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Development of bilateral trade and dynamics of the trade balance between the Russian Federation and the Democratic People's Republic of Korea, 2004–2018

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For a long time, the USSR was the key economic partner of the DPRK. However, after 1991, the share of the Russian Federation in North Korean foreign trade significantly decreased. Today, Russia is second among the top ten most important economic partners of the DPRK. This article presents a brief overview of the bilateral trade between the Russian Federation and the DPRK for 14 years from 2004 to 2018. Statistical and customs data were gathered from customs agencies of 8 Russian federal districts that are not the constituent units of the country but exist for the operation of main federal government agencies. The article utilizes the Harmonized Commodity Description and Coding System that is applied by Russian Customs Agencies, also known as the Harmonized System (HS) of tariff nomenclature. This is an internationally standardized system of names and numbers to classify traded products. Sophisticated methods or specific tools (the gravity equation, partial-equilibrium trade-policy simulation, etc.) were not applied to analyze the trade balance between two countries. The article is not meant to prove an assumption, but rather it is meant to provide a general understanding of the structure and extent of bilateral trade between the Russian Federation and the DPRK.

Keywords: Russian Federation, DPRK, North Korea, bilateral trade balance, trade structure, commodity groups.

For a long time, the USSR was the key economic partner of the DPRK. However, after 1991, the share of the Russian Federation in North Korean foreign trade significantly decreased. Today Russia holds the second place among the top ten most important economic partners of the DPRK, but it's literally means nothing as the share of trade between Russia and North Korea appeared to be 71 times less than with China, the DPRK's main trade partner. In 2018 the top ten economic partners of the DPRK were: China, Russia, Zambia, Brazil, Germany, Switzerland, South Africa, Thailand, Turkey, France; with 97.7 % the PRC's share in the total volume of imports to the DPRK and of exports — 87.6 % respectively.

This paper is the brief analysis of the bilateral trade between the Russian Federation and the DPRK since 2004 till 2018 with the special emphasis on the bilateral trade after imposition of the US sanctions in 2014 and under the pressure of economic and financial crisis resulted in the devaluation of the Russian national currency in the second half of 2014.

Being familiar with classic trade theory that has been developed to explain almost exclusively intra-industry trade among OECD countries Krugman [1; 2], Helpman [3; 4], Helpman and Krugman [5] we don't consider it could be applicable in this particular case describing the trade between the Russian Federation and North Korea. Still the large portion of trade among developed countries involves differentiated products as Evenett and Keller mentioned [6] and this approach was used in this paper. Worth mentioning here are the works of Leontief [7], Linder [8], Samuelson and Nordhaus [9], Mitra & Trindade [10]. Stylized facts will be presented for the percentage of trading value as well as the percentage of traded product categories in order to show graphically the proposed bilateral trade.

As a primary source the statistical and customs data for above-mentioned period from Customs Agencies of 8 federal districts of Russia that although are not the constituent units of the country but exist for the operation of main federal government agencies is used [I–VIII]. We didn't apply any data from the Russian Federal State Statistics Service that was transferred couple of years ago under supervision of the Ministry of Economic Development as data from this Service doesn't reflect the whole picture due to a lot of missing data and numbers. The Harmonized Commodity Description and Coding System that applied by Russian Customs Agencies, also known as the Harmonized System (HS) of tariff nomenclature that is an internationally standardized system of names and numbers to classify traded products was applied. For the total exports and imports value for each year diagrams reflect only commodity groups that covered more than 5 % of total exports or imports value for given year. Particularly, the total value of imports from the DPRK to Russia is too small even in compare with export from Russia to North Korea to take into account commodity groups that occupy less than 5 % of the total value of imports from the DPRK. We didn't use any sophisticated methods or specific tools (the gravity equation, partial-equilibrium trade-policy simulation, etc.) to analyze the trade balance between two countries, the work is much more simple descriptive nature and the main goal is not to justify any assumption but rather to give the general understanding of bilateral trade structure and size between the Russian Federation and the DPRK.

Export from Russia to North Korea

Till the mid-2000s exports value from Russia to the DPRK was not too high, but since 2007 it had declined almost twice and never reached the same level again (Figure 1). The value of about $100 mln per year became a visible Rubicon that Russian export couldn't cross over the following decade. 2009 and 2010 were critical years with more than 50 % decline in export volumes due to the consequences of 2007–2008 global financial crisis, still the sharp increase in 2011 is just the low base effect of 2009–2010. But since 2013 a constant annual exports value decline has taken place and the export recession became systemic.

2004–2006

During 2004–2006 the main export commodity group from Russia to North Korea was Code 27 (mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes). During these 3 years Code 27 had covered from 83 to 89 % of the total export value, still none of the other commodity group had exceeded 5 % (Fig. 2).

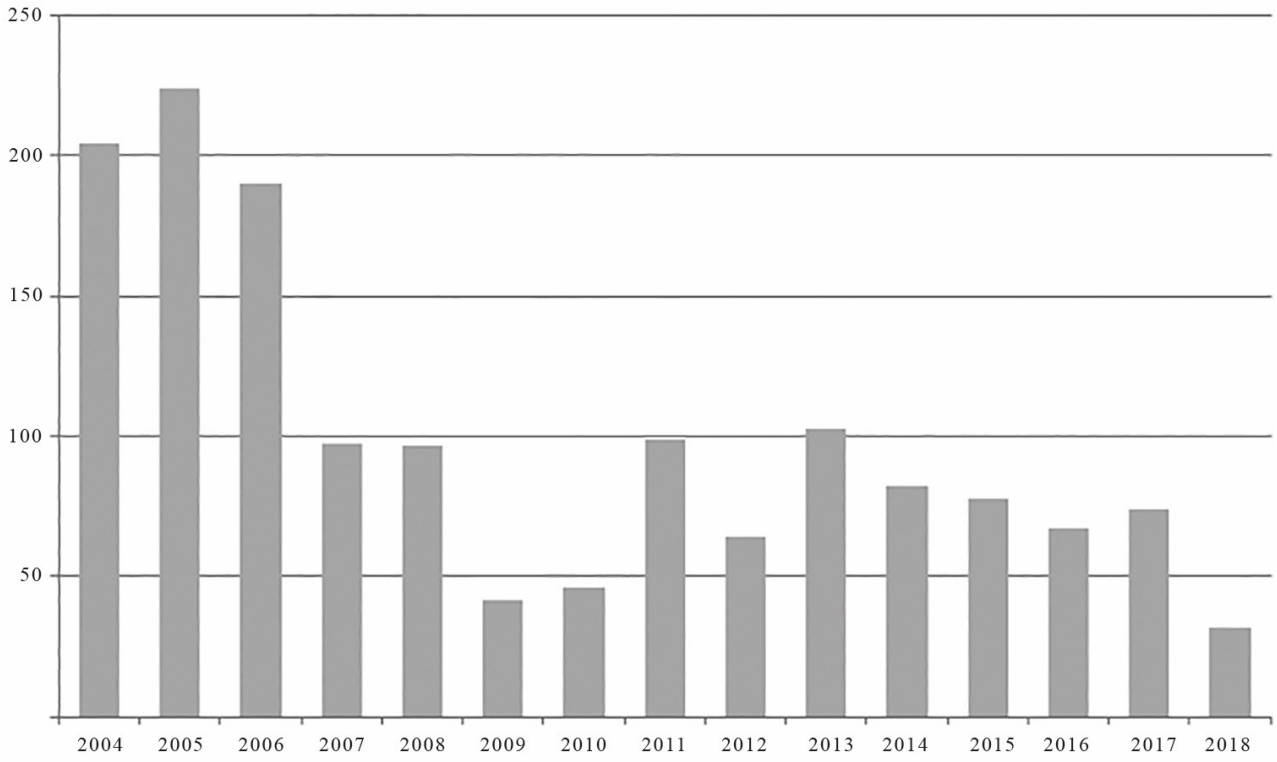

Fig. 1. The total value of exports from the Russian Federation to the DPRK, 2004-2018 (USD mln)

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [11–18].

Fig. 2. Share of Code 27 in the total value of export from the Russian Federation to the DPRK, 2004–2006

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

As well, taking into consideration increasing of export value in 2005 (see Fig. 1), the value of delivered products of Code 27 commodity group increased by 16.2 % in 2005 comparing with the previous year [11, p. 2].

2007–2008

In 2007 the total value of exports from Russia experienced sharp decline by 50 % comparing with 2006 that reflected consequences of 2007–2008 global financial crisis

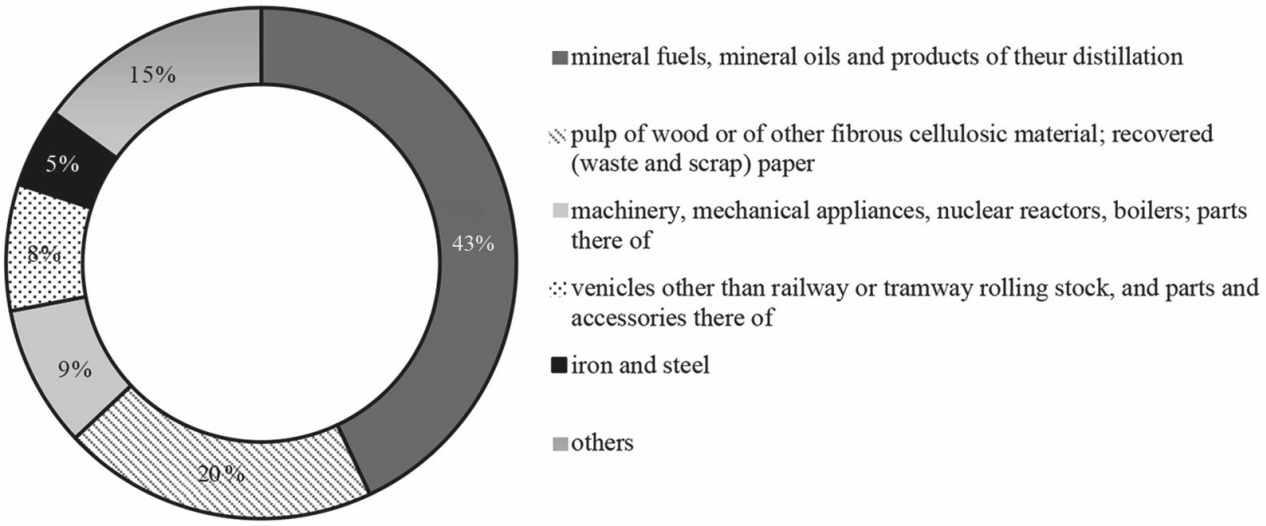

Fig. 3. Export from the Russian Federation to the DPRK, 2008
* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [11–18].

[12, p. 3–4; 13, p. 3–7]. This decline explained by reducing especially Code 27 commodity group that dropped down by 57 % compared with 2006. Moreover, in 2008 it dropped down by 43.3 % more in comparison with 2007 and almost 75.5 % in comparison with 2006 respectively. As a consequence of this decline the share of other commodities increased in total value, still export of some goods increased due to the rise of their respective values in the total value of exports (for example, pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard (Code 47) increased by 67 % in comparison with 2006, but didn't exceed much its share in exports in 2005 (only 8.2 %). However, mineral fuels still had held 75 and 43 % of the total exports value in 2007 and 2008 respectively. Other commodity groups shares increased at that time consequently in 2008 Russian exports value remained at the level of 2007 but became much more diversified in sense of commodity groups than it was only 2–3 years ago (Fig. 3). In 2008 pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard (Code 47) increased by 285 % comparing with 2007; vehicles other than railway or tramway rolling stock, and parts and accessories thereof (Code 87) increased by 403,6 % and machinery, mechanical appliances, nuclear reactors, boilers; parts thereof (Code 84) increased by 2305,5 % respectively.

2009–2010

2009–2010 characterized by the lowest export values for the entire reviewed period of 14 years (except of 2018), that reflects the consequences of 2007–2008 global financial crisis. [14, p. 14; 15, p. 6] The Great Recession significantly affected Russia-DPRK bilateral trade even though North Korea is far from being completely integrated into the world trade system. The Great Recession met the IMF criteria for being a global recession, requiring a decline in annual real world GDP per capita, only in the single calendar year 2009 [16, p. 11–14]. According to the US National Bureau of Economic Research the recession began in December 2007 and ended in June 2009, and thus extended over eighteen months [17]. The same year Russian currency fell down against US Dollar more by 50 %. The dynamic of Russia-North Korea bilateral trade clearly shows that it was in-

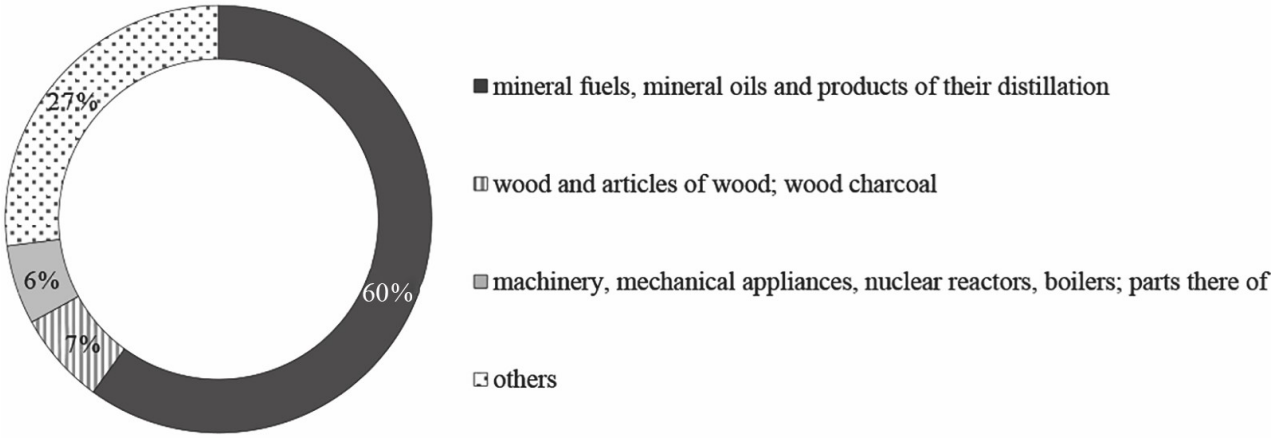

Fig. 4. Export from the Russian Federation to the DPRK, 2010
* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [11–18].

directly, but vigorously affected by the global financial crisis. This fact confirms the thesis that even totally closed economies cannot exist and develop in isolated autarkic model, and any assumption about total self-reliance or self-sufficiency is nothing more than a propagandistic cliché aimed domestic public opinion and the economic reality is that any global crisis directly or indirectly, but always with negative consequences, will affect even the most closed economy. In 2009 all commodity groups were vigorously affected by decline in total value of exports with sharpest decline in export of mineral fuels and mineral oils that dropped down by 81.2 % in comparison with 2008. Still in 2009 there was only one commodity group that showed clear increase in value comparing with the previous year, this was products of the milling industry; malt; starches; inulin; wheat gluten (Code 11) that rose up by 102.8 %. 2008–2009 were successful for Russian agricultural sector and volume of cereals harvest was high, moreover, in 2008, the Russian government decided to provide emergency food aid to the North Korean population by putting in the DPRK about 3 thousand tons of wheat flour. Still the main volume of Russian humanitarian aid to the DPRK is provided annually through the UN World Food Program (WFP) [18, p. 6].

In 2010 the total value of exports from Russia to the DPRK slightly increased by 8.9 %, but the structure of exports goods shifted from diversification to the domination of export of mineral fuels, mineral oils and products of their distillation with increasing of 250.7 % (Fig. 4).

2011–2013

In 2011 the total value of exports from Russia to the DPRK increased by 117 % due to the low base effect and reached the level of pre-crisis 2007-2008. Still the structure of export became much more diversified than it was in 2008 and especially in 2007 and the general trend for diversification had prevailed [19, p. 3]. More than 31 commodity groups covered 40 % of total value of exports with three main groups: mineral fuels, mineral oils and products of their distillation; cereals and articles of iron or steel occupied 60 % of export in 2011. In spite of diversification process the main export group from Russia to North Korea was still the same — mineral fuels, mineral oils and products of their distillation (39 %) and Code 27 practically had the same exports value as 31 other commodity groups exported from Russia to North Korea in 2011 (Fig. 5).

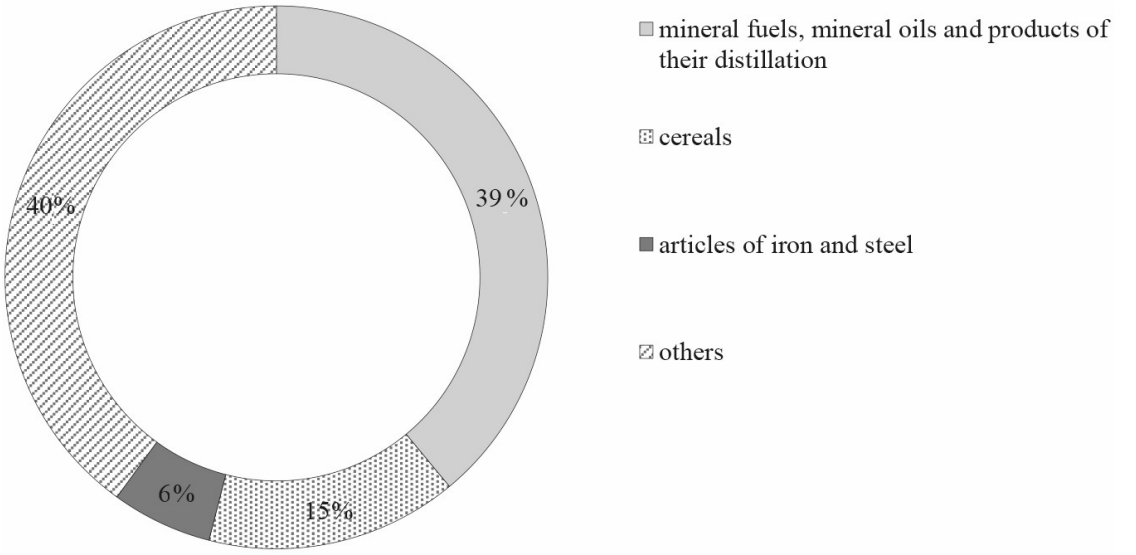

Fig. 5. Export from the Russian Federation to the DPRK, 2011
* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [11–18].

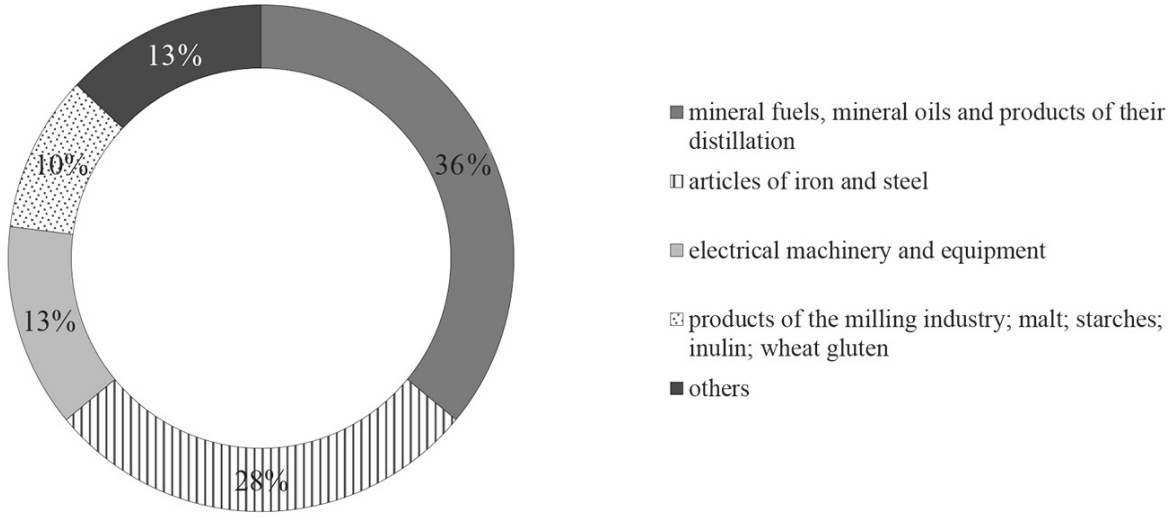

Fig. 6. Export from the Russian Federation to the DPRK, 2012
* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [11–18].

In 2012 the total value of Russian exports decreased again by 35 % due to decline of mineral fuel and mineral oils delivered volumes by 40 % (Fig. 6). Cereals export sharply declined in comparison with previous year to the negligible numbers, still articles of iron and steel showed increasing up to 200 %. Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers exports value increased by 151.7 %. There was one more factor that could serve as the cause for decline of the total value of exports in 2012. At the end of 2011 after the death of Kim Jong-il there was no clear understanding of the future path of relations between two countries that affected bilateral trade thereof [20, p. 5–6].

In 2013 the total value of Russian exports was slightly above $100 mln had indicated the highest exports value since 2006. Mineral fuels still occupied the biggest share of the total value of exports from the Russian Federation to the DPRK. Diversification and high exports value was directly connected with implementation of the Hasan-Rajin railway

project. Different kinds of machinery, mechanical appliances, parts thereof and vehicles other than railway or tramway rolling stock, and parts and accessories thereof combined had more than 31 % of the total value of exports in 2013. Construction works on the project started only in the second half of 2010 and were completed on September 22, 2013, when reconstructed railway section from Russian Hasan station to North Korean Rajin port was officially put into operation. In July 2014 Rajin transshipment terminal was opened [21, p. 3–4].

2014–2018

In 2014 the US sanctions were imposed on the Russian Federation. It's rather difficult to say whether that directly affected bilateral trade between Russia and North Korea immediately, but in 2014 the total value of exports from Russia declined by 20.5 % in comparison with 2013 [22, p. 1–2]. Mineral fuels still prevailed in the total value of exports from the Russian Federation to the DPRK although slightly declined by 22 % in comparison with the previous year (Fig. 7). Codes 84 and 87 together occupied more than 31 % of the total value of exports in 2014 that means the further development of re-constructed Hasan-Rajin project and construction of cargo terminal in Rason with through put of 4 mln tonnes per year. But the total value of exports of different kinds of machinery, mechanical appliances, parts thereof and vehicles other than railway or tramway rolling stock, and parts and accessories thereof declined by 23.4 %. We didn't connect this with sanctions but rather with finalization of Hasan-Rajin project.

In 2015 we can see the clear negative effect of sanctions affected bilateral trade between the Russian Federation and the DPRK. [23, p. 2–3] The total value of exports from Russian Federation to the DPRK declined only by 5.3 % still the general structure of commodity groups was affected significantly, mineral fuels, mineral oils and products of their distillation were absolutely prevail in the total value of exports and became the Russia's primary export commodity group (Fig. 8).

In 2016 the total value of exports from Russian Federation to the DPRK continued to decline by 13 % in comparison with 2015. [24, p. 2–3] And the only one commodity group (Code 27) absolutely prevailed in the total value of exports. As one can see the structure of export was drastically changed after the sanctions were imposed. Along with continuous decline in the total value of exports the diversification narrowed sharply to only one dominating commodity group that had occupied 84 and 85 % of export in 2015 and 2016 years. From 2008 till 2014 the structure of export from the Russian Federation showed clear diversification with prevail of mineral fuels, mineral oils and products of their distillation, but since 2015 the structure have came back to the situation of energy-supply domination instead of export diversification and supply of different kinds of machinery, mechanical and electromechanical appliances, vehicles, etc. During 2015-2018 the structure of export has shrunk and the value of exports declined simultaneously. [25, p. 2–5; 26, p. 2–3] Code 27 has occupied more than 3/4 of the total export volume (Fig. 9). The general trend to diversification was lost and shifted to the delivery of only one commodity group as it had taken place decade ago in 2004–2006. Nowadays one can see the similar situation with much smaller total value of exports. In 2018, the situation didn't change much and Code 27 comprised 67.5 % of Russian exports with the total value lowest in 14 years.

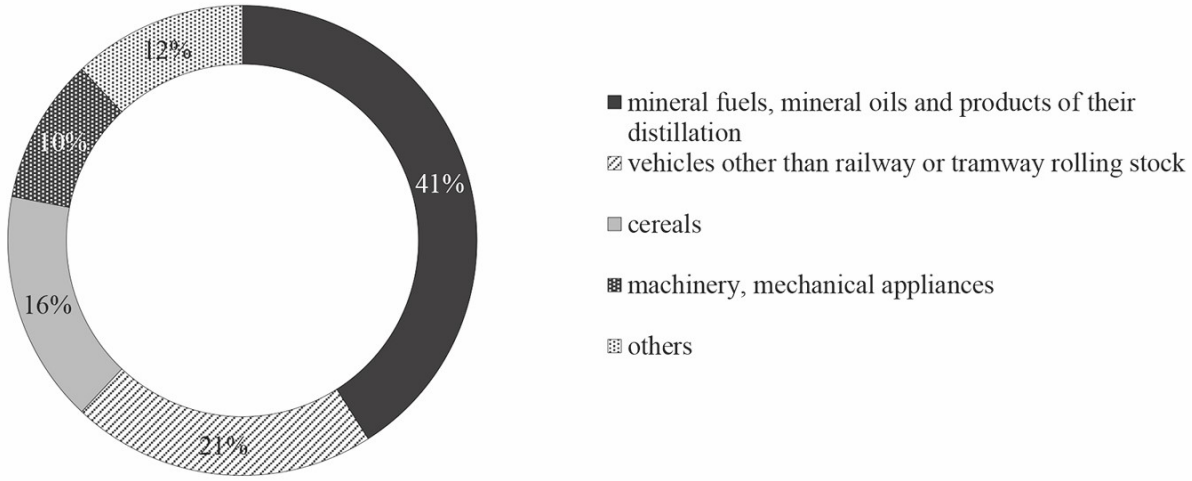

Fig. 7. Export from the Russian Federation to the DPRK, 2014

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [11–18].

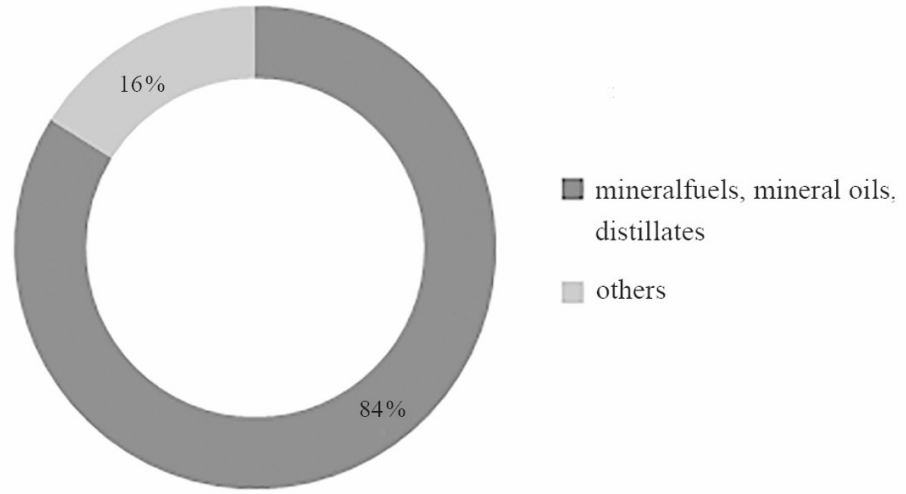

Fig. 8. Export from the Russian Federation to the DPRK, 2015

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [11–18].

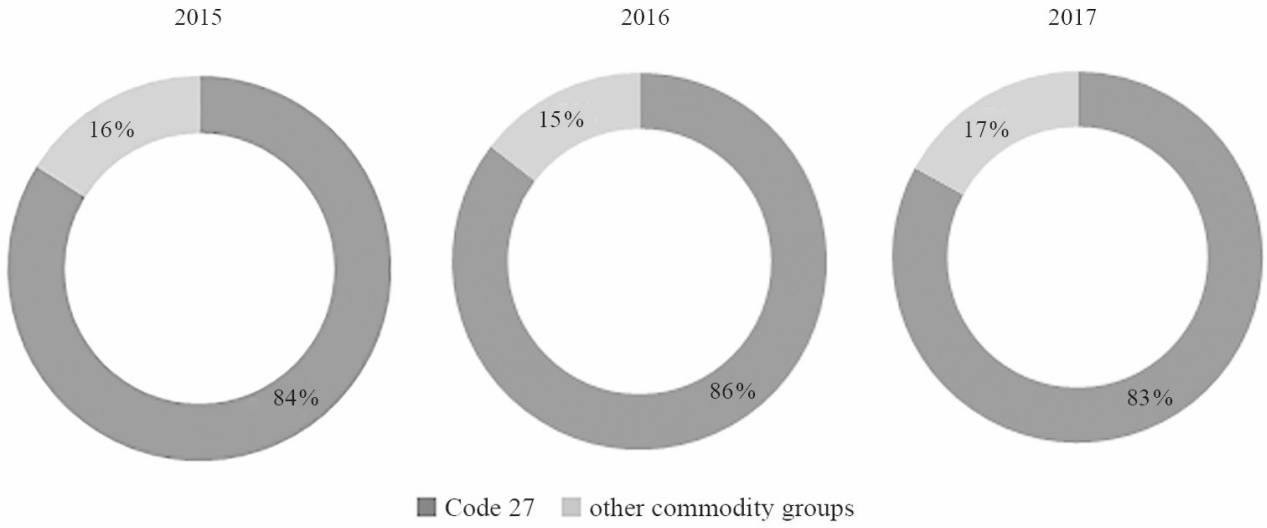

Fig. 9. Share of Code 27 in the total value of export from the Russian Federation to the DPRK, 2015–2017

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

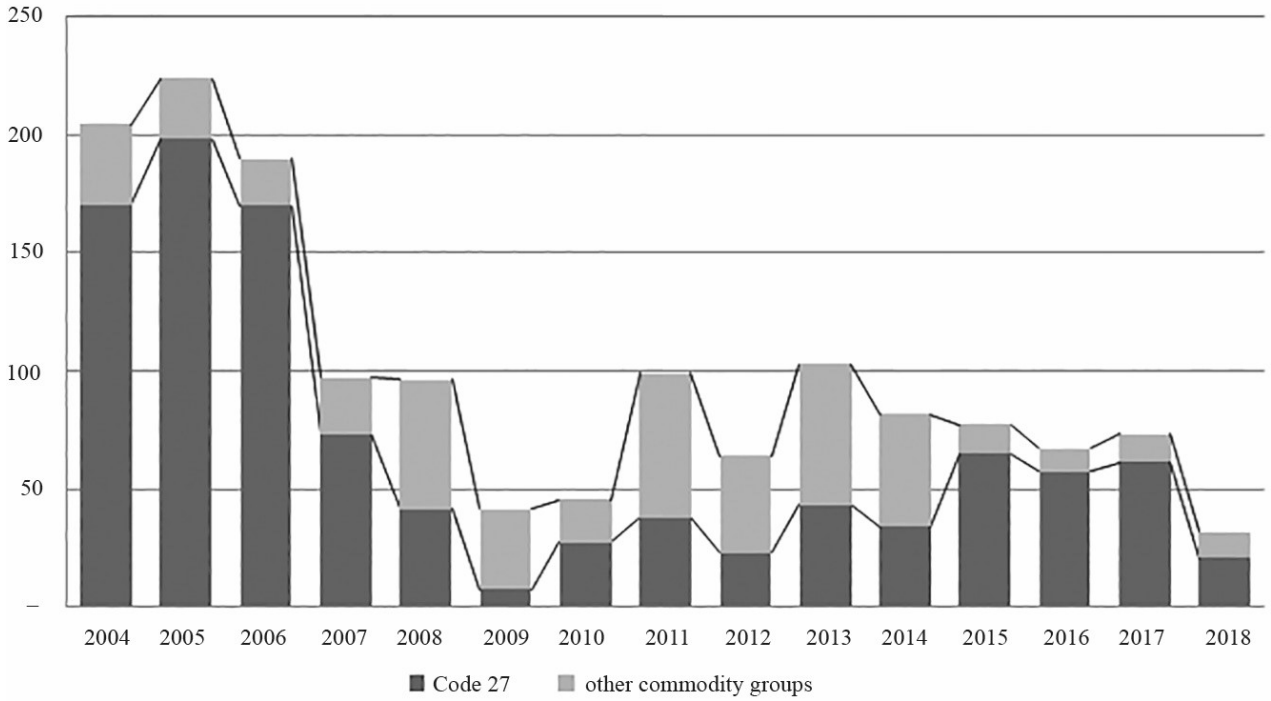

Fig. 10. Share of mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes (HS Code 27) in the total value of export from the Russian Federation to the DPRK, 2004–2018 (USD mln)

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

The diversification of Russian export has narrowed year by year alongside with the general decrease of the total value of exports. In 2014–2018 there were only several commodity groups with the value of more than 5 % from the total value of exports. At the same time, there has been sharp increasing in the share of Code 27 from only 41 % in 2014 to 84, 85 and 83 % respectively in 2015–2017. The situation is similar to 2004–2007 when the main export commodity group from Russian Federation to the DPRK was mineral fuels still and export articles didn't cover even 5 % each from the total value of exports (Fig. 10).

Today the main export commodity group from the Russian Federation to the DPRK is the commodity group with HS Code 27 (mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes) and there are no signs that the situation will change in the mid-term. Moreover, this is the clear message about North Korea's attitude to Russia as solely energy supplier but not partner in technological development.

Import from North Korea to Russia

The value of imports from the DPRK to Russia is remaining very low over decades even in comparison with small numbers of Russia's export to North Korea (Fig. 11). Over all observing period Russian exports a greater value than it imports from the DPRK, then having a trade surplus or positive trade balance with North Korea for all observing time. North Korean import has been in downtrend for the last 8 year starting from 2010 and an average yearly total imports value from North Korea was fifteen times less than Russian exports to the DPRK. The maximum imports value haven't exceeded $35 mln/year, while in 2018 the total value was only about $2 mln, became lowest over the past 14 years. It's

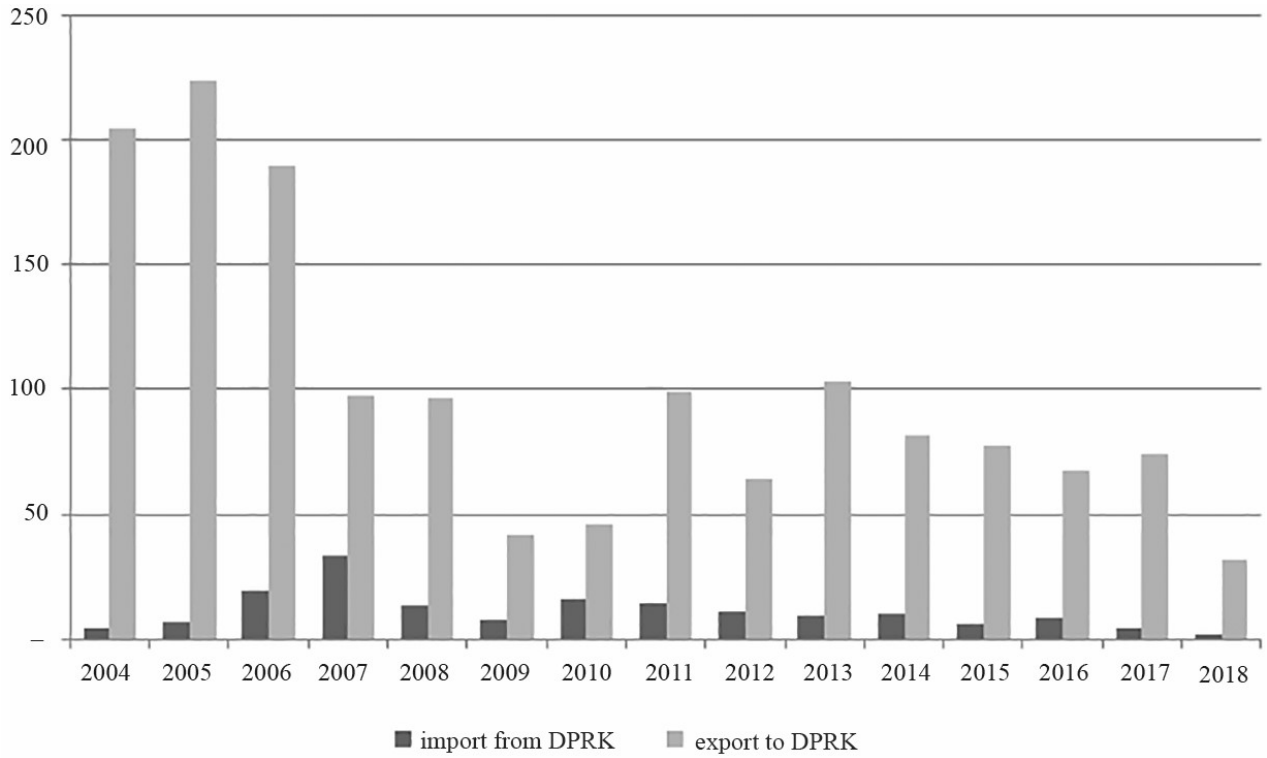

Fig. 11. The total value of imports from the DPRK to the Russian Federation VS the total value of exports to the DPRK from the Russian Federation, 2004–2018 (USD mln)

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

easy to notice that the decrease of the DPRK's total imports value to Russia has became systematic since 2013.

2004–2007

In 2004 the total value of imports from the DPRK to the Russian Federation was one of the lowest through observing period. The main import commodity group from the DPRK to the Russian Federation was plastics and articles thereof (Code 39) that took 46 % of the total value of imports. Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof (Code 84) and electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles (Code 85) occupied altogether about 27 % of the total value of imports from the DPRK to the Russian Federation (Fig. 12).

Still in 2005 the total value of imports from the DPRK to the Russian Federation significantly grew up by almost 50 % in comparison with previous year. Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof (Code 84) and electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles (Code 85) occupied together about 64 % of the total value of import from the DPRK to the Russian Federation and became two main import commodity groups. Share of plastics and articles thereof (Code 39) fell down by 76.7 % and occupied only 7 % of the total value of import but still had the 4th place in total value of imports.

Next year the total value of imports from the DPRK to the Russian Federation made impressive progress and significantly grew up as it was a year before, but in 2006 it rose by

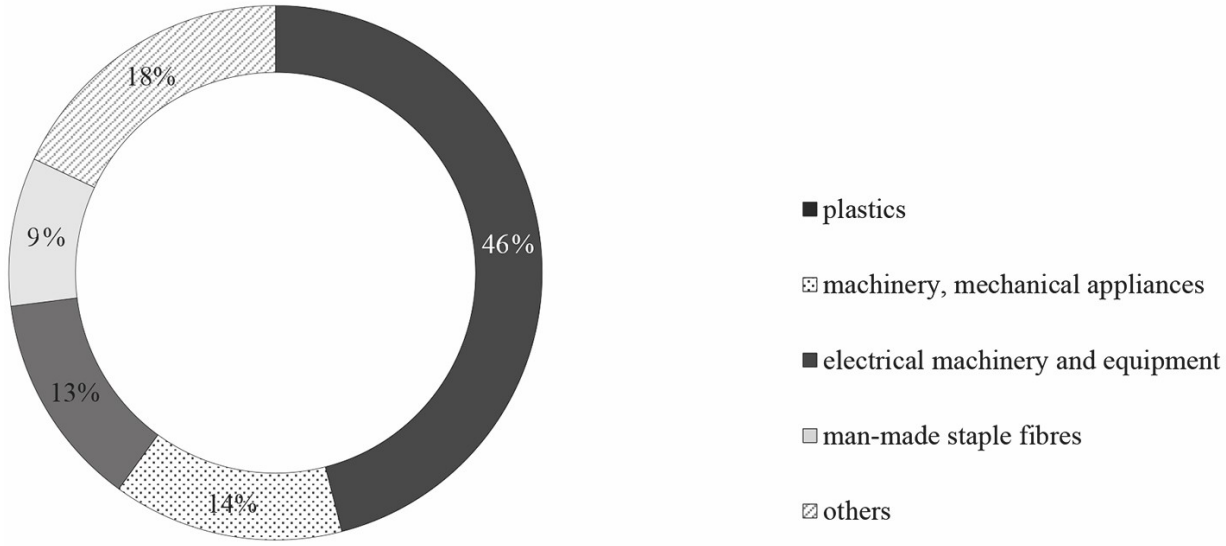

Fig. 12. Import from the DPRK to the Russian Federation, 2004

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

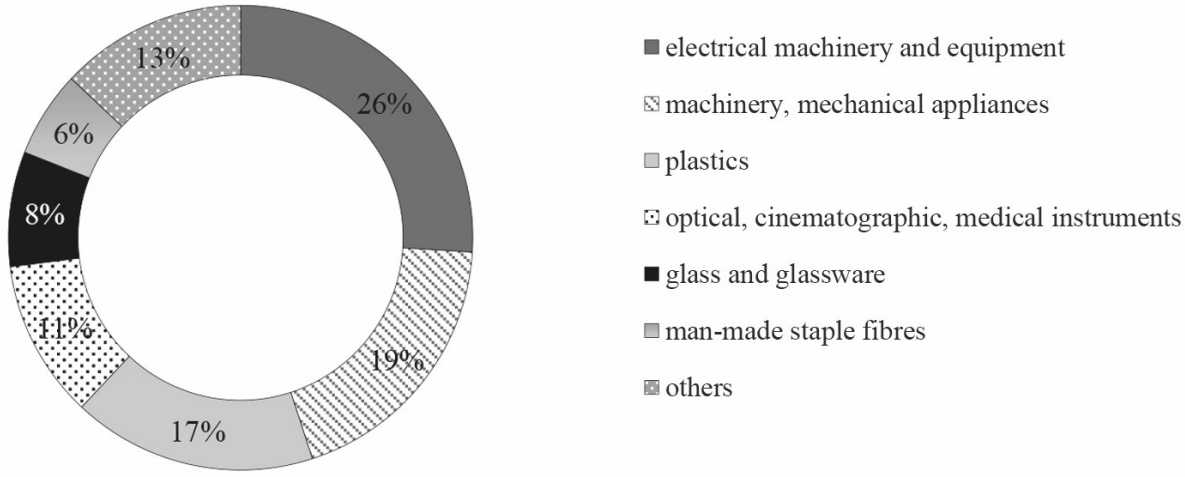

Fig. 13. Import from the DPRK to the Russian Federation, 2006

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

almost 200 % in comparison with previous 2005 year. Three commodity groups occupied more than a half of the total value of import from the DPRK to the Russian Federation. Three commodity groups that are Codes 84, 85 and 39 occupied totally more than 62 % of the value of imports. The total value of imports of these three groups rose respectively by 160,5 %, 270,9 % and 717 % (Fig. 13). Import from the DPRK to the Russian Federation became diversified and obtain necessary dynamic for further growth.

In 2007 the total imports value from the DPRK reached the highest numbers throughout observing period of 14 years, however there were clear signs of slowing down bilateral turnover. In 2007 the total value of imports from the DPRK grew up only by 68 % since it had increased twice a year before. One more interesting observation is that in 2007 the total value of imported commodity group designated by Code 49 (printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans) from the DPRK to Russia was as high as has never been before or after (Fig. 8). The 4-digits HS code of this group was 4901 and it means printed books, brochures and similar printed matter, whether or not in single sheets. The total price was $4,3 mln. One of pos-

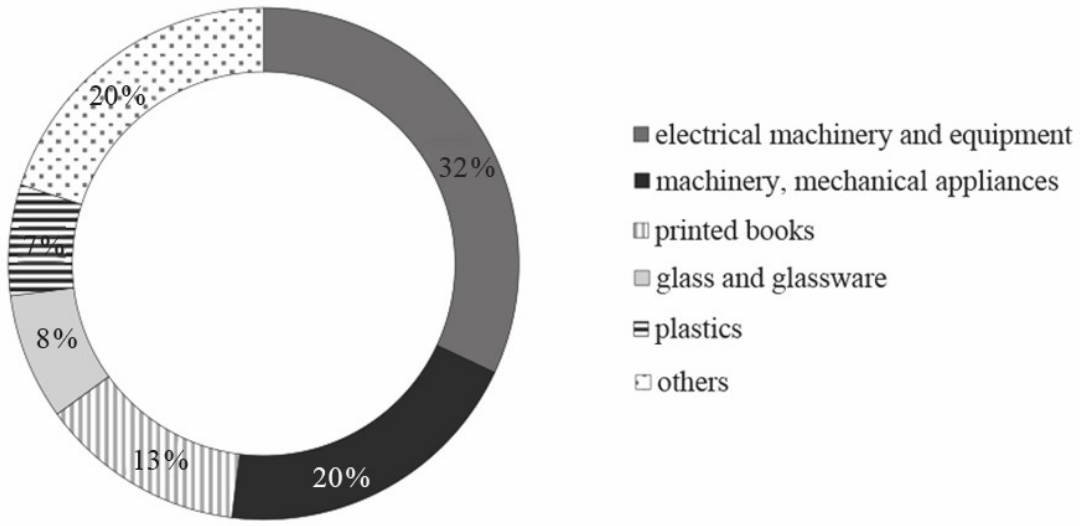

Fig. 14. Commodities share in total import from the DPRK to the Russian Federation, 2007

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

sible reasons was legislative elections in the 5th State Duma that were held in the Russian Federation on 2 December, 2007. [27, p. 2] At that time the very popular agitation instrument were leaflets that spread by electioneerers among citizens. Taking into consideration that all three main political parties (the United Russia, the Communist Party and the Liberal Democratic Party) have good formal and informal ties with the DPRK it's possible to assume that one of it or even all of them ordered printing of their propaganda leaflets from the DPRK. Excluding this the same three commodity groups occupied more than a half of the total value of imports from the DPRK to the Russian Federation, that are Code 84, 85 and Code 39 that weighted about 59 % of the total value of imports. The total value of imports of Code 84 and Code 85 rose respectively by 106.6 % and 75.6 %, although plastics and articles thereof (Code 39) fell down by 29 % (Fig. 14).

In 2004–2007 there had been three main commodity groups occupied more than 50 % of the total value of imports from North Korea, that are: Code 85 (electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles (combined 4 years total value from 2004 to 2007 is approx. $18.1 mln); Code 84 (machinery, mechanical appliances, nuclear reactors, boilers; parts thereof (approx. $13 mln); Code 39 (plastics and articles thereof (approx. $8.2 mln)).

2008–2010

In 2008 the total value of imports from the DPRK experienced sharp decline by 60 % that reflects the consequences of 2007–2008 global financial crisis. The same three commodity groups mentioned before had continued to dominate in the import structure occupied altogether about 50.5 % of the total value of imports. Still all of these dominated three commodity groups experienced sharp decline in comparison with the previous year.

In 2009 the total value of imports from the DPRK to the Russian Federation again experienced second wave of decline by 45.7 % that still was reflection of the global crisis

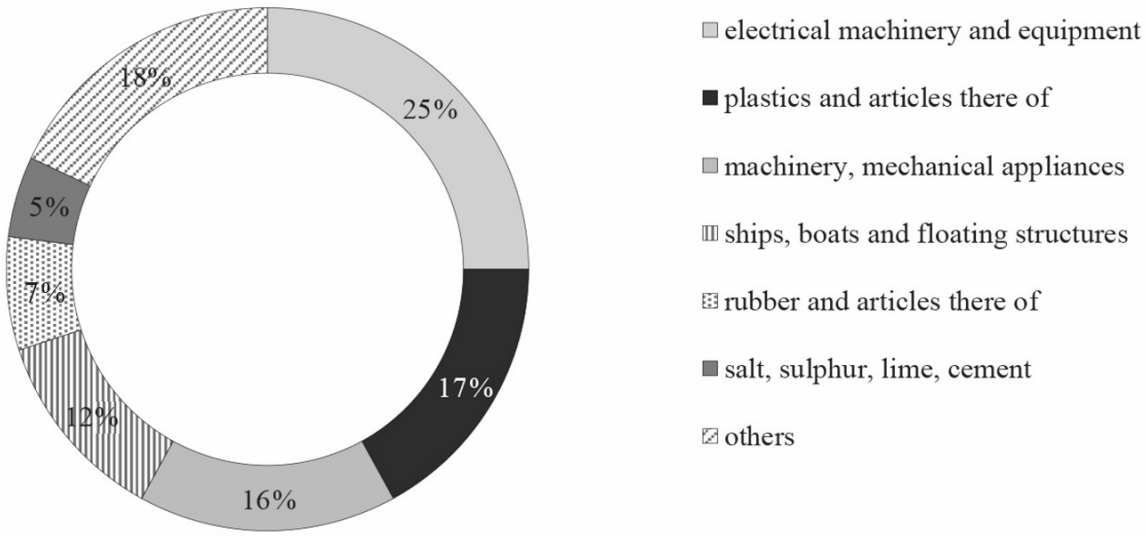

Fig. 15. Commodities share in total import from the DPRK to the Russian Federation, 2009

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

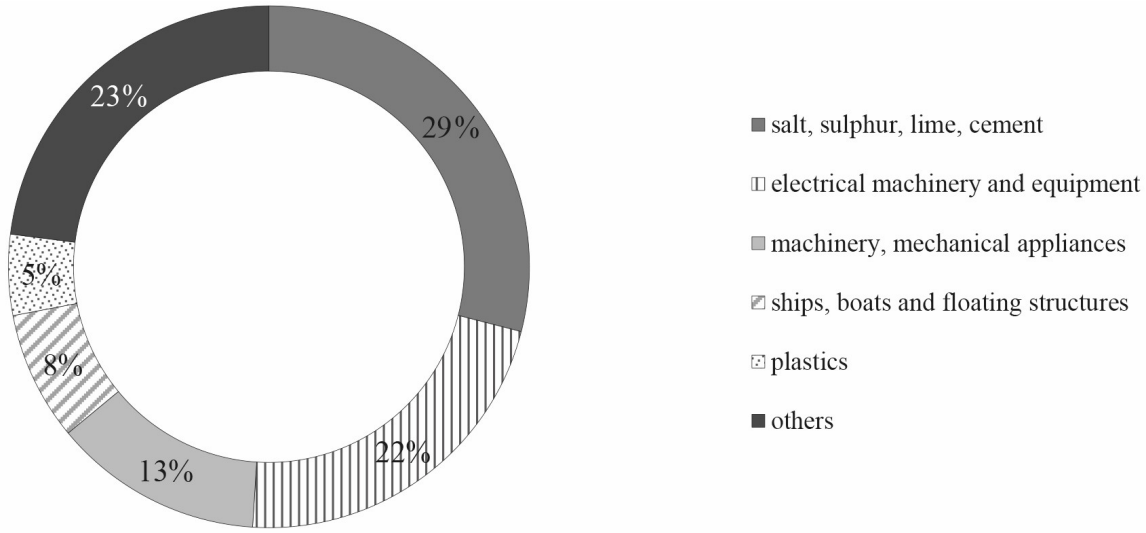

Fig. 16. Commodities share in total import from the DPRK to the Russian Federation, 2010

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

and in 2009 the total value of import from the DPRK to the Russian Federation came back to the levels of 2005. The same three commodity groups continued to dominate in the total value of import from the DPRK to the Russian Federation in spite of decline of the total value of import that reflects solid positions of these 3 groups in the import structure. Those were Code 84, Code 85 and Code 39 that occupied more than 57 % of the total value of imports (Fig. 15).

In 2010 the total value of imports from the DPRK to Russia rose up by 120 % not only reflecting the low base effect but clear signs of shifting in commodity groups structure that previously was dominated by three commodity groups: Code 84, 85 and 39 for several years in a row. In 2010 these groups occupied only 40.3 % of the total value of imports from the DPRK, but the new commodity group — salt; sulphur; earths and stone; plastering materials, lime and cement (Code 25) appeared. Code 25 had never before occupied a significant share of the total value of imports till 2010 since 2004, but in 2009 it took over

29 % of exports value. It's hard to say whether the structure of the total value of imports from North Korea to Russia became more diversified after the global crisis, but the signs of shifting appeared exactly in 2010 (Fig. 16).

2011–2018

In 2011 the total value of imports from the DPRK to Russia experienced slight decline by 12.6 %, but the structure had been changed significantly. Three commodity groups (Code 84, 85 and 39) dominated in the export structure for years shrank and occupied in 2011 only 24.6 % altogether. Code 25 held the biggest share a year before in 2011 occupied the same share (21 %). Overall structure of exports continued to demonstrate important shift to bigger diversification. [28, p. 8]

In 2012 the total value of imports continued to decline by 23.5 %, showing further move toward diversification at the same time. Two commodity groups: Code 84 and Code 85 occupied together 16 % of imports value. Code 25 took the second place gave the first one to articles of apparel and clothing accessories, not knitted or crocheted (Code 62) the total value of this commodity group increased by 38.9 % in comparison with 2011. Then, starting from 2012 Code 62 became the main commodity group imported by Russia from the DPRK instead of previously dominated Code 84, 85 and 39 highlighting important shift from the heavy industry products to the light industry ones [29, p. 31–33, 85–91].

There is one interesting observation. In 2012 in the DPRK's import to Russia appeared completely unexpected commodity group — musical instruments; parts and accessories of such articles (Code 92), 4-digits HS code shows that it was code 9205 — Wind musical instruments "e.g. clarinets, trumpets, bagpipes, keyboard pipe organs, harmoniums and similar keyboard instruments with free metal reeds, accordions and similar instruments, mouth organs" occupied 7 % of the total value of North Korean imports to Russia in 2012 (Fig. 17). Russian contractor geographically located in Moscow and Moscow Oblast and there is a strong possibility that we see here the Russian Ministry of Defense contract for the delivery of wind musical instruments for military bands.

In 2013 the total value of imports from the DPRK to the Russian Federation continued to decline by 15.8 %. Code 84 and 85 occupied together 17 % of import value. Code 25 occupied a significant part of the total value of imports from the DPRK to Russia during previous several years almost disappeared from export structure [30, p. 42–171]. Interesting that value of imports of musical instruments; parts and accessories of such articles (Code 92) increased by 62.7 % and became the second biggest commodity in the total value of imports after articles of apparel and clothing accessories (Code 62) occupied 42 % (Fig. 18).

In 2014 sanctions imposed on the Russian Federation didn't affect too much the total value of imports from the DPRK immediately. Code 84 and 85 occupied together 22 % of imports value but articles of apparel and clothing accessories totally dominated in the import and occupied 48 % the total value. The value of imports of musical instruments (Code 92) still occupied significant share of 14 % of the total value of imports. Actually, in 2014 Code 62 totally dominated in the North Korean import to Russia with 48 % share of imports [31].

The important observation is that starting from 2012 the products of light industry had become the main commodity group imported by Russia from North Korea instead of

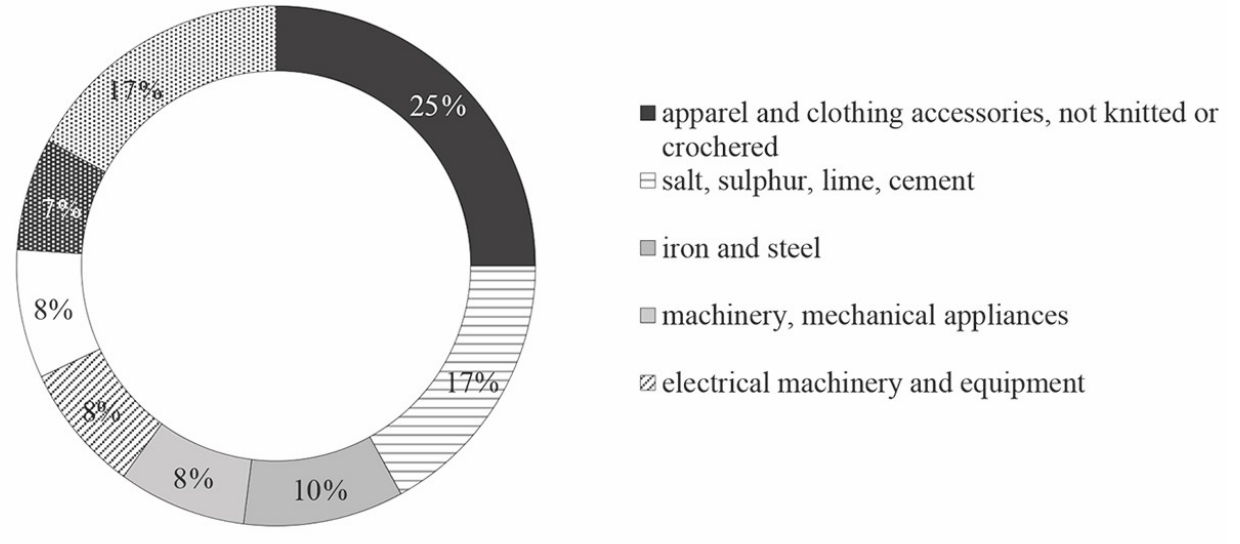

Fig. 17. Commodities share in total import from the DPRK to the Russian Federation, 2012

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

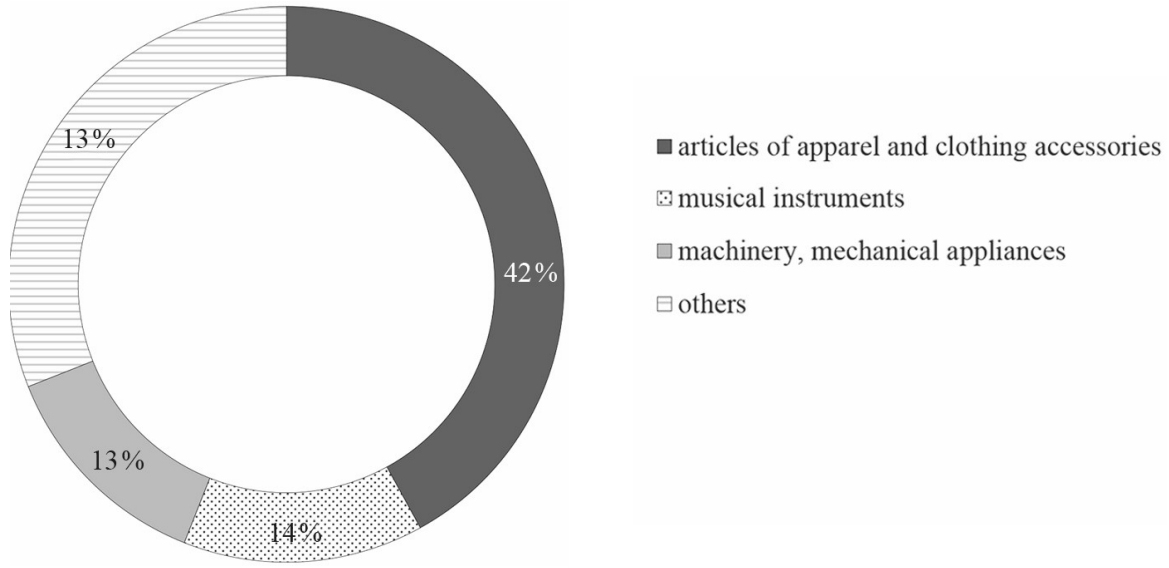

Fig. 18. Commodities share in total import from the DPRK to the Russian Federation, 2013

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

machinery, mechanical appliances, nuclear reactors, boilers; parts thereof (Code 84) and electrical machinery and equipment and parts thereof (Code 85) as it has taken place for several years since the middle of 2000s. This could indicate significant shift inside North Korea's industry structure to the South-East Asian light industry developing model or even to South Korean economic model on its very early stage. It's necessary to mention that exactly 2012 was the first year of Kim Jong-un rule in the DPRK (Fig. 19).

The effect of sanctions became clearly visible in 2015, the year with the lowest value of imports from the DPRK to the Russian Federation since 2004. The total value of imports declined by 40.7 % in comparison with previous 2014. Code 62 was still the main commodity group imported by the Russian Federation from the DPRK alongside with fish and crustaceans, molluscs and other aquatic invertebrates (Code 03) and these two commodity groups occupied altogether 58 % of the total value of imports [32].

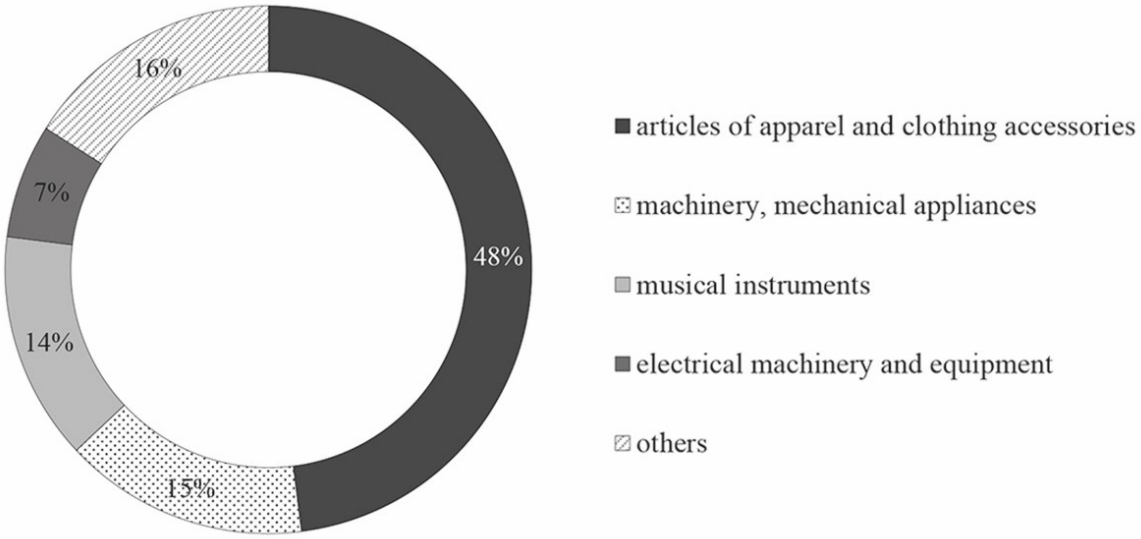

Fig. 19. Commodities share in total import from the DPRK to the Russian Federation, 2014

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

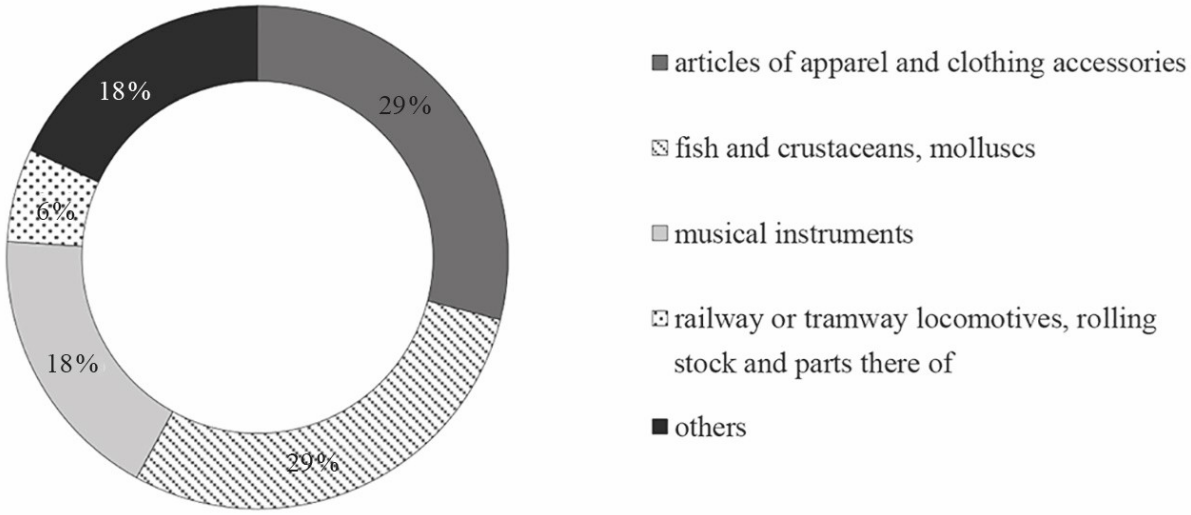

Fig. 20. Commodities share in total import from the DPRK to the Russian Federation, 2015

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

Code 03 was new for bilateral trade and appeared mainly due to the sale by Pyongyang its fishing rights in the Sea of Japan, the West Korea Bay and The East China Sea to China that practically deprived the DPRK of independent fishing. The value of imports of musical instruments; parts and accessories of such articles (Code 92) was continuing to hold the part of import (18 %). Import of railway or tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electromechanical) traffic signalling equipment of all kinds (Code 86) is easy to explain by re-export of equipment used during construction of Hasan-Rajinn railway project that was officially completed at 22 of September, 2013 (Fig. 20).

In 2016 year the import structure shifted again. Code 62 predominated in the total value of import for several previous years was pushed out to the third place with the share of 14 % after vehicles other than railway or tramway rolling stock, and parts and accessories thereof (Code 87) and fish and crustaceans, molluscs and other aquatic invertebrates

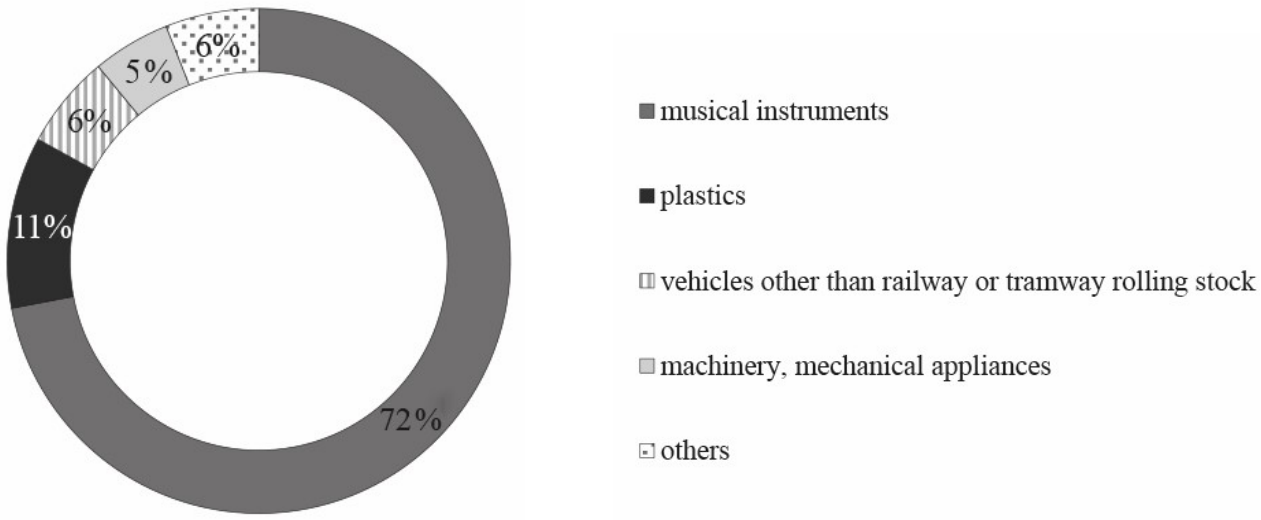

Fig. 21. Commodities share in total import from the DPRK to the Russian Federation, 2018

* Based on statistical and customs data from Customs Agencies of 8 federal districts of Russia [I–VIII].

(Code 03) occupied altogether 56 % of the total value of import. Code 85 occupied 10 % of import value became one of constant commodity groups in the total value of imports from the DPRK to the Russian Federation. The value of imports of Code 92 constantly held the part of import (13 %) as for 2016. It was the fourth year in a row of import of wind musical instruments since 2012 ($1.1 mln in 2016) and this supports the assumption about the long-term contract [33].

In 2017 the total value of imports from the DPRK continued to decline, Code 62 (articles of apparel and clothing accessories) and Code 92 (musical instruments) hold about 59 % of all North Korean import. However, 2018 becomes the worst for bilateral trade when total value of imports from the DPRK didn't exceed even $2 mln with 72 % of musical instruments as the main commodity group (Fig. 21).

Conclusion

In 2004–2007 the main export article from Russian Federation to the DPRK was mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes (Code 27), still other commodity groups didn't cover even 5 % from total export value each. In 2007 there was a sharp decline in total value of exports from Russian Federation to the DPRK that reflected a consequence of global financial crisis of 2007–2008. Since 2008 signs of changing export structure appeared alongside with the sharp decline of Code 27 in the total value of exports. Export became more diversified than it was in 2004–2007. In 2009 the total value of exports from the Russian Federation to the DPRK was the lowest for all reviewed period from 2004 to 2018 that reflects the consequences of the global financial crisis 2007–2008. The Great Recession affected significantly Russia-DPRK bilateral trade even though the North Korea is not completely integrated into the world trade system. In 2009 all commodity groups were affected by decline in total value of exports with sharpest decline in export of mineral fuels from Russia to the DPRK. In 2010–2014 Russian export experienced further diversification shifting from predomination of only one commodity group. In 2014 sanctions was imposed on the Russian Federation and it affected bilateral trade. The very next year the clear negative effect of sanc-

tions on bilateral trade between the Russian Federation and the DPRK appeared. The total value of exports from Russia to North Korea declined only by 5.3 % (in comparison with 2014) still the general structure of commodity groups was affected significantly, mineral fuels was absolutely prevail in the total value of exports and became the Russia's primary export commodity group. The structure of export was significantly changed after the sanctions were imposed. Along with continuous decline in the total value of exports the diversification narrowed sharply to only one dominating commodity group that has occupied 84-86 % of export in 2015–2017. From 2008 till 2014 the structure of export from the Russian Federation was diversified with prevail of mineral fuels, but since 2015 the structure came back to the situation of energy-supply domination of 2004–2007 instead of export diversification and supply of different commodity groups. Today mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes (Code 27) is the main commodity group exporting from the Russian Federation to the DPRK and there no signs that the situation will be changed in the mid-term.

From the other side the value of import from the DPRK to the Russian Federation is very low in comparison with the value of export to the DPRK from Russia still we can indicate several commodity groups that has occupied the significant share of the total value of import at least for several years in a row. In 2004–2007 there have been three commodity groups occupied more than a half of the total value of import from the DPRK to Russia, that are machinery, mechanical appliances, nuclear reactors, boilers; parts thereof (HS Code 84), electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles (HS Code 85) and plastics and articles thereof (HS Code 39). In 2007 the total value of import from the DPRK to the Russian Federation was the highest throughout observing period of 12 years, however there were signs of slowing down of trade dynamics. And in 2008 the total value of import from the DPRK to Russia experienced sharp decline by 59 % that reflects the consequences of the global financial crisis 2007–2008, then in next year the total value of import from the DPRK to the Russian Federation came back to the levels of 2005. Since 2011 the slow shift in commodity groups structure have taken place, two "main" commodity groups (Code 84 and 85) occupied together only 16 % of imports value. Starting from 2012 articles of apparel and clothing accessories, not knitted or crocheted (Code 62) became the main commodity group imported by the Russian Federation from the DPRK instead of Code 84 and Code 85 as it had taken place since the middle of 2000s, that highlighted significant shift in import from the products of heavy industry to the products of light industry. The effect of sanctions became clearly visible in 2015, the year with the lowest value of import from the DPRK to the Russian Federation since 2004 when the total value of import declined by 40.7 % in comparison with previous 2014 year. Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles (Code 85) have became one of constant commodity groups in the DPRK's import to the Russian Federation during observing period from 2004 till 2018.

The value of imports from North Korea to Russia always has been extremely small. In 2018 Russia was on fourth place after China, Zambia and Germany among the DPRK's main importing partners. Still in 2017 Russia was on 16th place; 2016 — 10th; 2015 — 24th and in 2014 — 16th. It should be mentioned that Russia appeared in the 4th place in

2018 not due to increasing of import from the DPRK or bilateral trade turnover, but just because of reduction the total amount of countries imported goods from North Korea. Existing insignificant North Korean import has a very clear downtrend that has become systemic since 2010. As have been mentioned the average yearly value of Russia's exports to the DPRK have exceeded the value of North Korea's imports to Russia by fifteen times for the last 14 years (in 2018 by sixteen times). The total value of imports from the DPRK in 2018 became the smallest for the last 14 years. Today there are no preconditions for increasing of the DPRK's import to Russia in the mid-term. Still the increasing the share of Code 62 commodity group (articles of apparel and clothing accessories) is very important especially taking into consideration that this shift took place at the first year of of Kim Jong-un rule and may indicate an attempt to carry out a kind of industrial reforms with emphasis on the light industry development. At the same time, the complete disappearance of Codes 84 and 85 previously widely presented in the DPRK's import structure is caused by implementation of the UN Security Council sanctions restricted trade operations specifically with these commodity groups among others.

There is no solid reason to assume any important changes in the structure and dynamics of bilateral trade between Russia and North Korea in the nearest years under the current political conditions. With a high degree of confidence it could be argued that the main export commodity group from the Russian Federation to the DPRK will remain Code 27 (mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes) and Russia's only one role in the eyes of North Korean political establishment will be the role of energy supplier. Situation regarding to import from North Korea is even worse, since in 2018 almost all import from the DPRK consisted of a single contract (musical instruments) valued $1.4 mln with the total value of imports of $2 mln. Moreover, there are no assumptions neither real steps for the development of bilateral trade.

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