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STRUCTURAL CHANGES IN RUSSIAN EXPORTS

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ABSTRACT

Sustainable economic development does not only have the export volume and growth rate, but also its qualitative structure. This problem confirms that non-energy commodity exports need encouragement. Recent economic crises have shown that the fragile economic growth in Russia strongly depends on volatile conditions in global commodity markets. They also have accentuated a need in priority rethinking. This research explores the dynamics of the commodity structure in Russian exports in 2008-2019. Having evaluated the export potential and structural changes, we identified key trends that the export structure diversification was slight. There were the largest positive structural changes in groups of foods and agricultural raw materials, metals and metal products, textiles, textile products, and shoes. There was a decrease in export shares of mineral and chemical products, machinery, equipment, and vehicles. 2015-2016 became a turning point for export structural changes. The data obtained show that export growth rates exceed growth rates of GDP and those in the share of non-energy non-resource exports. At the same time, in terms of the export quota, the involvement in international trade is mild-moderate. In value terms, in the period under review, Russian exports revealed a steady trend towards contraction. In the medium and long term, the commodity status of Russian exports dominates against the background of changes to priority commodity groups. We obviously need a transition to another type based on the growth in the sectors that are a part of the inward-oriented group.

Disciplinary: International Business Management & Trade Policy, Economic Science.

1. INTRODUCTION

Economic growth and development sustainability depend on many factors. In terms of globalization, perhaps, the successful integration of a national economy into the system of global economic relations is the most important of them. Encouragement to export activities is

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conventionally a way to achieve this goal. Generally, international trade is a means by which governments might establish their production profile. Recent studies confirm that apart from export volume and growth rates, the export qualitative structure is also essential for long-term growth (Guerson *et al.,* 2007; Kaukin & Freinkman, 2009). There is ongoing restructuring in the world economy accompanied by the appearance and growth of the new power centres that redirect the main commodity flows of production resources in a new way. In this regard, the unilateral export-raw material profile in the Russian economy creates a real danger to its structural sustainability (Frolov, 2007).

There is a dominating opinion that chances and potential of economic growth largely depend on the national resource wealth (Vosylius *et al*., 2013). At the same time, the availability of minerals and their exports do not usually lead to long-term sustainable growth. The structure of a national economy mechanism strongly influences the situation as it specifies the system for distribution of incomes from mining and other primary production resources.

Recent economic crises have confirmed the strong dependence of fragile economic growth in Russia on the volatile business environment in the world's commodity markets. Keeping in mind increasing risks, general uncertainty, and the structural profile of the Russian economy, it should mention a need in production intensification with a focus on international markets (Kheyfets & Chernova, 2019).

These and other reasons finally contributed to the statement of our research goal, which refers to the analysis of changes in the commodity structure of Russian exports, identification of stable dependencies, and development trends. To achieve this goal, in the course of the research activities, we solve the tasks of structural characteristics of exports, volatility evaluation for its main elements influenced by external conditions, evaluation of the dynamics in its composition, and overall changes in a volume of exports with its conjugated participation in the economic growth.

2. LITERATURE REVIEW

Conventionally, experts explain national production profiles with the thesis that the existing export structure primarily depends on the available resources required for competitive production (Samuelson, 1953). Hausmann (2003) provides an alternative explanation of the export profile. The structure of production and export does not only and not so much depend on the abovementioned fundamental factors (available resources), but on the fact that production of one good is not the same as the production of another good in terms of their influence on the potential of the economic development.

The economic growth (as the neo-classicists think) is achievable owing to the exported products produced with low labour costs and with the use of the imported process-oriented capital (Protasov, 2019). The success of this pattern is possible where there are favourable economic and geographical position and transportation routes, significant government's involvement in management, a lot of cheap resources (including labour ones), and finally where there is the orientation towards world markets accompanied by the implementation of the protectionist policy, etc. (Spiridonova, 2013). Many nations adopted the ideas of this approach and have recently simultaneously taken protectionist

support measures with respect to local producers and scaled up their presence in world markets (Chernova, 2017; Kheyfets & Chernova, 2019).

As a subject, the export potential development has been well explored. Many researchers have paid special attention to the definition development of *the export potential* as a concept. In particular, it refers to a volume of the goods (services) produced and sold in the world market with the highest benefit for a nation (El'kin & El'kin, 2011).

Research on the impact of the national export resource focus on the economic growth of a country led to the establishment of the so-called "resource curse" concept. Sachs and Warner were founders of this movement (Sachs & Warner, 1995). Their findings revealed the general tendency towards lower rates of economic growth due to a larger share of minerals in the structure of national exports.

The dependent economy pattern appears in the situation where commodity exports dominate, where there are no competitive non-resource exports, and where national trade is highly dependent on imported goods. Long-term use of this pattern might lead to environmental depletion and, as a result, a gradual reduction in exports of raw materials due to their exhaustion, loss of economic independence, and general decline (Sarsembekova, 2004). Conclusions are consistent with the empirical analysis at both national, and regional levels. Thus, Corey & McMahon (2009) associate institutional specifics to resource abundance and growth rates. Guriev & Sonin (2008), Hesse (2009) shown that high long-term rates of qualitative growth require a growing or at least irreducible share of non-resource high value-added goods.

To a greater or lesser degree, the dependent economy pattern was present in OPEC countries and in several other countries, which used to have or which have still focused on exports of raw materials and energy source materials. We believe that Russia belongs to such countries. It is obvious that signs of the resource curse in Russia influence nature and vector of the institutional development (Guriev *et al.,* 2007). This once again confirms that the research of the existing commodity structure of Russian exports would make it possible to identify certain regularities in its composition and prospects for change. In the subsequent choice of priority directions for export diversification, people should take into account that diversification costs significantly differ depending on commodity items, therefore, they do not have the same prospects in terms of economic growth (Hausmann & Klinger, 2006).

3. METHOD

At the first stage of the research, the measurement of the export focus in the Russian economy included the calculation of parameters that describe the export potential. Such indicators, as the export growth rate, export quota, export elasticity ratio, and foreign trade turnover balance ratio were in use. Export measurement include

1. Export quota:

$$I_1 = \frac{E}{GDP} \times 100\%, \quad (1),$$

where E is a volume of exports, GDP is the gross domestic product.

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2. Exports elasticity ratio

$$I_2 = \frac{GRe}{GRgdp} \times 100\% \quad (2),$$

where *GRe* is export growth rates, *GRgdp* is GDP growth rates.

3. The foreign trade-turnover balance ratio (net exports competitiveness):

$$I_3 = \frac{\text{E - I}}{FTT}, \quad (3),$$

where *I* is a volume of imports and *FTT* is a national foreign trade turnover.

In the *second stage* of the research, we reviewed the commodity structure of Russian exports in 2008-2019 based on the statistics provided by the Federal Customs Service of Russia and Rosstat. For statistics processing, we used the structural-dynamic analysis method that assumes the finding of individual and summarizing indicators of structural changes (absolute and relative structural changes with the variable and permanent comparison base) (Sivelkin & Kuznetsova, 2002).

The total structural indicator (d_i) was calculated as follows:

$$d_i = \frac{x_i}{s} \times 100 \quad (4),$$

where *di* is a fraction of *i*-th element of a structure, *i* is N,1, *xi* is an absolute value of the *i*-th element; *s* is a sum total of absolute values of *i*-th elements of the structure.

The individual absolute indicator of structural changes with variable (Δ_v) and constant (Δ_c) comparison base is as follows:

$$\Delta_v = d_j - d_{j-1}, \Delta_c = d_j - d_0, \quad (5)$$

where d_j is the specific gravity of a group in the *j*-th period, d_{j-1} is the specific gravity of the group in period *j-1*, d_0 is the specific gravity of the group in a reference period.

The individual factor of relative structural changes with variable (J_{dv}) and constant (J_{dc}) comparison bases are found as follows:

$$J_{dv} = \frac{d_j}{d_{j-1}}, \; J_{dc} = \frac{d_j}{d_0}, \quad (6)$$

The linear coefficient of absolute structural changes with the variable comparison base is found as follows:

$$L^{Ab}_{z} = \frac{\sum_{i=1}^{n} | d_j - d_{j-1} |}{n} \quad (7)$$

where *d* is specific gravities of attributes, *n* is a number of gradations in structures, *j* is the periods compared.

The indicators' values obtained were interpreted as absolute and relative values of discrepancies

between fractions (frequencies) of elements in the export structure calculated with methods of mean linear and standard deviations. Note that in the course of the research, we calculated the change in the overall structure, structural shift, instead of changes to separate shares in the export composition.

4. RESULT AND DISCUSSION

Before any discussions of estimated Russian exports, where there are clear high productive commodity groups (Kaukin & Freinkman, 2009), let us consider export dynamics.

In 2008-2019, Russian exports fell from USD 445 billion to 384 billion. The change in dynamics was extremely unstable. In the period under review, there was a growth in exports in 2012-2014. After 2014, due to the introduced sanctions, there was a steady decline in exports. It was possible to reverse the trend with the adoption of many export increase measures. In 2017-2018, its value increased from $357 billion to $450 billion. The difficult situation in the world's commodity markets adjusted the growth trend, in 2019, the annual export reached the level of $419 billion.

Table 1 show the the calculated results of export potential parameters in the Russian economy.

Table 1: Export potential in the Russian economy, 2009-2019

Year	Parameter			
	Export growth rates, %	Export quota, %	Exports elasticity ratio	Foreign trade turnover balance ratio (net exports competitiveness)
2009	64.1	23.4	87.3	0.28
2010	130.9	24.5	104.6	0.26
2011	128.2	23.3	95.4	0.25
2012	109.7	23.9	102.6	0.25
2013	100.3	22.9	95.8	0.25
2014	94.4	24.2	105.5	0.27
2015	69.1	25.3	104.7	0.31
2016	83.1	22.4	88.4	0.22
2017	125.1	22.7	101.2	0.22
2018	126.0	27.0	119.3	0.31
2019 *	85.2	25.3	93.5	0.27

Note: * for 11 months of 2019
Source: (Federal Customs Service of Russia)

The completed calculation confirms that the importance of exports for the Russian economy increased from 23.4% in 2008 to 25.3% in 2019 (or +1.9 percentage points). The export quota indicator varied in the mentioned period (22.4-27%). At the same time, the value of over 30% is considered high. In terms of value, about 25.3% of all the goods made in Russia are exported. The elasticity indicator confirms the growing role of exports. The export elasticity confirms that the economy is much more open, export growth rates were higher than those of GDP. In 2017-2018, the export elasticity coefficient increased (from 101.19 to 119.26%), thus, exports became much more elastic. A much more open economy might have a seemingly opposite effect as trade liberalization has an essential positive influence on the growth of imports and might prevent exports from the growth (Hadili *et al.,* 2016).

In 2008-2019, the foreign trade turnover balance ratio was always positive, which confirms that exported goods (services) dominated over imported ones. However, the share of net exports in the

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foreign trade turnover was decreasing in 2015 and later, leading to a decrease in export competitiveness. The asymmetry of commodity positions, clear from the comparison of export-import operations, points out to the inefficient commodity structure in the foreign trade.

In 2008-2019, the gain in commodity exports was -13.7%. There were also changes in the internal structure of exports. There was the growth in such commodity categories, as foods and agricultural raw materials (+165.5%), textiles, textile products, and shoes (+160.0%), machinery, equipment, and vehicles (+92.7%), precious stones, precious metals, and products made of them (+81.1%), wood and pulp and paper products (+24.5%). We found the decrease in exported chemical products (-14.4%), mineral products (-21.4%), fuel and energy products (-21.8%), metals and products made of them (-33.4%), other goods (-51.4%). Table 2 gives the aggregated commodity structure of Russian exports.

Table 2: Commodity structure of Russian exports in 2008-2019, USD billion (Source: Federal Customs Service of Russia)

Year	Export	Commodity groups										
		G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11
2008	444.5	8.4	311.8	307.2	28.5	0.3	9.4	0.5	7.4	51.8	12.4	14.0
2009	284.9	9.3	192.0	189.9	17.5	0.2	8.2	0.4	5.0	32.2	16.6	3.5
2010	372.9	8.1	260.5	257.4	22.8	0.3	9.2	0.4	8.6	39.5	19.6	3.9
2011	478.2	11.3	346.1	340.7	29.2	0.3	10.4	0.4	11.1	43.4	21.1	4.9
2012	524.7	16.6	374.6	369.4	32.0	0.5	10.1	0.7	13.8	44.5	26.5	5.4
2013	526.4	16.2	376.8	371.8	30.7	0.6	11.0	0.9	14.4	40.9	28.3	6.6
2014	496.9	18.9	350.1	345.4	29.1	0.4	11.6	1.1	11.8	40.6	26.3	7.0
2015	343.4	16.2	219.2	216.1	25.3	0.3	9.8	0.8	7.9	33.0	25.4	5.5
2016	285.5	17.0	168.9	166.0	20.8	0.3	9.8	0.9	8.9	29.1	24.3	5.5
2017	357.1	20.7	215.6	211.4	23.9	0.3	11.8	1.1	11.0	37.3	28.1	7.3
2018	450.0	24.9	291.5	286.7	27.4	0.3	13.9	1.2	10.1	44.5	29.1	7.1
2019 *	383.5	22.3	245.0	240.2	24.4	0.2	11.7	1.3	13.4	34.5	23.9	6.8
Growth rates in 2019/2008	86.3	265.5	78.6	78.2	85.6	66.7	124.5	260.0	181.1	66.6	192.7	48.6

Note: * for 11 months of 2019. G1 is foods and agricultural raw materials (except textile), G2 is mineral products, G3 is fuel and energy products [as part of G2], G4 is chemical and rubber products, G5 is raw leather, furs, and their derivates, G6 is wood and pulp and paper products, G7 is textiles, textile products, and shoes, G8 is gemstones, precious metals, and articles made therefrom, G9 is metals and articles made therefrom, G10 is machinery, equipment, and vehicles; G11 is other products.

One of the most urgent is the problem related to the high proportion of low value-added products in the export part of the foreign trade turnover. Such products are mainly unprocessed raw materials (crude oil, gas, metal ores, and metals that have only undergone primary processing, unprocessed wood). In 2016–2018, the share of fuel and energy products was 36.2% in the national annual foreign trade turnover or 59.2% of the total exports. At the same time, the share of exported machinery, vehicles, and equipment, which are a framework factor in the economic development of the country, was only 4.8% of the total annual volume of the national foreign trade turnover, or 7.9% of its export share.

In the analysis of non-resource non-energy exports, the dynamics of the indicator calculated in natural units are much more informative. The border between resource and non-resource goods lies in lower value-added products. All the goods not classified as resource materials might be considered

non-resource materials. As a result, for instance, in metallurgy, metals themselves are resource materials, while metal products are non-resource (Kalinin, 2019). For instance, the 11.7% export growth in 2017 was primarily owing to an 8.2%-higher index of export prices. Thus, the growth index of physical volumes of exported non-resource non-energy goods was 3.5%.

In 2008-2019, mineral products, including fuel and energy products, steadily had the largest share in the commodity export structure (Table 3). In 2008, their share was 70.1% (fuel and energy products – 69.1%), by 2019, their share had slightly fallen to 63.9% (fuel and energy products - to 62.6%). There was also a reduction in the second most important commodity group in exports, metals, and metals products, to 9.0% in 2019. The proportion of wood and pulp and paper products increased from 2.1% in 2008 to 3.1% in 2019. The share of exported precious stones, precious metals, and products made of them increased to 3.5%. Owing to the low base effect, there was a significant increase in the share of machinery and equipment (to 6.2%), foods, and agricultural raw materials (to 5.8%). The proportion of other commodity groups decreased to 1.7%. Since the WTO joining in 2012, the Russian export structure has undergone changes. They were mostly due to the decrease in world prices for energy resources, accounting for a significant share of exports.

Thus, the growth of the export focus in the Russian economy is slow. Over the recent 11 years, mineral products, including fuel and energy products, have still prevailed in the structure of commodity exports. The share of other commodity groups does not exceed 10% in the overall structure of commodity exports.

Table 3: Russian exports commodity structure (%) (Source: Federal Customs Service of Russia)

Year	Export	Commodity groups										
		G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11
2008	100	1.9	70.1	69.1	6.4	0.1	2.1	0.1	1.7	11.7	2.8	3.1
2009	100	3.3	67.4	66.7	6.1	0.1	2.9	0.1	1.8	11.3	5.8	1.2
2010	100	2.2	69.9	69. 0	6.1	0.1	2.5	0.1	2.3	10.6	5.3	0.9
2011	100	2.4	72.4	71.2	6.1	0.1	2.2	0.1	2.3	9.1	4.4	0.9
2012	100	3.2	71.4	70.4	6.1	0.1	1.9	0.1	2.6	8.5	5.1	1.0
2013	100	3.1	71.6	70.6	5.8	0.1	2.1	0.2	2.7	7.8	5.4	1.2
2014	100	3.8	70.5	69.5	5.9	0.1	2.3	0.2	2.4	8.2	5.3	1.3
2015	100	4.7	63.8	62.9	7.4	0.1	2.9	0.2	2.3	9.6	7.4	1.6
2016	100	6.0	59.2	58.1	7.3	0.1	3.4	0.3	3.1	10.2	8.5	1.9
2017	100	5.8	60.4	59.2	6.7	0.1	3.3	0.3	3.1	10.4	7.9	2.0
2018	100	5.5	64.8	63.7	6.1	0.1	3.1	0.3	2.2	9.9	6.5	1.5
2019*	100	5.8	63.9	62.6	6.4	0.1	3.1	0.3	3.5	9.0	6.2	1.7

Note: * for 11 months of 2019.

In 2009, compared to 2008, there was a change in the structure of commodity exports owing to the increased share of foods and agricultural raw materials. At the same time, there were 2.7%-decrease in the share of mineral products, 0.3%-decrease in the share of chemical products and rubber, 0.4%-decrease in the share of metals, and metals products, and 1.9%-decrease in the share of other goods. In 2010, foods and agricultural raw materials showed the largest decline. In 2011, the share of mineral products increased by 2.5%, while shares of other commodity groups decreased by 0.3-1.5%. In 2012-2014, the export structure slightly changed, in the range of 1% in each major commodity group. There were sharp changes in exports in 2015 when the share of mineral products

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decreased by 6.7%. In their turn, shares of machinery, equipment, and vehicles increased by 2.1%, shares of chemical and rubber products by 1.5%, metals and metal products by 1.4%. In 2016, export directions' diversification was consolidated, the share of mineral products decreased by 4.6%, shares of foods and agricultural raw materials increased by 1.3%, machinery, equipment, and vehicles by 1.1%. In 2017-2018, the export structure was restored to its previous levels owing to the systematic growth in the share of mineral products. In 2019, there was some improvement in the structure in favour of non-resource non-energy exports. Thus, the largest changes toward export diversification were in 2015-2016, while in other periods, the export structure was monopolized in the direction of raw materials.

Let us find linear factors of absolute structural changes in the exports commodity structure for 2008-2019: $L_{2009/2008} = 1.06$, $L_{2010/2009} = 0.59$, $L_{2011/2010} = 0.54$, $L_{2012/2011} = 0.11$, $L_{2013/2012} = 0.22$, $L_{2014/2013} = 0.31$, $L_{2015/2014} = 1.35$, $L_{2016/2015} = 0.94$, $L_{2017/2016} = 0.30$, $L_{2018/2017} = 0.88$, $L_{2019/2018} = 0.42$ and $L_{2019/2009} = 2.70$. The highest value of structural changes was in 2015-2016. In 2009-2014, structural changes were non-significant. Over the entire period under review, the coefficient of absolute structural changes was 2.7. There were the largest changes in such commodity categories, as foods and agricultural raw materials, mineral products, fuel, and energy products.

See absolute chain structural changes in Table 4.

Table 4: Absolute chain structural changes in the commodity structure of Russian exports in 2008-2019

Year	Commodity group									
	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
2009	1.4	-2.7	-2.4	-0.3	0	0.8	0	0.1	-0.4	3
2010	0.3	-0.2	-0.1	-0.3	0	0.4	0	0.6	-1.1	2.5
2011	0.5	2.3	2.1	-0.3	0	0.1	0	0.6	-2.6	1.6
2012	1.3	1.3	1.3	-0.3	0	-0.2	0	0.9	-3.2	2.3
2013	1.2	1.5	1.5	-0.6	0	0	0.1	1	-3.9	2.6
2014	1.9	0.4	0.4	-0.5	0	0.2	0.1	0.7	-3.5	2.5
2015	2.8	-6.3	-6.2	1	0	0.8	0.1	0.6	-2.1	4.6
2016	4.1	-10.9	-11	0.9	0	1.3	0.2	1.4	-1.5	5.7
2017	3.9	-9.7	-9.9	0.3	0	1.2	0.2	1.4	-1.3	5.1
2018	3.6	-5.3	-5.4	-0.3	0	1	0.2	0.5	-1.8	3.7
2019*	3.9	-6.2	-6.5	0	0	1	0.2	1.8	-2.7	3.4

In 2008-2019, there were the largest positive structural changes in such export commodity groups, as foods and agricultural raw materials (+3.9%), other goods (+3.4%), metals and metal products (+1.8%), textiles, textile products, and shoes (+1%). There was a decrease in shares of exported mineral products (of 6.2%), chemical products (of 6.5%), machinery, equipment, and vehicles (of 2.7%).

As far as the research focuses on the relationship between the export structure and the economic growth, we will pay close attention to the dynamics of physical volumes of exports and evaluate its impact on the economic growth. We assume that the increase in volumes of non-resource non-energy exports in Russia would increase GDP growth rates. To verify this assumption, we have performed the correlation-regression analysis.

In the pattern, we found the dependence of GDP growth rates on the volume of non-resource non-energy exports and USD annual average exchange rate (Table 5). The value definition of the target indicator of non-resource exports is a limiting factor that prevents the rouble from devaluation in favour of higher competitiveness and increasing export supplies. Although due to devaluation, international buyers can purchase a larger physical volume of products for the same price in dollars or the same volume paying a lower volume price, the value of exports does not change or decrease accordingly (Kalinin, 2019).

Table 5: Data on the correlation-regression analysis pattern.

Year	GDP growth rates, % (Y)	USD average annual exchange rate (X_1)	Non-resource non-energy exports, billion USD (X_2)
2009	64.09	31.828	92.9
2010	130.89	30,364	112.4
2011	128.24	29.393	132.1
2012	109.72	31.073	150.1
2013	100.32	31.849	149.6
2014	94.40	38.467	146.8
2015	69.11	61.295	124.2
2016	83.14	67.189	116.6
2017	125.08	58.309	141.5
2018	126.02	62.691	158.5
2019*	85.22	64.663	138.5

The correlation coefficient between the GDP growth rates (Y) and the average annual USD exchange rate (X_1) is -0. 231. The link is weak and reverse. The link between GDP growth rates (Y) and NOE volume (X_2) is 0.462, being moderate and direct (Table 6).

Table 6: Matrix of paired correlation coefficients

	Y	X_1	X_2
Y	1	-0.231	0.462
X_1	-0.231	1	0.144
X_2	0.462	0.144	1

Let us calculate the equation of two-factor multiple regression making the system of equations of the two-factor multiple regression. Using the Cramer's rule method, we find that. $b_0 = 39.408; b_1 = -0.452\ b_2 = 0.623$. Thus, the regression equation might look like $Y = 39.408 - 0.452x_1 + 0.623x_2$. Determination coefficient R^2 =0.304. Hence, there is no functional dependence between GDP growth rates, the volume of non-commodity exports, and the USD exchange rate. The correlation between these parameters shows a moderate relationship.

With this regression dependence, we might predict the further GDP dynamics in the given conditions of the Russian socio-economic development until 2024 (Ministry of Economic Development of Russia). In the case of the achieved scheduled indicator of non-energy and non-recourse exports ($250 billion), growth rates of Russian GDP (from the pattern) would reach 164.6%. At the same time, the basic development scenario assumes the 136.6%-growth rate in GDP in 2024-2019. Thus, the achievement of the target volume of non-resource exports is unlikely in these conditions. We might conclude that the export-resource type of development has been at the end of its

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resources and cannot have a strong impact on economic growth. It is obvious that the transition to another type is necessary, based on the growth in the sectors that are a part of the inward-oriented group (Frolov & Lebedev, 2007). There should be such encouragement to the growth in export supplies that would at the same time ensure the growth in the national market.

We believe that the completed research made an empirical basis for the further solving of the problem of targeted encouragement to non-energy and non-resource exports to maximize the influence effect of export supplies on the GDP growth, taking into account its structural changes.

5. CONCLUSION

Russian economy conventionally includes a large share of low value-added goods in the export part of its foreign trade turnover, mainly in the form of raw materials. Our research findings confirmed that this circumstance is a barrier to sustainable economic growth. The analysis showed that active export activities performed by Russian companies encourage the industrial advance in the fuel and energy sector, ferrous and non-ferrous metallurgy, chemical, petrochemical, woodworking, and pulp and paper sectors. Other sectors develop within the momentum of the national demand, limited by imports of high value-added goods. This prevents the economic structure from harmonization and only makes disparities (towards exported raw materials) stronger. The export concentration in raw materials leads to slow growth rates in the export focus of the economy, and from time to time, there are periods of reduction. Existing development trends evidence the preservation of the short- and long-term commodity-based status of Russian exports with changed priorities in terms of commodity groups. The research findings make it possible to conclude that the raw materials-based export nature is not able to make an intense impact on economic growth. We obviously need a transition to another type, based on the growth in the sectors that are a part of the inward-oriented group.

6. AVAILABILITY OF DATA AND MATERIAL

Information can be made available by contacting the corresponding author.

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