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VALUE CHAIN ANALYSIS IN THE REPUBLIC OF MACEDONIA

JEL CLASSIFICTION: F21, F62, J30

Abstract

The fragmentation of production processes and the international dispersion of tasks and activities within them have led to the emergence of borderless production systems, that create complex networks and which may be global, regional or span only between two countries. These systems are commonly referred to as global value chains (GVCs) and they are typically coordinated by transnational corporations (TNCs). Since Macedonia does not have official statistics about participation into the global value chains, this paper aims to analyze the opportunities and results of the inclusion into global value chains for the Macedonian economy though the policy of attraction of foreign direct investments. Some specifics are given for the inclusion of Macedonia into global value chains through regional cooperation of the Western Balkans countries.

KEY WORDS:
VALUE CHAINS, FOREIGN DIRECT INVESTMENTS, ADDED VALUE, EXPORT

1. INTRODUCTION

The process of globalization brings fragmentation of the production process and international dispersion of tasks and activities that may be global, regional or span only between two countries that are coordinated by transnational companies (TNCs). Advantages of such fragmented international production, for the companies whose affiliates are engaged in transaction of upgrading and finishing products can be hardly measured. Traditional indicators for export and import of goods and services, does not give data for the inclusion of the domestic enterprises in the total value of production of the TNCs or in other words for their added value in the production. Basic forms of international business operations such as export and import of the goods and services have been partially transformed into international production based on system of internationally fragmented production process through Global value chains (GVCs). Transnational companies with the cross-border self-governing companies create the network of GVCs. OECD and WTO measure the domestic and foreign value added in content of gross export by exporting industry of 61 economies covering OECD, EU, G-20, most East and South – East Asian economies and selection of South American countries. The joint OECD – WTO Trade in Value-Added statistics is known as TiVA. Statistics for South-Eastern Europe is still not available.

The focus of this paper is to analyze the opportunities for inclusion into global value chains for the Macedonian economy though the policy of attraction of foreign direct investments (FDIs). The inflows of FDIs do not guarantee immediate inclusion of the local enterprises in the GVCs and creation of added value. Still, it is one way to determine is there a significant inclusion of the domestic enterprises in the value chains and transfer of technology and knowhow. Therefore, the following indicators are used, which are known as *direct or static* benefits for the domestic economies: inflows of foreign capital in form of FDIs; direct creation of employment; increase of the export and its diversification and increase of the public revenues.

The *dynamic effects* of the policy of attraction of FDIs, on the other hand are hard to measure. Those are: inclusion of local enterprises into the global value chain and transfer of knowledge and know-how. In order to give some insights of the dynamic effects data for the inclusion in the global value chains thought regional cooperation within Western Balkan region are used, according to the study of USAID.1

2. IMPORTANCE OF INCLUSION INTO GLOBAL VALUE CHAINS

About 60 per cent of global trade, which today amounts to more than $20 trillion, consists of trade in intermediate goods and services that are incorporated at various stages in the production process of goods and services for final consumption.2 The whole process of production is typically coordinated by transnationalcorporations (TNCs), with cross-border trade of production inputs and outputs taking place within their networks of affiliates, contractual partners and arm's-length suppliers. For developing countries the

1 USAID (2016), pp. 25-36.

2 UNCTAD (2013), pp. 10-14.

average share of foreign value added in export for the period of 2010 amounted to 25%. In case of the developed countries it is 31%, in the case of European Union export that percentage amounted to 39, for USA 11% and for Japan 18%. In view of the countries in Central America, East and South-East Asia that percentage amounted approximately to 30 percent.

The literature makes distinction between value and supply chains. Global value chain can be explained as added value of the production, outsourcing of the production, vertical integration of the production, fragmented production or in one word "made in the world". Through foreign direct investments, part of the production of the TNCs is transferred into countries in which they can lower the costs of production and increase their profits. Also, companies that are self-governed can participate in some of the phases of production of the final product of the TNCs. All of the producers add some value to the final product, and in that way they create chains in the GVCs of the final product. Supply chain, on the other hand is the interconnection of all the activities that starts from the manufacturing of raw material into the finished product and ends when the product reaches the final customer.

All participants in the production do have advantages of such fragmented international production as well as all countries whose companies are engaged in transactions of upgrading and finishing products.[3] GVCs is important chain for empowering the production capacities of the domestic economy. It is important for the small and medium enterprises to specialize into certain activities in the GVCs that can ease the access to the global markets and integration in the global economy. The way to attract the presence of TNCs in the domestic economy is usually by attraction of FDIs. Still, the presence of the FDIs does not guarantee automatic inclusion of local small and medium enterprises in the chain of production, neither it guarantee immediate transfer of know-how and technology.

There is also a danger for the local producers to be "captured" in the production of relatively low value added for a long period of time or their survival to be in danger by complete isolation of the global value chains as a result of global competition. In addition, the gains for the local producers might be limited. As an example, in the production of one mobile phone almost 58,5% of the profit goes in the TNCs, in this case of Apple. Local producers have insignificant profits that are between 1-2% of the final price of the product.[4]

Due to the dynamic nature of the TNC, they can easily move to locations with lower labor costs, in countries with weaker regulations and so on. Thus, if the regulation of the domestic economy seeks to attract FDI at any price, it can worsen social conditions and occupational safety and health of workers, impact negatively on the environment and decrease the budget revenues through low tax and customs rates. Very often, the situation in which the effect on the domestic economy is negligible or it has no significant contribution, except for the employment of people who are mostly unskilled, it is called „footlooseness" situation. Such investments are not intended to increase the value of production in the domestic economy or to improve their production processes and products. Often such FDI are those who leave the country if the current privileges disappear (for example, increase of the: fees after the period in which investors are provided with certain benefits

3 Kozomara (2016), pp. 167-183.

4 Kraemer, Linden and Dedrick (2011), p.27

such as free connection to the mains energy, water, electricity, etc.). Hence, attracting FDI is not a „panacea" or panacea for the problems of the domestic economy. The economy must have well designed strategy of attracting FDI, that would fit her needs.

3. STATIC EFFECTS OF THE POLICY OF ATTRACTION OF FDIS FOR THE MACEDONIAN ECONOMY

By analyzing the cost and benefits of the policy of FDIs attraction the benefits for Macedonian economy from inclusion into global and regional value chains are determined. The actual strategy on attracting FDI in Macedonia was first implemented about 8 years ago. It is based on the creation of special zones- Technological Industrial Development Zones (TIDZ), which are exempted from the regular customs and fiscal area of the country. Companies performing within the TIDZ are provided abundant incentives and subsidies if their output is exported to foreign markets. Currently, there are fifteen TIDZs established within the country. However, only seven established zones are operational at the moment (Skopje, Skopje 2, Tetovo, Kichevo, Struga, Shtip and Prilep).[5]

TABLE 1. FDI INFLOW IN THE REPUBLIC OF MACEDONIA FOR THE PERIOD 2008-15 (IN MILLION EUROS)

	2008	2009	2010	2011	2012	2013	2014	2015
FDI inflow	399.89	144.97	160.47	344.41	111.22	252.2	205.14	216,72
% of GDP	6.00%	2.00%	2.20%	4.60%	1.70%	2.80%	2.30%	2,3%

Source: National Bank of the Republic of Macedonia. http://www.nbrm.gov.mk. Accessed March 2015

All of the invested FDI in TIDZ are green-field investments which changed the general picture of the invested FDI in the country in favor of green-field investments. Up to 2011 green-field investments created slightly more than 38%, while acquisitions and mergers created over 61% of the total amount of FDI in the country (National Bank of the Republic of Macedonia 2012). However, with **FDI stocks** of only about 4.400 million Euros (1997-2015), which is slightly more than 220 euros per capita, Macedonia remains to be among the least attractive countriesfor foreign investors in Europe. The annual rate of FDI inflows remains around 2,5-3% of the GDP in the whole analyzed period.[6] Only, Albania from the countries in the Western Balkan region has lower rates of FDI inflows.

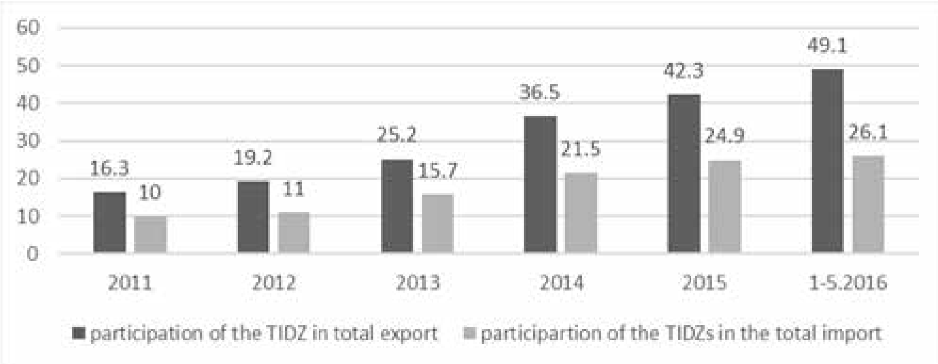
According to the methodology used in the study of Jovanovik,[7] the share in the income of the firms working in the TIDZs in the total value of GDP in 2015 reached 2.1%. Johnson Metty has the highest participation in the share of 1.19%. Only five firms create 90% of the total income.

5 Jovanovik (2017), p. 7

6 NBRM database, www.nbrm.mk

7 Jovanovik (2017), p.37

FIGURE 1. PARTICIPATION OF THE TIDZS IN THE TOTAL EXPORT/IMPORT

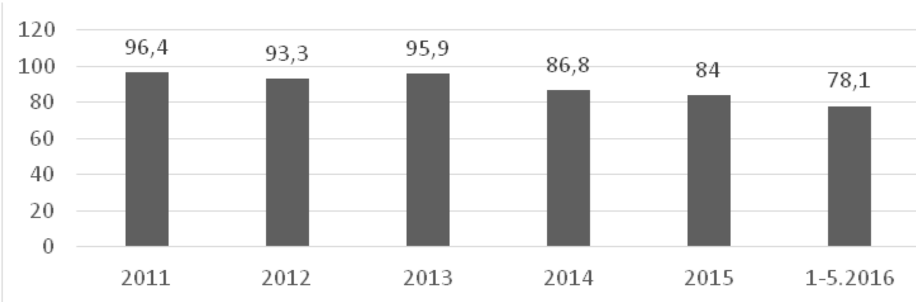


Source: NBRM (2016): Quarterly report of the NBRM.

FDIs are export oriented and create almost 42,3% of the total value of the export of the country in 2015. However, these new plants became also the biggest importers of raw materials and components needed for their production, as they are not using the domestic raw material base and have a very limited cooperation with domestic companies. For example, the leading exporting foreign company from the TIDZ - the British *Jonson's Matthy* - happens to be the greatest exporter from Macedonia at the moment. It produces and exports catalysts for the automotive industry. The platinum in powder, which is the basic raw material for this kind of production, is imported in the country and happens to be the second biggest import item in the Macedonian trade balance, after crude oil.

Most of the producing plants in the TIDZ depend from imports of raw materials and components from abroad. In the first years of its existence they had deficit in the trade balance, but it slowly change into surplus, reaching 2,1% of the GDP in 2015 meaning that the dynamics of the import components is decreasing. Figure 2 shows that in the 2015, the import component decrease to 84% of the export from the TIDZ, while in 2011 it was 96,4%. Still, it does not influence the trade-balance significantly (only 0,3% in the past seven years from 2009-2015) and there is a room for improvment. That can also be interpret that the spill over effects and the cooperation with domestic companies is modest.

FIGURE 2. IMPORT COMPONENT OF THE EXPORT FROM TIDZS (IN PERCENTAGE)



Source: NBRM (2016): Quarterly report of the NBRM, pp. 61-65.

The positive aspects include the fact that there are significant changes in **the structure of exported products and services**. The countries, who was completely dependent from export of metal processing industry and production of oil derivatives, as well as industries with low added value (textile, agricultural products), in the last five years strengthen the position of the manufacturing sector, and within it the position of the chemical industry. The most important exporting product is catalyzes for automobiles and other products for machinery industry. Therefore, new industries were created that were not previously present in the country with improved and modern technology compared with the existing one.

Government officials estimate that companies established within the TIDZ started **cooperation with about 500 domestic firms**, as they used their services in the maintenance of the equipment, in transportation and logistics, catering, security, construction works, and in some cases in providing some raw materials. However, the total realized gain of the engaged domestic companies in cooperation with the companies within the TIDZ is only 46 million Euros.[8] Foreign companies find domestic suppliers unable to meet EU technical and safety standards. They are also not satisfied with the quality of domestic components. Therefore, they prefer to import almost all the needed components for their production, rather than to supply them from the domestic market.[9] The largest part of the companies that have cooperation with the foreign firms are in the architecture and design studios, construction companies, security agencies and catering services. Less of them are suppliers in the process of production such as: “Arije metal”, “Uni plast”, “Ting Inoks” and “Rade Konchar-Tep”.[10]

The creation of the TIDZ was supposed to contribute to the decrement of the unemployment rate. There is no official data on the actual number of employees within the TIDZ. Some estimation pointed out that at the moment the total number of employees in the zones is about 3,500. If the number of the workers employed in the companies Drexlermaer and Kromberg & Schubert that operate out of the zones, but enjoy the same benefices as the companies within the zones is added to this figure, than the total

8 Mojanovski, Todorovska et al., pp.69-73.

9 Kikerkova (2016), p.9.

10 Mojanovski, Todorovska, Georgievski, Stojkoski, Mitevski, Popovik, Spasovska and Sazdovski (2016), p.71

number of new employments in the last five years is estimated on about 13,000.[11] The number of employees increased significantly in the last three years. Until 2012, the total number of employees in the TIDZs was only 1339 people. Again, only three companies (Draexlmaier, Kromberg & Schubert and Johnson Controls) employed around 80% of the people.[12] The average wage in 2016 is 261 Euros, which is below the average wage in the country of 360 Euros.

Total expenditures for the period 2007-2015 are 159.656 million Euros. 56.58% of them are from the Government of the Macedonia, 25.70% of the Agency of TIDZs, and 17.71% of the Agency for FDIs.[13] The numerous exemptions from customs and tax duties, as well as from contributions for pension, education and health funds for workers in the TIDZ, are additional burden for the state budget. If the trend of creating working posts within the TIDZ continues, the state budget might face serious problems in providing finances for vital budget positions. Jovanovik, compares the government expenses with the number of employment, and states that cost per one worker is 12.580 Euros.[14]

The huge expenditures from the central budget for the promotion of the latest strategy on attracting FDI and the subsidies provided for foreign investors within the TIDZ are rather disputable. One may only estimate what would have happened if all these state money went to other ventures for stimulating economic growth instead of stimulating FDI.

4. DYNAMIC EFFECT OF THE POLICY OF ATTRACTION OF FDIS FOR THE MACEDONIAN ECONOMY

Regional value chains (RVCs) can be promoted by inter-agency cooperation for export and investment promotion in regional partnerships. This cooperation can be supported by regional development banks which can finance under favorable terms projects in strategic sectors for the countries. Sharing risks and increasing their market strength can be a strategic way to approach global markets. UNCTAD introduces the concept of "Regional industrial development compacts" that could encompass integrated regional trade and investment agreements focusing on liberalization and facilitation, and establishing joint trade and investment promotion mechanisms and institutions. They could also aim to create cross-border industrial clusters through joint financing for GVC-enabling infrastructure and joint productive capacity-building. Establishing such compacts requires working in partnership between governments in the region, between governments and international organizations, and between the public and private sectors.

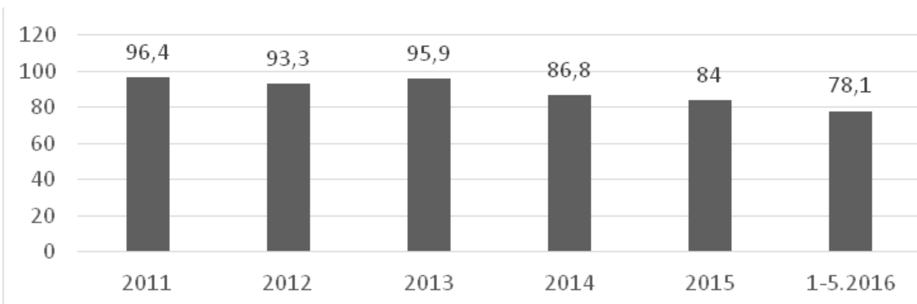
Regional value chains links are often more important that global ones especially in North America, Europe, and East and South-East Asia. In the transition economies, Latin America and Africa, regional value chains are relatively less developed.[15] Regarding the

11 Kikerkova (2016), p.8
12 Jovanovik (2017), p.31
13 Jovanovik (2017), p.22
14 Jovanovik (2017), p.37.
15 UNCTAD (2013), pp. 15-20.

countries from the Western Balkan region, we can speak about regional supply chains. Regional supply chains mean exporting raw materials and intermediate goods to other countries in the region, which in turn employ those goods in the production of final goods. In addition to their own direct exports, Western Balkan (WB) countries increasingly participate in regional supply chains. Most of the final goods are latter exported to the world.

The USAID examines the potential supply chains in the Western Balkans in three sectors: 1) manufacturing of clothes, 2) shoe manufacturing and 3) manufacturing of auto parts and cars.[16] Serbia as the biggest economy in the WB region shows the biggest absolute value of its participation in regional supply chains in the three selected sectors. Yet, in relative terms (i.e. relative to the size of country exports), the importance of regional supply chains is quite different. For Macedonia, manufacturing of cars is the most important for export of intermediate goods in this sector. The export of intermediate products is directed to other WB markets. For the 2010-2014 period, the potential contribution of Macedonia to supply chains through other WB countries was 26,7 million dollars. For the period 2010-2014 this was over 40% of the total export (both direct and via supply chains) from Macedonia to the world.

TABLE 2. EXPORT OF MACEDONIA TO THE WORLD VIA SUPPLY CHAINS THROUGH WESTERN BALKANS (IN THOUSAND EUROS)



Source: USAID, (2016): Analysis of potential regional supply chains Western Balkans

For the 2010-2014 period both the direct export and the export via regional supply chains in the production of cars grew and amounted 40,4 million dollars. Exports through supply chains grew by almost 500% in 2014 in comparison to 2010, reaching more than 16 million dollars. Macedonian contribution is 3.1 million euros, with significant increase during the years.

The average value for the period 2010-2014 in the manufacturing of clothes, though supply chain is 77 million dollars. The potential contribution of Macedonia to supply chains through other WB countries is 16.4 million dollars.

The average value in the manufacturing of shoes, for the period 2010-2014 is 80 million euros. Potential contribution of Macedonia to supply chains through other WB countries was 7.2 million dollars. Moreover, the value of its trade via potential supply chains

16 USAID (2016), pp. 13-22.

through the Western Balkans was growing over the years. In 2014 the value of the export of Macedonia to the world via supply chains through other WB countries was over 2.5 million USD and this was the biggest value over the period 2010-2014.

However, this are not regional supply chains that are initiated by regional investors investing in Macedonia, but from investors outside the region having in mind the inflow of FDIs in Macedonia from regional investors are insignificant. Only in 2008 there is significant FDIs inflow from Serbia - 54,1 million euros (13,6 % of the total inflow of FDIs in 2008) and from Croatia 23,5 million euros or 5.8% of the total inflow in 2008.

Macedonian investments in the region are in the following industries: construction (Renova - Skopje, Ading – Skopje, Urban Invest – Kavadarci); basic pharmaceutical products and pharmaceutical preparations (Alkaloid AD – Skopje); basic metals and fabricated metal products (Bravo – Veles); food products, beverages and tobacco products (Promes-Skopje, Briliant- Shtip).

CONCLUSION

In Macedonia there is a presence of global rather than regional value chains, since most of the investors of FDIs come from European countries. Therefore, direct or static indicators of the policy of attraction of FDIs are used for presenting the effects of the inclusion of the Macedonian economy into the global value chains: inflows of foreign capital in form of FDIs; increase of the export and its diversification; direct creation of employment and increase of the public revenues and the dynamic effects of the policy of attraction of FDIs: inclusion of local enterprises into the global/regional value chain and transfer of knowledge and know-how.

Regarding the static effects Macedonia remains to be among the least attractive countries for foreign investors in Europe. FDI stocks are about 4.400 million Euros for the whole analyzed period (1997-2015), or 2.5%-3% on annual level which is slightly more than 220 euros per capita. As most of the producing plants in the TIDZ depend from imports of raw materials and components from abroad, the net-effect of their export performance is positive, but minor. In the first years of its existence they had deficit in the trade balance, but it slowly change into surplus, reaching 2,1% of the GDP in 2015 meaning that the dynamics of the import components is decreasing. The import component decrease to 84% of the export from the TIDZ, while in 2011 it was 96,4%. Still, it does not influence the trade-balance significantly (only 0,3% in the past seven years from 2009-2015) which means that there is a room for improvment. The number of new employment in the last five years is estimated in about 13.000 which are 2% of the total number of employees in the country. Still, the effect is insignificant since they receive wage below the average wage in Macedonia, and also the government aid is 12.580 Euros per employee.

Although the static effects show modest improvements, the most important aspect is the significant change in the structure of exported products and services. The country who was completely dependent from export of metal processing industry and production of oil derivatives, as well as industries with low added value (textile, agricultural products), in the last five years strengthen the position of the manufacturing sector, and within it the position of the chemical and car industry.

The inclusion into the global value chains can be made by strengthening the regional cooperation. Since Macedonia is landlocked country, in order to be competitive and attractive to the global investors it should be "intensively" included in the regional value chains. Therefore, recommendation for the policy makers is further strengthening of the regional cooperation. That would mean creation of simple and safe administrative and custom procedures, elimination not only of customs duties but also elimination of quantitative restrictions between the countries in the region. The logistic performances should also be strengthen as well as the quality of infrastructure. The lowering of the transaction costs will reduce the time for transactions among the affiliates included in the value chain.

Dynamic effects on the other hand show the spill over effects and the cooperation with domestic enterprises and transfer of technology and know-how is modest. The largest part of the companies that have cooperation with the foreign firms are in the architecture and design studios, construction companies, security agencies and catering services. Less of them are suppliers in the process of production.

In order to increase the dynamic effects, the policy for attraction of FDIs should create legal instruments for protection of workers' rights and set higher environmental standards. Also, reforms in the educational system should be made according to the "growing" sectors in the economy. Most of all, the policy for attraction of FDIs should give the same incentive to the domestic and foreign investors. That would create same conditions for the domestic companies to be active participants in the global and regional value chains.

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