffs indexes to the concrete branches of manufacturing and service. These data are presented in the form of tariff rates (%) and summarized indexes which help to compare countries worldwide. All indexes are visualized as well and presented in a table form. In addition, they include world indicators and world trends, which enable to show the position of each country on the background of the world tendencies.

Comparative economic analysis of international trade dynamics in separate advanced, emerging and developing countries

The comparative analysis is one of the most used in the practice. In the international trade, all of indicators are systematized by trade sectors and countries.

Referring to IMF (2016), all economies worldwide are divided into 3 statuses: advanced economies, developing and emerging. Although, this classification is quite specific and other official world institutions (OECD, World Bank and WTO, 2020) do not support it, dividing countries just to developed and developing. Here, we will use IMF classification. Advanced economies considered in this research are Australia, Canada, Germany, the UK and the US. Developing countries are Brazil, Columbia, Costa Rica, Turkey and South Africa. Emerging economies are considered here China, India and Russian Federation. Such a set of countries is chosen from the perspective of their comparability within a divided group and from the point of representativeness in the geographical placement. Also, our own interest to the international trade in chosen countries exists from the point of professional activity and research.

The comparative economic analysis is the sub-field of economic methodology which gives the possibility to identify, check and compare

different indicators referring to the same datasets (Greenlaw, Taylor, Shapiro, 2011). Comparative economic analysis of international trade includes collation and matching method including the main international trade indicators and their interpretations with the help of geographical and table presentations (Mankiw, 2016).

Current account trends

The current account is the main account of BoP which includes the balance of trade in goods, the balance of trade in services, income (inflow minus outflow) and current transfers (secondary income). The current account reflects a quantitative side of international trade (Krugman, and Obstfeld, 2015). It should be noted, that the current account can be with a surplus or with a deficit. A surplus occurs whenever a balance has a positive value, while a deficit is vice versa (Mankiw, 2016).

Balance of trade in goods is the most significant part of a current account in percentage, because it shows the value of physical trade. Balance of trade in services is the second part by importance, because it includes intangible assets' value in international trade. Income refers to the net inflow or outflow of money depending on where they have been earned. Current transfers refer to any monetary transactions from abroad which include non-earning: monetary gifts, foreign aid and other subsidization free of charge (Krugman, and Obstfeld, 2015). Based on the information given above, let us consider the statistics background of current account BoP chosen countries.

Based on statistics (OECD, 2021), a comparison of advanced economies with current-account indicators show the following trends (Figure 1):

- Australia always had a current account deficit starting from 2000 to 2018. Only in the pre-pandemic and pandemic period, Australia changed into the current account surplus (2019) which increased three times in 2020.

- Canada had since 2002 till 2008 surplus. But this trend has been changed in 2009 and till now Canada has a persistent trade deficit.

- Germany has a trade deficit in 2000-2004. This trend has been changed significantly in 2002 and till now Germany has an increasing trade surplus.

- The UK demonstrates a trade deficit along with all analysed periods. Only in 2001 and in 2019 country had a small surplus.

- The US always has a persistent trade deficit along with the whole history of its trading attitudes.
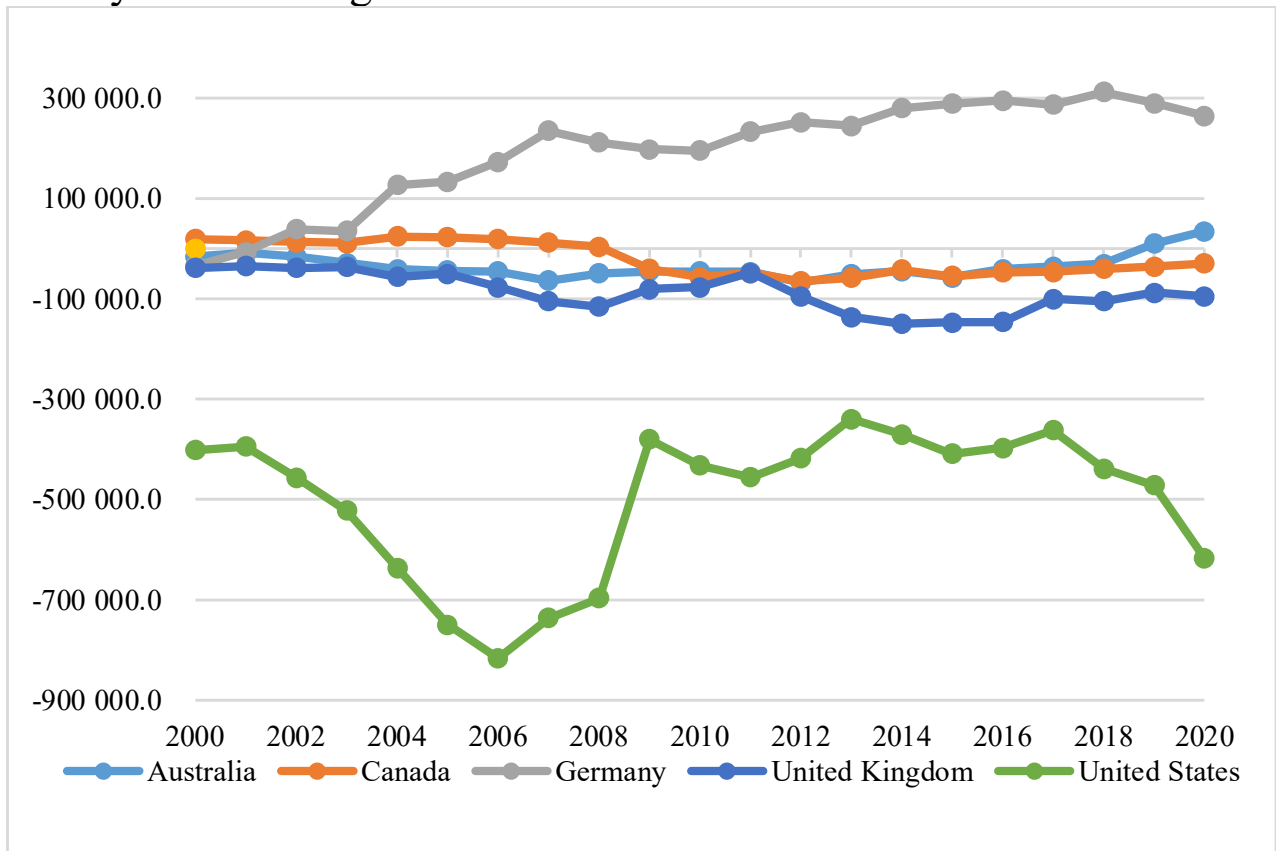

Figure 1: Dynamics of current account balance in advanced countries
Source: created by author based on OECD statistics database (2021)

Despite all the above-mentioned countries are advanced economies, they progress in different ways. For example, Germany keeps pace of trade on surplus, while the UK, the US, Australia and Canada feel convenient even with the trade deficits. The difference can be explained by different international trade strategy implemented by these countries. Germany is following an export-oriented strategy, while other countries are import-oriented.

The second group of countries (developing) reflects the following trends (Figure 2):

- Brazil does not follow constant strategy in international trade. Starting from the trade deficit in 2000, it cycles with up and down from 2008 till 2020.

- Colombia demonstrates persistent current account deficit from 2001 to 2020, which is characterized by means of chaotic trend without any system and predictability.
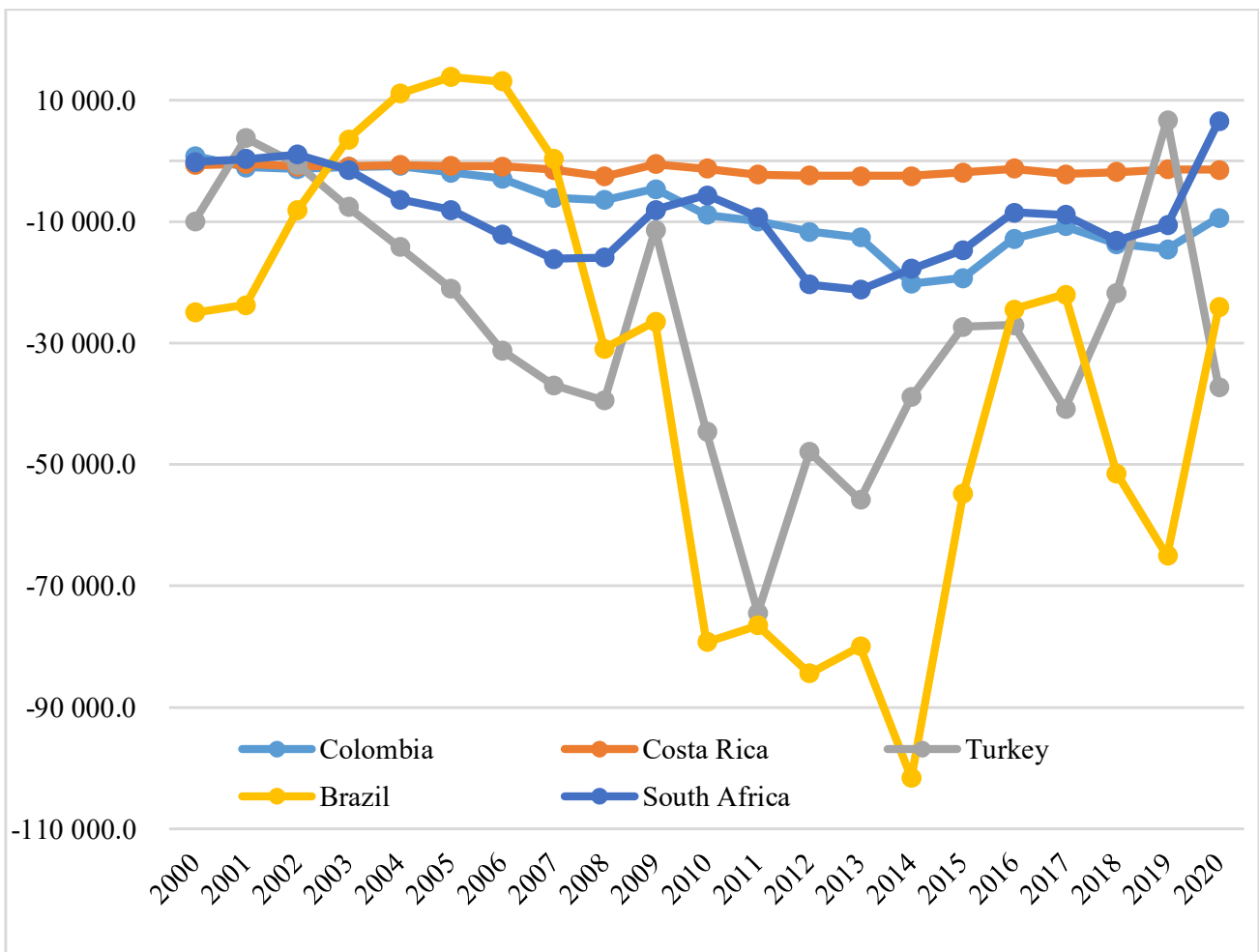
Figure 2: Dynamics of current account balance in developing countries
Source: created by author based on OECD statistics database (2021)

- Costa Rica, similarly to Columbia, has constantly changing current account deficit without any predictability.

- Turkey does not indicate consistency since 2000. Thus, in 2001 and 2019 it accidently became into the trade surplus, but the rest of considered time it stayed with increasing trade deficit, which has been on the peak in 2011 and 2020.

- South Africa, similarly to previous countries, does not demonstrate stability in international trade. Most of time, viz. 2000, 2003-2019 it fell into the current deficit, while 2001-2002 and 2020 a trade surplus appeared.

Unfortunately, all developing economies analysed, show absence of any strategy and tactic in international trade, but this situation is obvious, because developing countries depend on advanced and emerging economies, they are forced to follow international rules and WTO agreements negotiated illusory benefits for them with low standards.

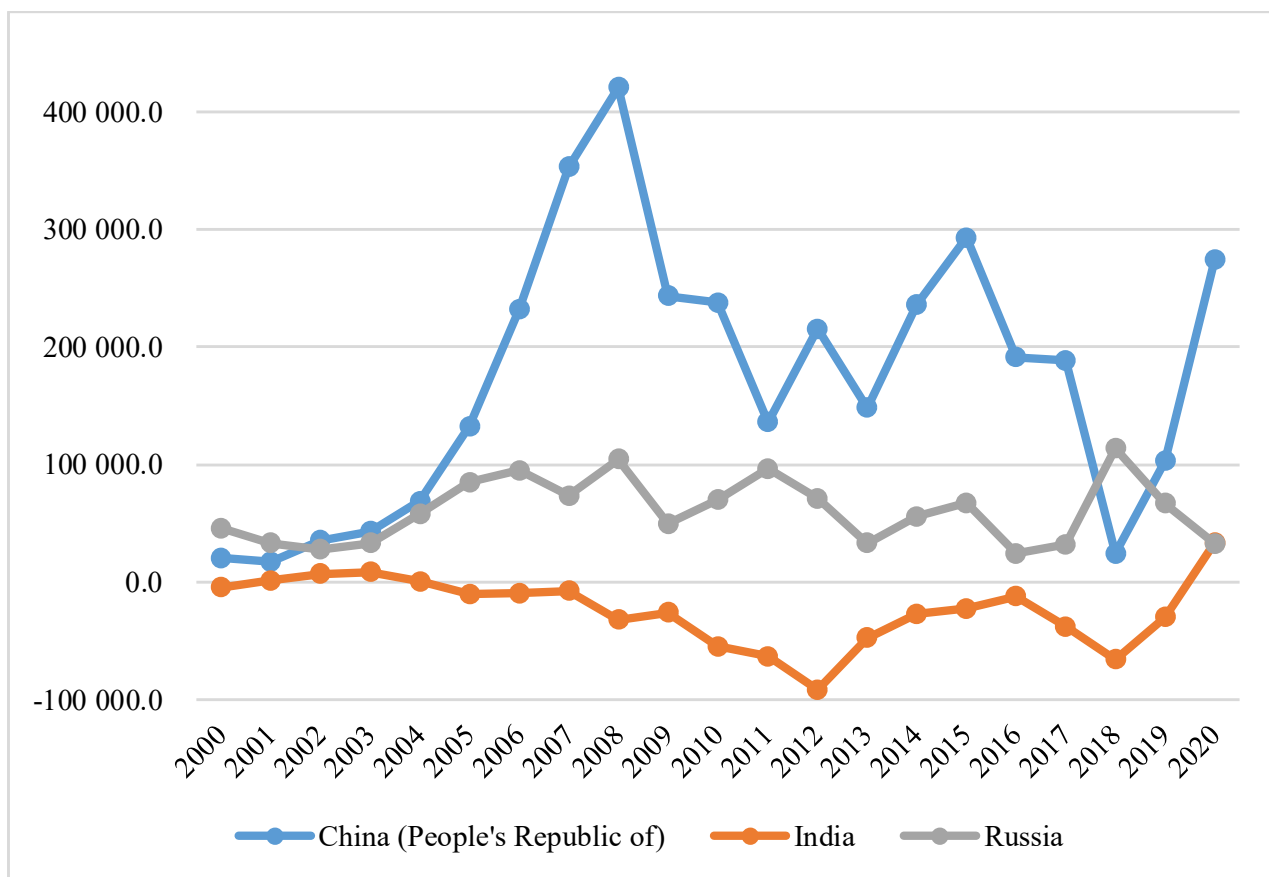Figure 3 shows comparing trends with emerging countries:

Figure 3: Dynamics of current account balance in emerging countries
Source: created by author based on OECD statistics database (2021)

- China demonstrates an impressive increase in a trade surplus since 2000 till now. Such an emerging situation was interrupted only in 2018, when the trade war between the US and China has been started. Repeatedly hiking tariffs hit Chinese economy significantly, but even then, economy demonstrates in 2020 twice increased trade volumes comparing with the per-pandemic periods.

- India doesn't demonstrate consistency and stability in international trade. Starting from the trade deficit in 2000 and emerging in 2001-2004, it fell again into the trade deficit from 2005 till 2019. However, India cardinally changed deficit to the surplus pushing international trade up in 2020.

- Russia constantly demonstrates trade surplus since 2000, however this trend is unstable that is explained by economic sanctions on the background of constantly depreciating rubble.

All of three described above economies are emerging, they have different strategies, as well as advanced economies. For example, both

China and Russia follow export-orientation, while India seems does not have any strategy at all.

Figure 4 shows the state of the balance for trade in goods in advanced economies and reflects the following trends:
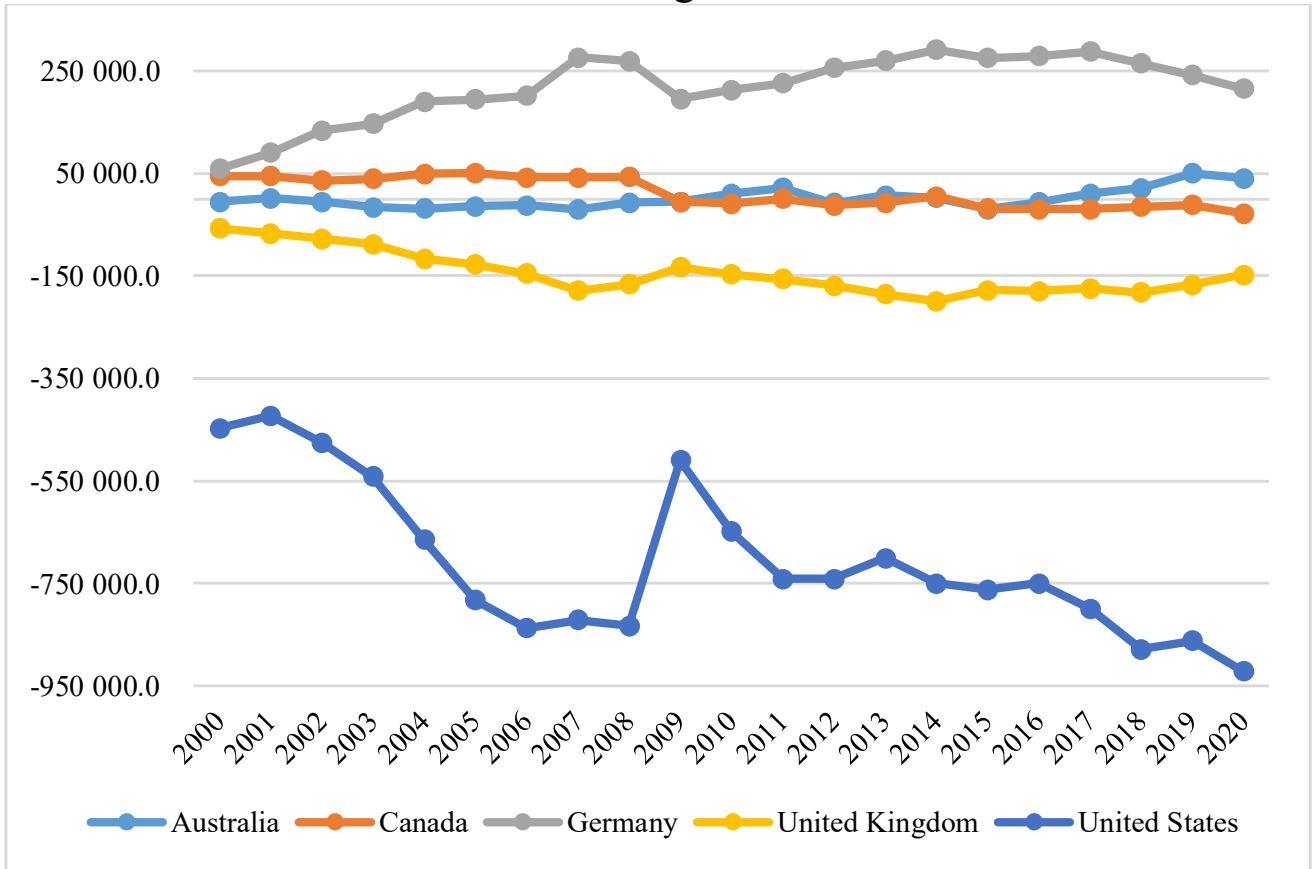

Figure 4: Dynamics of balance for trade in goods balance in advanced countries
Source: created by author based on OECD statistics database (2021)

- Australia experiences up and down within the business cycle. From 2000-2009, country had unstable fall and growth in trade deficit, trying to improve it till 2009. In 2010-2011 country went into a trade surplus, which charged in 2012 with deep fall, and improved in 2013-2014. Period of 2015-2016 was most unfavourable, when country has experienced a deepest trade deficit and since 2017 till now country improved and changed to a surplus for the trade in goods.

- Canada has been in a trade surplus since 2000 till 2008, which has become into the trade deficit in 2009. Such deficit can be considered as persistent excluding 2011 and 2014, where country shortly came in a surplus.

- Germany is constantly increasing trade in goods since 2000 till 2020 with insignificant small up and down. Till now, country expanded

trade in goods in 3.6 times.

- The UK is demonstrating a trade deficit in goods since 2000 till 2020. It can be said; such trade deficit is consistent and steady. The size of the deficit has deepened in 2.5 times from 2000 to 2020.

- The US during 2000-2020 had impressive by numbers trade deficit in goods, which is constantly grew. Its size increased since 2000 twice.

As the analysis above shows, advanced countries demonstrate absolutely different trading status and position in the trade of goods. If both the UK and the US are strongly depending on imports of goods, Germany is clearly export-oriented growing economy. Canada from 2009 turned to the import-depending country, probably, because of economies of scale and targeting competitive advantages in more valuable goods. Australia does not show any stability in trading policy, whereas become last 3 years in trading export strategy.

Comparative analysis of trade in goods (as the main part of current account for developing countries) is indicated in Figure 5 and reflects the following:
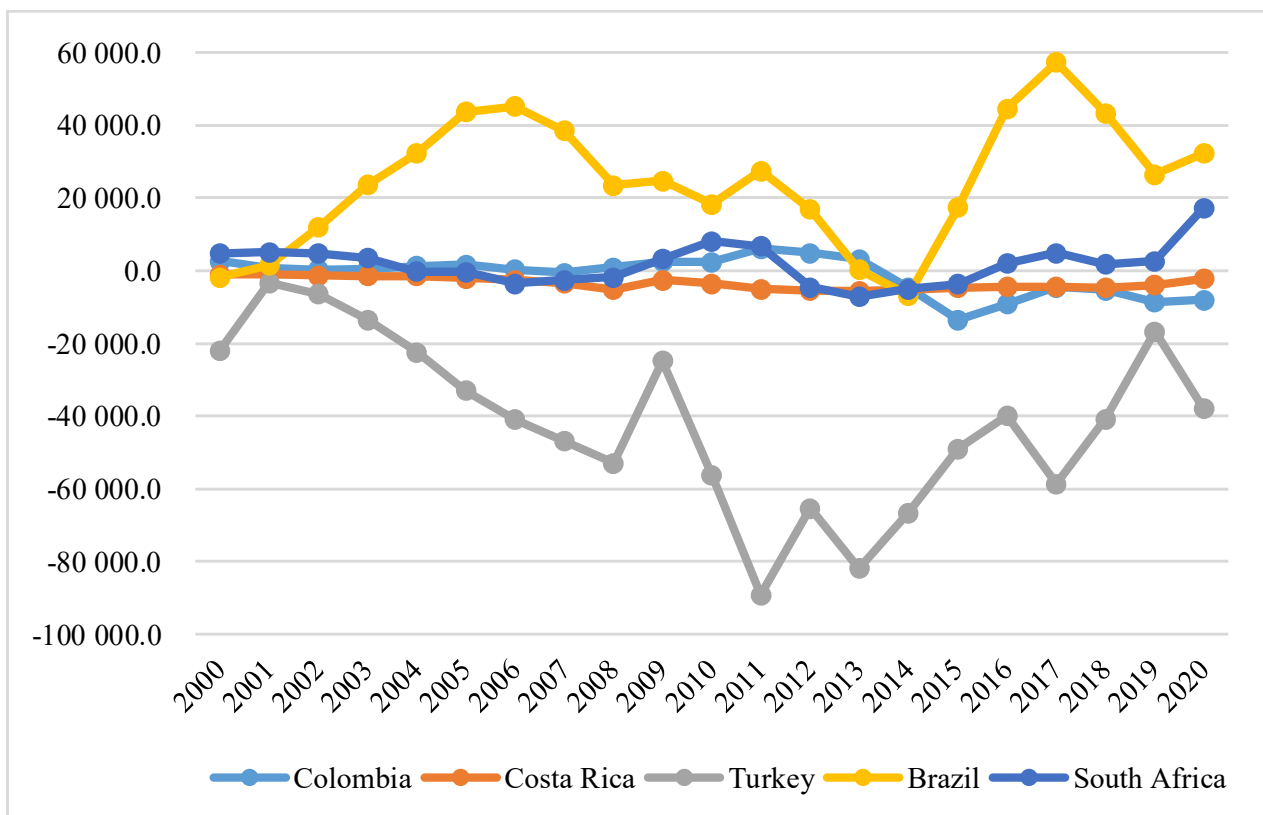

Figure 5: Dynamics of balance for trade in goods balance in developing countries

Source: created by author based on OECD statistics database (2021)

- Brazil is experiencing up and down in trade of goods since 2000. From 2001 to 2007 country shows its impressive growth in trade, in 2008-2013 it was sharp decline, in 2014 it changed to the trade deficit, from 2015 till now trade of goods is expanding.

- Colombia has no dominating trend in selling and buying goods since 2000. From 2002 to 2006, it showed diminishing trade surplus, in 2007 it decreased sharply to the deficit, from 2008 to 2013 it dynamically grew, from 2014 till now country experiences a trade deficit in goods, which is doubled comparing with previous surpluses.

- Costa Rica is constantly showing a trade deficit of goods since 2000 till 2020, but common tendency reflects its deep fall in 2008-2014 and improving trend in 2015-2020.

- Turkey is constantly experiences a trade deficit in goods, which is primarily has been improved from 2000 to 2002 and afterwards significantly fluctuates on the wide deviations.

- South Africa demonstrates cyclical fluctuations in the trade of goods. In 2000-2003, country had surplus, in 2004-2008 country fell into the trade deficit, in 2009-2011 country experienced the best position with surplus, in 2012-2015 again deep fall into the trade deficit, from 2016 till now country dynamically increases trade of goods surplus.

Referring to the situation described above, all developing countries except of Turkey show fluctuations within the business cycle in the trade of goods. Only Turkey is always experienced and still experiences sustainable trade deficit. Such trend leads us to the conclusion that developing countries are in a strict dependence on their trade partners within the group of developing countries, as well they depend on advanced economies' requests.

Figure 6 indicates comparative analysis of trade in goods in emerging economies and reflects the following trends:

- China demonstrates progressing dynamics in trade of goods since 2000 till 2020. It should be noted, that the trade in goods by China increased in 17 times from 2000 till 2020.

- India has always been in the trade of goods deficit. Even from 2000 to 2012 country has experienced deep fall in trade of goods, since 2013 till 2016 country has attempted to improve a trade deficit, in 2017-2019 country again experienced fall in trade of goods, in 2020

country demonstrated the level of trade reached in 2008 trying to move toward the balanced economy.
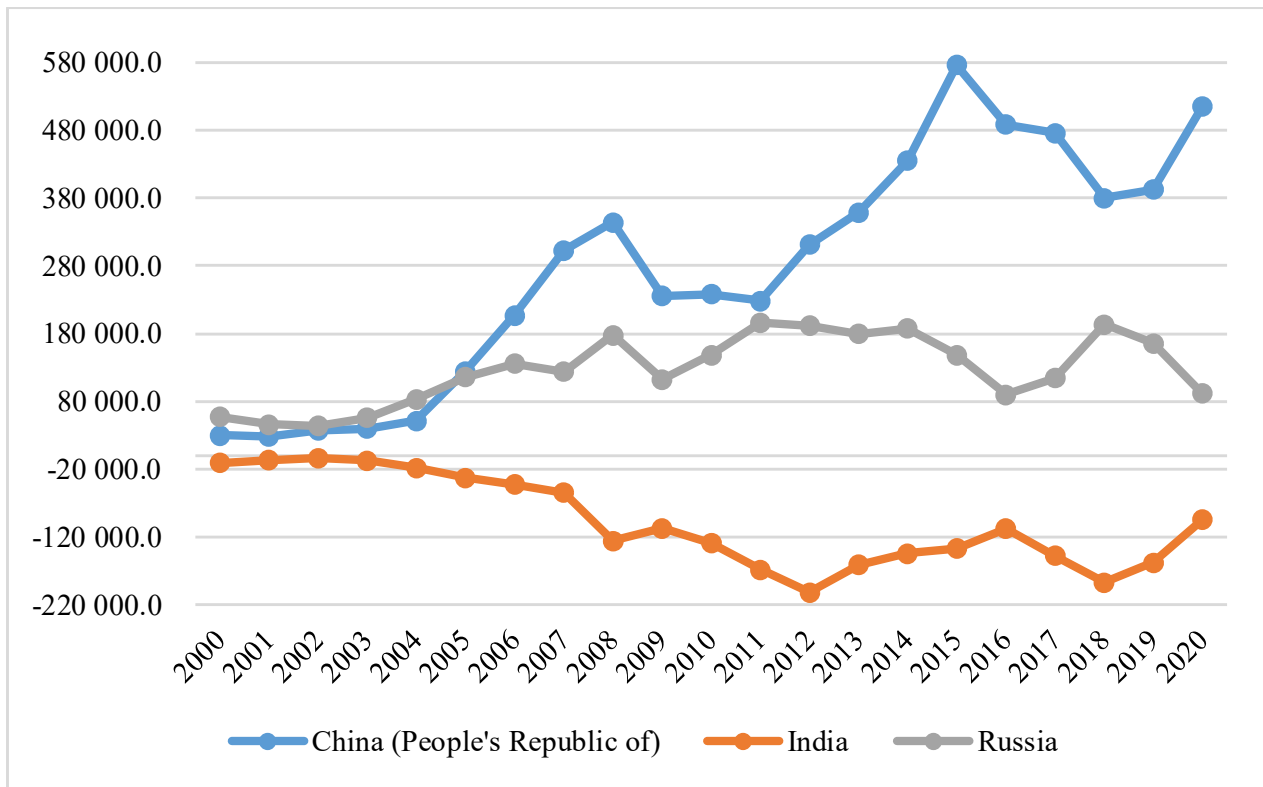

**Figure 6: Dynamics of balance for trade in goods balance
in emerging countries**
Source: created by author based on OECD statistics database (2021)

- Russia has been in the trade surplus for goods during 2000-2020. However, this trend always experiencing up and down. 2018-2020 were unfavourable for Russia, show diminishing trend, probably, because of implemented economic sanctions.

Referring to the situation analysed above, despite emerging status of economy, China, India and Russia demonstrate absolute different strategies and positions in trading goods.

Thus, China keeps pace to the expanding growth, India is likely permanently import-dependent economy and Russia is moving towards its business cycle, which deepening by its political status worldwide.

Second by importance part of BoP is a trade in services balance. As service sphere today is developing quite rapidly worldwide, it occupied significant part in international trade as well. Common picture of service development is presented by means of comparative analysis below.

Figure 7 indicates trends of advanced economies and shows the following:

- Australia has no exact position in trade of services. In 2000-2003, country showed growing surplus, in 2004-2019 country fell into the trade deficit, the deepest point of which has been observed in 2013. Gradually, from 2014 to 2019 country decreased the trade deficit becoming in 2020 in strong position of trade exporters of services.

- Canada has always been in the trade deficit for services, deepest point of which has been reached in 2012. Since 2012, the country managed to reduce trade deficit till 2020 by 4 times.

- Germany shows persistent trade deficit in services since 2000 till 2019, which however, diminishing and became a surplus in 2020.

- The UK is traditionally-oriented in trade of services (e.g. education). Since 2000 till now it is observed significant grows in 5 times, which however has been disrupted in times of financial crisis during 2009-2010.

- The US traditionally demonstrates the surplus in trade of services, which is consistently increases from 2000 till 2020 in 3.2 times. The most peak in trade of services has been in 2018.
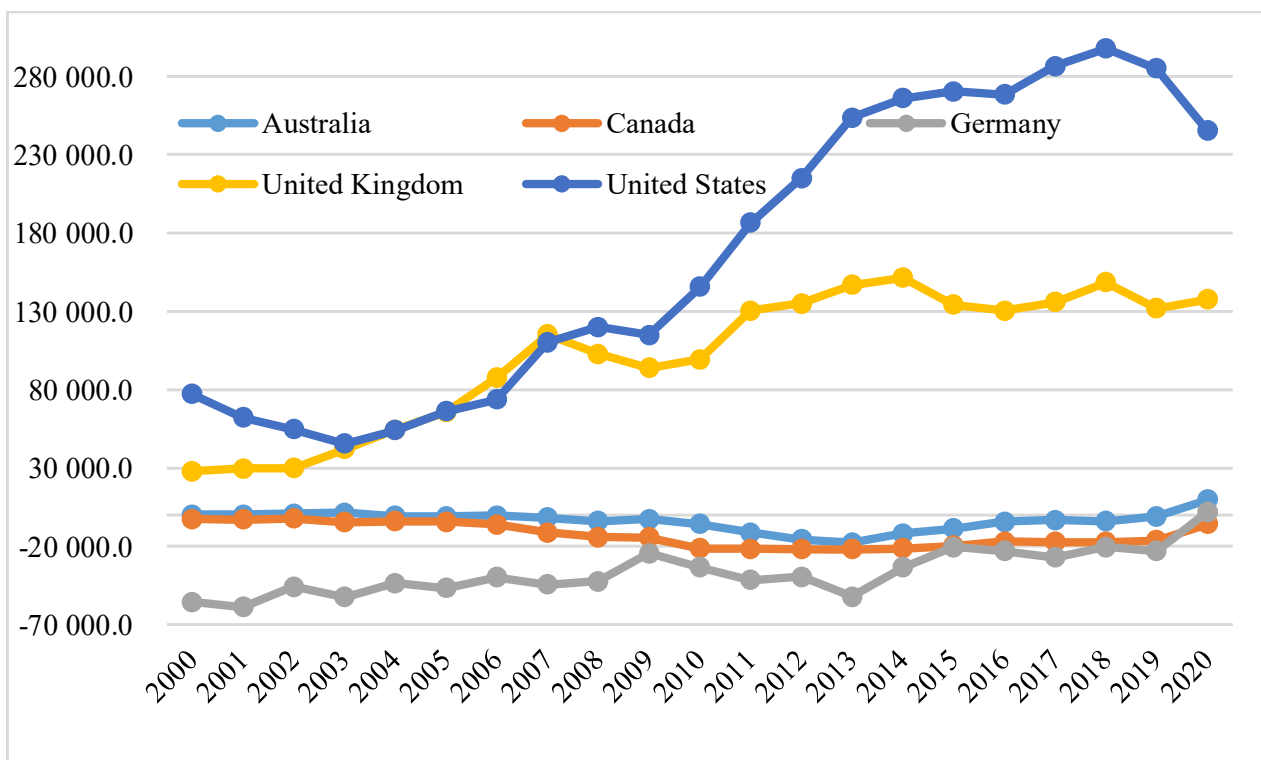

Figure 7: Dynamics of balance for trade in services balance in advanced countries

Source: created by author based on OECD statistics database (2021)

Summarizing the situation described above, it should be stated that advanced economies do not show equal strategies in trading services similarly to goods.

While the UK and the US are dynamically improving trading services, Canada and Germany prefer to import services. Only Australia again does not show stable preferences in trading services policy.

Figure 8 reflects trends in trade of services for developing economies and show the following:

- Brazil is considered as an economy depending on import from 2000 to 2020, however, the deepest fall was observed in 2014.

- Colombia shows persistent trading deficit in services from 2000 to 2020, the highest peak of which has reached in 2014.

- Costa Rica shows growing trend on trading services, which peak surplus is observed in 2019.

- Turkey demonstrates the trade surplus in services, which is consistently growing from 2000 to 2019 in 3 times due to its tourism-orientated economy, however, it was interrupted in 2020 due to pandemic.

- South Africa demonstrates the trade deficit in services along 2000-2020 except of 2003. The deepest fall of its deficit observed in 2010.

Due to the different service preferences, developing economies show different strategies.

While Brazil, South Africa and Colombia are strongly depending on the trade in services, then Costa Rica and Turkey are export-oriented in services sphere.

Figure 9 shows comparative analyses in trade of services for emerging economies and reflects the following:

- China, from country being depended from services, becomes in the deep trade with it, the peak of which was in 2008.

- India, in the opposite of China, from 2004 took a strategy to export-oriented country, which increased more than 40 times.

- Russia is the country with import-oriented strategy in service sphere, but this trend is consistently changing.

Thus, analysis of emerging economies shows difference in trading of services strategies. Both China and Russia are import-depending, while India is export-oriented.
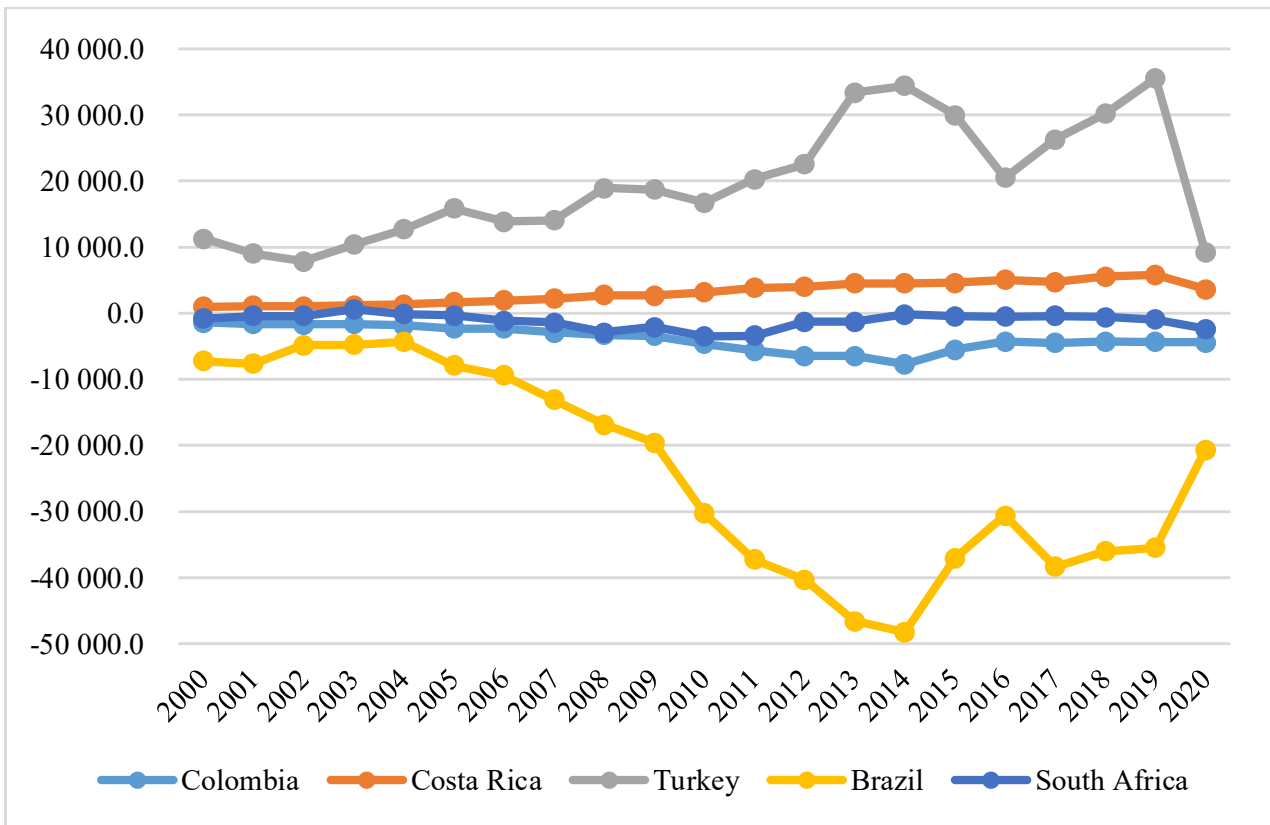
Figure 8: Dynamics of balance for trade in services balance in developing countries

Source: created by author based on OECD statistics database (2021)
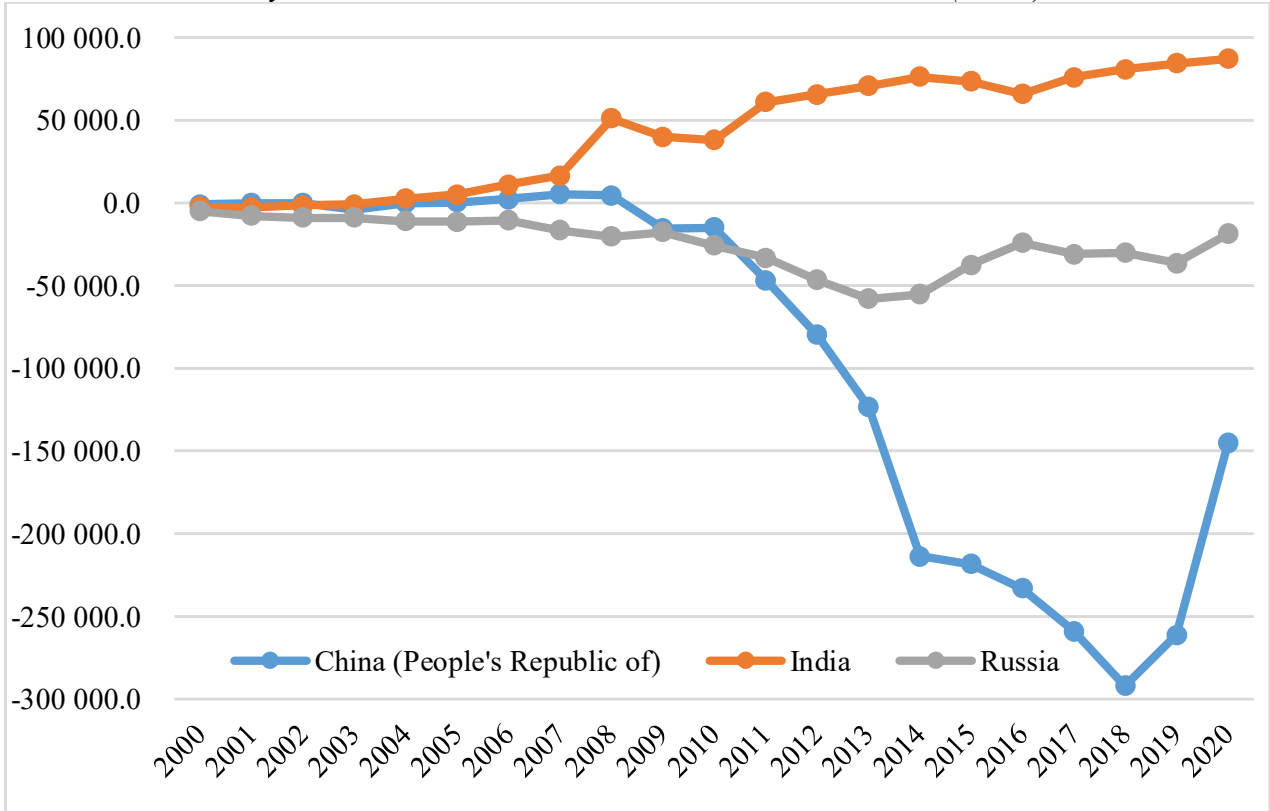

Figure 9: Dynamics of balance for trade in services balance in emerging countries

Source: created by author based on OECD statistics database (2021)

Trade profiles' analysis

This part is dedicated to description of trends each country in the world economy. It is considered around justification of country profile in the following fields: (a) Trade indicators; (b) Development indicators (Merchandize trade and service trade); (c) Tariff and non-tariff desk board; (d) Economic growth; (e) Export and import parameters; (f) World ranking (World Bank, WITS, 2021). Following this, we will consider world trade profiles of each country.

Advanced economies:

- Referring to the world average trade growth, Australia it shows exceeding status, but referring to the world GDP growth, it fluctuates depending on terms of trade. In 2000, country had 204 import partners, imported 4745 products and index of its export penetration was 11.58. At the same time, the number of export partners has been 219, exporting products 4589 and HH Market Concentration was 0.08. The main products of export include fuels (20,90%), animals (9.18%), and metals (9.90%). The number of tariff agreements 9 with weighted average 5.83%. Duty free tariff line share is 31.08%. Merchandise import rate 41.03% of GDP, while merchandise export rate 32.61% of GDP. Service import rate is 21.59% of GDP, while export in service rate is 19.43% of GDP. Country's growth in 2000 was 12.93%, while world growth 7.07% (World Bank, WITS, 2021).

As for 2019, Australia had Trading Across Borders Rank 106. In 2019, it had 216 import partners with 4317 import products, and index of its export penetration 13.10. At the same time, it had 211 export partners with 4118 export products. HH Market Concentration was 0.20. The main products of export include minerals (21.01%), fuel (18.93%), miscellaneous (19.42%). The number of tariff agreements 29 with weighted average 0.77%. Duty free tariff line share is 58.46%. Merchandise import rate 45.71% of GDP, while merchandise export rate 35.27% of GDP. Service import rate is 21.60% of GDP, while export in service rate is 24.11% of GDP. Country's growth in 2019 was 2.74%, while world growth (-1.13%).

- In 2000, Canada had 210 import partners, imported 4924 products and index of its export penetration 16.20. At the same time, the number of export partners has been 208, exporting products 4658 and HH

Market Concentration was 0.64. The main products of export include transportation (24,04%), machinery and electronics (16.22%) and fuels (13.19%). The number of tariff agreements 10 with weighted average 1.13%. Duty free tariff line share is 54.61%. Merchandise import rate 83.04% of GDP, while merchandise export rate 70.24% of GDP. Service import rate is 38.68% of GDP, while export in service rate is 44.36% of GDP. Country's growth in 2000 was 8.46%, while world growth 7.07%.

As for 2019, Canada had Trading Across Borders Rank 51. There are 224 import partners with 4536 import products, and index of its export penetration 16.08. At the same time, it had 219 export partners with 4354 export products. HH Market Concentration was 0.51. The main products of export include fuels (22.11%), transportation (16.38%), machinery and electronics (10.80%). The number of tariff agreements 24 with weighted average 1.51%. Duty free tariff line share is 82.99%. Merchandise import rate 64.98% of GDP, while merchandise export rate 52.44% of GDP. Service import rate is 33.33% of GDP, while export in service rate is 31.64% of GDP. Country's growth in 2019 was (-0.03%), while world growth (-1.13%).

- Germany in 2000 had 215 import partners, 4904 imported products and index of its export penetration 44.28. At the same time, the number of export partners has been 216, exporting products 4767 and HH Market Concentration was 0.05. The main products of export include machinery and electronics (29.90%), transportation (19,63%) and miscellaneous (13%). There are no tariff agreements; weighted average 2.29%. Duty free tariff line share is 51.31%. Merchandise import rate 61.53% of GDP, while merchandise export rate 53.99% of GDP. Service import rate is 30.68% of GDP, while export in service rate is 30.85% of GDP. Country's growth in 2000 was 1.88%, while world growth 7.07%.

As for 2019, Germany had Trading Across Borders Rank 42. There are 231 import partners with 4497 import products, and index of its export penetration 39.03. At the same time, it had 232 export partners with 4413 export products. HH Market Concentration was 0.04. The main products of export include machinery and electronics (27.80%), transportation (20.01%), chemicals (12.86%). There are no tariff

agreements, weighted average 1.83%. Duty free tariff line share is 58.16%. Merchandise import rate 87.99% of GDP, while merchandise export rate 70.54% of GDP. Service import rate is 41.10% of GDP, while export in service rate is 46.89% of GDP. Country's growth in 2019 was (-2.52%), while world growth (-1.13%).

- The US in 2000 had 217 import partners, 4919 imported products and index of its export penetration 45.75. At the same time, the number of export partners has been 222, exporting products 4911 and HH Market Concentration was 0.08. The main products of export include machinery and electronics (39.37%), transportation (13.57%) and miscellaneous (11.56%). The number of tariff agreements 13 with weighted average 2.10%. Duty free tariff line share is 49.59%. Merchandise import rate 25.04% of GDP, while merchandise export rate 19.91% of GDP. Service import rate is 14.35% of GDP, while export in service rate is 10.69% of GDP. Country's growth in 2000 was 5.79%, while world growth 7.07%.

As for 2019, The US had Trading Across Borders Rank 39. There are 223 import partners with 4529 import products, and index of its export penetration 40.62. At the same time, it had 223 export partners with 4529 export products. HH Market Concentration was 0.05. The main products of export include machinery and electronics (22.39%), transportation (16.72%), fuels (12.15%). The number of tariff agreements 26 with weighted average 13.78%. Duty free tariff line share is 52.42%. Merchandise import rate 26.31% of GDP, while merchandise export rate 19.65% of GDP. Service import rate is 14.58% of GDP, while export in service rate is 11.73% of GDP. Country's growth in 2019 was (-0.46%), while world growth (-1.13%).

- The UK in 2000 had 217 import partners, 4876 imported products and index of its export penetration 37.02. At the same time, the number of export partners has been 217, exporting products 4786 and HH Market Concentration was 0.06. The main products of export include machinery and electronics (33.59%), miscellaneous (14.16%) and chemicals (11.13%). There are no tariff agreements; weighted average 2.72%. Duty free tariff line share is 49%. Merchandise import rate 52.13% of GDP, while merchandise export rate 37.57% of GDP. Service import rate is 26.93% of GDP, while export in service rate is

25.20% of GDP. Country's growth in 2000 was 4.49%, while world growth was 7.07%.

As for 2019, The UK had Trading Across Borders Rank 33. There are 228 import partners with 4507 import products, and index of its export penetration 32.66. At the same time, it had 228 export partners with 4481 export products. HH Market Concentration was 0.05. The main products of export include machinery and electronics (21.51%), transportation (15.24%), chemicals (12.75%). There are no tariff agreements; weighted average 1.72%. Duty free tariff line share is 55.5%. Merchandise import rate 64.29% of GDP, while merchandise export rate 41.20% of GDP. Service import rate is 32.69% of GDP, while export in service rate is 31.60% of GDP. Country's growth in 2019 was (-2.97%), while world growth (-1.13%).

Developing economies:

- In 2000, Brazil had 188 import partners, 4659 imported products and index of its export penetration 10.46. At the same time, the number of export partners has been 198, exporting products 4264 and HH Market Concentration 0.08. The main products of export include transportation (14.62%), machinery and electronics (13.16%) and food (11.27%). There was 1 tariff agreement; weighted average 12.69%. Duty free tariff line share is 0.99%. Merchandise import rate 22.64% of GDP, while merchandise export rate 17.36% of GDP. Service import rate is 12.45% of GDP, while export in service rate is 10.19% of GDP. Country's growth in 2000 was 7.76%, while world growth 7.07%.

As for 2019, Brazil had Trading Across Borders Rank 108. There are 219 import partners with 4257 imported products, and index of its export penetration 12.58. At the same time, it had 227 export partners with 4183 export products. HH Market Concentration 0.12. The main products of export include vegetables (18.43%), fuels (13.45%), and minerals (11.72%). The number of tariff agreements 64 with weighted average 7.97%. Duty free tariff line share is 17.24%. Merchandise import rate is 28.98% of GDP, while merchandise export rate is 22.27% of GDP. Service import rate is 14.65% of GDP, while export in service rate is 14.32% of GDP. Country's growth in 2019 was (-2.14%), while world growth (-1.13%).

- Columbia had 190 import partners, imported 4546 products and index of its export penetration 4.17. At the same time the number of export partners has been 149, exporting products 3300 and HH Market Concentration 0.26. The main products of export includes fuel (43.08%), vegetables (17.45%) and chemicals (7.62%). There were 2 tariff agreements; weighted average 10.96%. Duty free tariff line share is 2.76%. Merchandise import rate 32.67% of GDP, while merchandise export rate 24.61 (percent of GDP). Service import rate is 16.75% of GDP, while export in service rate is 15.92% of GDP. Country growth in 2000 was 4.78%, while world growth 7.07%.

As for 2019, Columbia has changed world rank 159. There are 201 import partners with 4196 import products, and index of its export penetration 5.76, at the same time 187 export partners with 3357 export products. HH Market Concentration is 0.15. The main products of export include fuels (54.78%), vegetables (14.41%), stone and glass (5.66%). Number of tariff agreements 66 with MFN 2.92 %. Duty free tariff line share is 74.45%. Merchandise import rate 37.71% of GDP, while merchandise export rate 28.48% of GDP. Service import rate is 21.91% of GDP, while export in service rate is 15.80% of GDP. Country's growth in 2019 was (-2.67%).

- Costa Rica in 2000 had 152 import partners, imported 4338 products and index of its export penetration 3.05. At the same time, the number of export partners has been 117, exporting products 2555 and HH Market Concentration 0.28. The main products of export include machinery and electronics (38.64%), vegetables (24.20%) and textile and clothing (7.65%). There were 5 tariff agreements; weighted average 3.7%. Duty free tariff line share is 54.87%. Merchandise import rate 86.9% of GDP, while merchandise export rate 81.87% of GDP. Service import rate is 43.78% of GDP, while export in service rate is 43.11% of GDP. Country's growth in 2000 was (-2.6%).

As for 2019, Costa Rica has changed world rank – 168. There are 192 import partners with 4070 import products, and index of its export penetration 3.57, at the same time 150 export partners with 2988 export products. HH Market Concentration 0.15. The main products of export include miscellaneous (32.56%), vegetables (25.40%), food (11.94%). Number of tariff agreements 22 with weighted average

1.62%. Duty free tariff line share is 64.14%. Merchandise import rate 66.02% of GDP), while merchandise export rate 45.23% of GDP. Service import rate is 32.23% of GDP, while export in service rate is 33.79% of GDP. Country growth in 2019 was 5.03%.

- Turkey in 2000 had 173 import partners, imported 4662 products and index of its export penetration 12.01. At the same time, the number of export partners has been 186, exporting products 4391 and HH Market Concentration 0.08. The main products of export include textile and clothing (36.43%), machinery and electronics (12.16%), metals (10.62%). There were 14 tariff agreements with weighted average 2.38%. Duty free tariff line share is 55.99%. Merchandise import rate 42.35% of GDP, while merchandise export rate 30% of GDP. Service import rate is 22.47% of GDP, while export in service rate is 19.88% of GDP. Country growth in 2000 was 0.69%.

As for 2019, Turkey has changed world rank 122. There are 212 import partners with 4401 import products, and index of its export penetration 23.79. At the same time, 220 export partners with 4308 export products. HH Market Concentration 0.03. The main products of export include transportation (16.29%), textile and clothing (15.80%), machinery and electronics (15.21%). Number of tariff agreements 28 with weighted average 3.13%. Duty free tariff line share is 69.36%. Merchandise import rate 62.68% of GDP), while merchandise export rate 51.37% of GDP. Service import rate is 29.94% of GDP, while export in service rate is 32.74% of GDP. Country's growth in 2019 was (-0.82%).

- South Africa in 2000 had 214 import partners, imported 4752 products and index of its export penetration 12.30. At the same time, the number of export partners has been 210, exporting products 4690 and HH Market Concentration 0.05. The main products of export include metals (17.11%), miscellaneous (15.80%), fuels (10.17%). There were 4 tariff agreements with weighted average 5.27%. Duty free tariff line share is 43.67%. Merchandise import rate 51.44% of GDP, while merchandise export rate 43.76% of GDP. Service import rate is 24.28% of GDP, while export in service rate is 27.16% of GDP. Country growth in 2000 was 11.35%. As for 2019, South Africa has changed world rank 164. There are 232 import partners with 4482

import products, and index of its export penetration 12.15. At the same time, 223 export partners with 4460 export products. HH Market Concentration 0.07. The main products of export include stone and glass (17.28%), minerals (15.21%), transportation (13.63%). Number of tariff agreements 9 with weighted average 5.37%. Duty free tariff line share is 66.53%. Merchandise import rate 59.20% of GDP, while merchandise export rate 56.21% of GDP. Service import rate is 29.35% of GDP, while export in service rate is 29.85% of GDP. Country's growth in 2019 was (-2.48%).

Emerging economies:

- China in 2000 had 185 import partners, imported 4840 products and index of its export penetration 31.10. At the same time, the number of export partners has been 204, exporting products 4798 and HH Market Concentration 0.13. The main products of export include machinery and electronics (29.25%), textile and clothing (19.81%) and miscellaneous (10.78%). There were 3 tariff agreements; weighted average 14.67%. Duty free tariff line share is 1.73%. Merchandise import rate 39.41% of GDP, while merchandise export rate 39.15% of GDP. Service import rate is 18.52% of GDP, while export in service rate is 20.89% of GDP. Country growth in 2000 was 12.80%.

As for 2019, China has changed world rank 5. There are 215 import partners with 4425 import products, and index of its export penetration 48.14, at the same time 215 export partners with 4423 export products. HH Market Concentration 0.06. The main products of export include machinery and electronics (43.51%), miscellaneous (10.84%), textile and clothing (10.43%). Number of tariff agreements 25 with weighted average 2.53%. Duty free tariff line share is 30.04%. Merchandise import rate 35.84% of GDP, while merchandise export rate 32.06% of GDP. Service import rate is 17.34% of GDP, while export in service rate is 18.50% of GDP. Country's growth in 2019 was (-3.51%).

- India in 2000 had 174 import partners, imported 4441 products and index of its export penetration 16.74. At the same time, the number of export partners has been 212, exporting products 4501 and HH Market Concentration 0.07. The main products of export include textile and clothing (26.32%), stone and glass (19.57%) and chemicals (9.43%). There were 2 tariff agreements; weighted average 23.36%. Duty free

tariff line share is 6.12%. Merchandise import rate 26.90% of GDP, while merchandise export rate 20.05% of GDP. Service import rate is 13.90% of GDP, while export in service rate is 13% of GDP. Country's growth in 2000 was 7.94%.

As for 2019, India has changed world rank 87. There are 210 import partners with 4356 import products, and index of its export penetration 26.78. At the same time, 226 export partners with 4442 export goods. HH Market Concentration 0.06. The main products of export include chemicals (14.93%), fuels (13.78%), stone and glass (12.73%). Number of tariff agreements 22 with weighted average 6.59%. Duty free tariff line share is 18.24%. Merchandise import rate 39.55% of GDP, while merchandise export rate 28.24% of GDP. Service import rate is 21.14% of GDP, while export in service rate is 18.41% of GDP. Country's growth in 2019 was 0.71%.

- Russia in 2000 had 179 import partners, imported 4731 products and index of its export penetration 8.46. At the same time, the number of export partners has been 176, exporting products 4413 and HH Market Concentration 0.04. The main products of export include fuels (50.77%), metals (16.19%), miscellaneous (12.66%). Merchandise import rate 68.09% of GDP, while merchandise export rate 57.72% of GDP. Service import rate is 23.03% of GDP, while export in service rate is 44.06% of GDP. Country's growth in 2000 was 22.03%.

As for 2019, Russia has changed world rank 147. There are 224 import partners with 4426 import products, and index of its export penetration 11.59, at the same time 198 export partners with 4385 export products. HH Market Concentration 0.04. The main products of export include fuels (51.95%), miscellaneous (13.73%), metals (8.80%). Number of tariff agreements 8 with weighted average 5.34%. Duty free tariff line share is 31.62%. Merchandise import rate 49.07% of GDP, while merchandise export rate 39.68% of GDP. Service import rate is 20.76% of GDP, while export in service rate is 28.71% of GDP. Country's growth in 2019 was (-3.49%).

CONCLUSION

Modelling the tariffs impact on the current account balance, it was discovered by means of regression simulations. Dependent variable (Y) is the main factor which development we choose. In our case, the

current account balance has been chosen, because we discuss the changes made especially to the current account prediction ability. Independent variables (xi) are factors the average tariff rate AHS, its Implementing tariff lines, i.e. AHS tariff lines, most favourable nation tariff rate, i.e. MFN and MFN total tariff lines. Range of chosen x_i is tariff determinants. To establish a comprehensive analysis, dataset of the World Bank and OECD have been used for the period of time 2000-2019 with chosen countries from advanced, developing and emerging economies. Modelling of current account balance led to the following conclusions: the current account balance depends on above-mentioned variables CA = 1,34 ASH tariff lines – 1,14 ASH + 0.72 MFN tariff lines – 0.75 MFN + δ_u, where δ_u is unexplained variables. A set of statistics tests done explain the relative reliability the model received and show inverse dependence of the current account balance of the tariff rates increase, while it shows a proportional dependence on the number of tariff lines. It gives the hope, that chosen countries have to move towards the tariff elimination (at least decreasing) but widening the products (services) tariff lines to be more precise with the estimation of possible benefits for them. Interesting and quite disruptive is the equation from the perspectives of emerging countries, as they have chosen absolutely different ways of development.

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