



# Deindustrialization of Russia's Peripheral Regions: The Case of the Republic of Dagestan

## Desindustrialización de las regiones periféricas de Rusia: el caso de la República de Daguestán

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Received: 11/10/2019 • Approved: 26/01/2020 • Published 12/03/2020

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#### ABSTRACT:

The authors argue that the imbalance in the modern economic development of the central (capital) and peripheral regions of modern Russia is reduced to antagonism between the processes of their industrialization and deindustrialization. To investigate this antagonism, the authors have employed an advance coefficient, which is the ratio of the rate of industrial and agricultural growth to the rate of growth in Gross Regional Product, with the study's scope including Dagestan, the North Caucasus and Russia as a whole.

**Keywords:** Dagestan, uneven development, periphery, deindustrialization, strategy for regional development

#### RESUMEN:

Los autores sostienen que el desequilibrio en el desarrollo económico moderno de las regiones centrales (capitales) y periféricas de la Rusia moderna se reduce al antagonismo entre los procesos de industrialización y desindustrialización. Para investigar este antagonismo, los autores han empleado un coeficiente de avance, que es la relación entre la tasa de crecimiento industrial y agrícola y la tasa de crecimiento del Producto Regional Bruto, con un alcance del estudio que incluye Daguestán, el Cáucaso del Norte y Rusia en general.

**Palabras clave:** Daguestán, desarrollo desigual, periferia, desindustrialización, estrategia para el desarrollo regional.

## 1. Introduction

A problem that has consistently faced the Russian Federation is the uneven economic development of its regions. The country can be divided into the central industrial zone (the Central Part, or the Old Russian Zone) and peripheral national autonomies. These two major groups of regions differ tangibly both in level and rate of socio-economic development. Based on data from RIA Rating, an information-analytical agency, the way in the first group, which is the bigger one, is led by Saint Petersburg and Leningrad Oblast, Moscow and Moscow Oblast, the Republic of Tatarstan, Samara Oblast, Perm Oblast, Sverdlovsk Oblast, and others, i.e. historic centers and regions in the Central Part of Russia (Rating ..., 2017). The group also incorporates a number of relatively well-to-do outlying regions in the Russian North and Western Siberia, which currently are actively engaged in

the development of oil-and-gas resources – Khanty-Mansi Autonomous Okrug, Yamalo-Nenets Autonomous Okrug, and Chukotka Autonomous Okrug.

The other group comprises a much smaller number of regions and is represented by economically backward national autonomies. It can be divided into the country's southern periphery (the Republic of Kalmykia, the Kabardino-Balkar Republic, the Republic of Ingushetia, the Chechen Republic, and the Republic of Dagestan) and its south-eastern edge (the Altai Republic, the Tuva Republic, and Jewish Autonomous Oblast). Among these, worthy of special mention are the Republic of Ingushetia and the Tuva Republic, which are distinguished by the largest share of residents living below a minimum subsistence income – 32 and 41%, respectively (Economic health..., 2019).

To assess the current degree to which regional development is uneven, researchers normally employ the Gross Regional Product (GRP) per capita metric. In 2000, the gap between Tyumen Oblast (176,900 rubles), ranked the highest, and the Republic of Ingushetia (6,600 rubles), ranked the lowest in this indicator, was 26.5 times. Note that by 2017 the gap decreased to 16.5 times. While the degree of regional inequality by GRP per capita has decreased, it still remains quite significant overall. In 2017 (just like in 2000), the top 10 in GRP per capita were still Moscow, Tyumen Oblast, Magadan Oblast, Sakhalin Oblast, Krasnoyarsk Krai, the Sakha (Yakutia) Republic, the Komi Republic, and Chukotka Autonomous Okrug. The bottom-10 group did not change much either. It still included the Kabardino-Balkar Republic, the Karachay-Cherkess Republic, the Republic of North Ossetia-Alania, the Tuva Republic, the Republic of Dagestan, and the Republic of Ingushetia (Kazantseva, 2019).

A drop in the share of industrial output in the GRP of the country's national peripheral regions is a consequence of declines in production mainly at industry's major enterprises (Iziev, Rabadanova, 2016; Abdullaeva, Gamidullaev, Sultanov, 2019). Many researchers are convinced that issues such as deindustrialization, declines in people's well-being, and increased subsidies for Russia's outlying regions may be fraught with a serious threat of its political-geographical destabilization (Sagidov et al., 1996; Seliverstov et al., 1996; Aliyev, 2004; Dokholyan et al., 2014; Akhmeduev, 2016; Holland, 2016).

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## 2. Methodology

The paper discusses quite a commonplace model of economic development in a country's outlying national regions or independent countries in the world's periphery which is characterized by clear contrasts in the development of the following two key areas of the economy – the (traditional) agricultural sector and the (innovation-driven) industrial sector (Wallerstein, 2004; A Report..., 2018). The functional relationship between "traditionally agricultural" and "innovatively industrial" nations is normally interpreted via the concept of "cycles of poverty", or "poverty traps" (Cycle of poverty, 2019). These cycles are testimony that most of the gain from international (in this paper's context – interregional) trade is derived by areas that turn out the actual end product, while it is inevitable for resource-based economies, which import this product, to simply degrade further (Nureyev, 2008).

Today, some find relevance in the following dictum on the socio-historical role of agricultural societies, which was popular in the first quarter of the 20th century: "Happy is a nation whose people has not forgotten how to rebel" (Tawney, 1912, p. 357). As commonly known, in the spirit of this dictum a major focus during said period was on discussing and implementing in practice scholarly concepts related to "national social justice" (including Lenin's theory of socialism), aimed at freeing agricultural nations from colonial rule and helping them overcome the "vicious circle of poverty".

In principle, things have changed but little a hundred years later. It must be acknowledged, however, that scholarly concepts and theories regarding the economic dependency of countries and regions in the periphery are formulated now in a more politically correct manner. For instance, the relationship between metropolitan (or "donor" in the Russian version) and colonial ("recipient") regions can be discussed quite productively within the framework of the theory of the self-regulating development of industrial or agricultural clusters (Porter, 1990). This kind of linguistic tact in present-day economic discussions may be viewed as a consequence of scholars' negative reactions to "agricultural revolts" and "great leaps" in the 20th century, which were accompanied by the emergence of shockingly bloodthirsty totalitarian regimes.

The current theory of investigating the functional dynamics and historical evolution of regional economies tends to factor in the dialectics of concepts such as 'structure' and 'strategy' (Chandler, 1962; Rumelt, 1974). With that said, the term 'structure' has a sort of analytical connotation to it, while 'strategy' is more associated with forecasting (Grant, 2010). Traditionally, the parametrics of the category 'structure' in regional-studies research may be associated with the following two major theoretical angles of consideration: vertical and horizontal (Granberg, 2004; Hill, 2014). The vertical structure is associated with authority, or, in other words, hierarchy in economic management, while the horizontal structure is associated with the market, or spatial-economic forms of reciprocal adaptation (Thakur, 2011; Eldarov, 1998).

This study's methodology is focused on the horizontal (divisional) structure of the economy, which can be viewed as a relationship between the industrially- and agriculturally-specialized economies of regions, zones, states, and civilizations (Wallerstein, 2004). Its information base is grounded in government statistical data that cover the following three key strategic indicators of the sectoral development of the regional economy: GRP, industrial output, and agricultural output.

The work employs a special summarizing indicator – the 'advance coefficient', which expresses the following two ratios: (1) the ratio of the rate of growth in industrial and agricultural output to the rate of growth in GRP; (2) the ratio of indicators for the Republic of Dagestan (hereinafter 'RD') and the North Caucasus Federal District (NCFD) to those for the Russian Federation (RF) as a whole. The above indicator may provide a more in-depth assessment of the strategic reserves and prospects for economic transformations in the region.

### 3. Results

When it comes to the dynamics of the sectoral structure of Dagestan's economy, the region's industry is still in a state of recession, which it entered following a major slump in production in the early 1990s. The republic's total industrial output in 2000 was just 17% relative to that recorded before the start of the recession in 1990. By 2009, the figure rose to 72%, while in 2013 it dropped to 40%. Thus, despite high recovery rates, the region's industry appears to have seen little to no development overall (Idziev, 2014).

The fact that the RD lags in industrial development is evident from the current situation with fixed assets in its industry, which constitute just 0.36% of total fixed assets in the Russian Federation. The region has a negligible share in Russia's total fixed assets (0.06%) in extraction of mineral resources (Gadzhiev et al., 2017). Note that Dagestan's population accounts for 2.1% of Russia's total population (data as at January 1, 2018). Major lagging-behind in investing in the republic's industry has resulted in the current volume of fixed assets per capita in Russia being 5.7 times that in Dagestan.

To determine the place occupied by industry in the economies of the RD, the NCFD, and the RF, the authors conducted a comparative analysis of the rates of change in GRP, industrial output, and agricultural output over the 10-year period 2006 to 2016 (Table 1).

**Table 1**  
Rate of Change in GRP and in Total Industrial and  
Agricultural Output over the 10-Year Period 2006 to 2016

	<b>Republic of Dagestan</b>	<b>North Caucasus Federal District</b>	<b>Russian Federation</b>
	<b>Rate of growth, times</b>		
<b>GRP</b>	5.95	4.51	3.27
<b>Total industrial output</b>	2.71	3.35	3.60
<b>Total agricultural output</b>	3.95	3.93	3.74
	<b>Advance coefficient (GRP = 1.00)</b>		
<b>GRP</b>	1.00	1.00	1.00

<b>Total industrial output</b>	0.45	0.74	1,10
<b>Total agricultural output</b>	0.66	0.87	1.15
	<b>Advance coefficient (RF = 1.00)</b>		
<b>GRP</b>	1.82	1.38	1.00
<b>Total industrial output</b>	0.75	0.93	1.00
<b>Total agricultural output</b>	1.06	1.05	1.00

Calculations by the authors, based on data from "Regions of Russia" (2017)

The authors' calculations, performed by reference to current prices, indicate that the rate of growth in industrial output across the RF is higher than the rate of growth in GDP. This, certainly, is a positive trend. With the RD, the rate of growth in industrial output is significantly lower than the rate of growth in GRP and agricultural output, which is testimony to a decline in the share of industry in GRP. Thus, currently the Russian economy as a whole is mostly characterized by growth in industrial output, while Dagestan is mainly witnessing growth in agricultural output and GRP.

Using a coefficient expressing the ratio of the rate of growth within the RD and the NCFD to the rate of growth within the RF, the authors arrived at the following findings: GRP and agricultural output within the RD increased to a greater degree than that within the NCFD and the RF as a whole, while the volume of industrial output within the RF was greater than that within the NCFD and the RD.

As a percentage of GRP, industrial output declined within the RD from 9.8 to 6.2%, within the NCFD – from 17.7 to 12.8%, and within the RF – from 35.1 to 31.7%. Concurrently, there was a decline in agricultural output: within the RD – from 23.5 to 14.0%, within the NCFD – from 18.9 to 13.9%, and within the RF – from 5.2 to 4.8%. With that said, the combined output of industry and agriculture declined within the RF from 40.3 to 36.5%, within the NCFD – from 36.6 to 26.7%, and within the RD – from 33.3 to 20.2%.

The period 2006–2016 is distinguished by a number of noteworthy changes across the three metrics under examination – GRP, industrial output, and agricultural output. There was an increase in the share of the North Caucasus's and Dagestan's GRPs in the RF's GDP (from 2.1 to 2.6% and from 0.6 to 0.9%, respectively), while the share of industrial output from manufacturing in the RF's total industrial output declined: from 1.3 to 1.1% with the NCFD and from 0.14 to 0.09% with the RD. Over the 10-year period, the share of agricultural output generated within the North Caucasus in the RF's total agricultural output increased from 7.1 to 7.9%, and that generated within Dagestan rose from 1.6 to 1.9%.

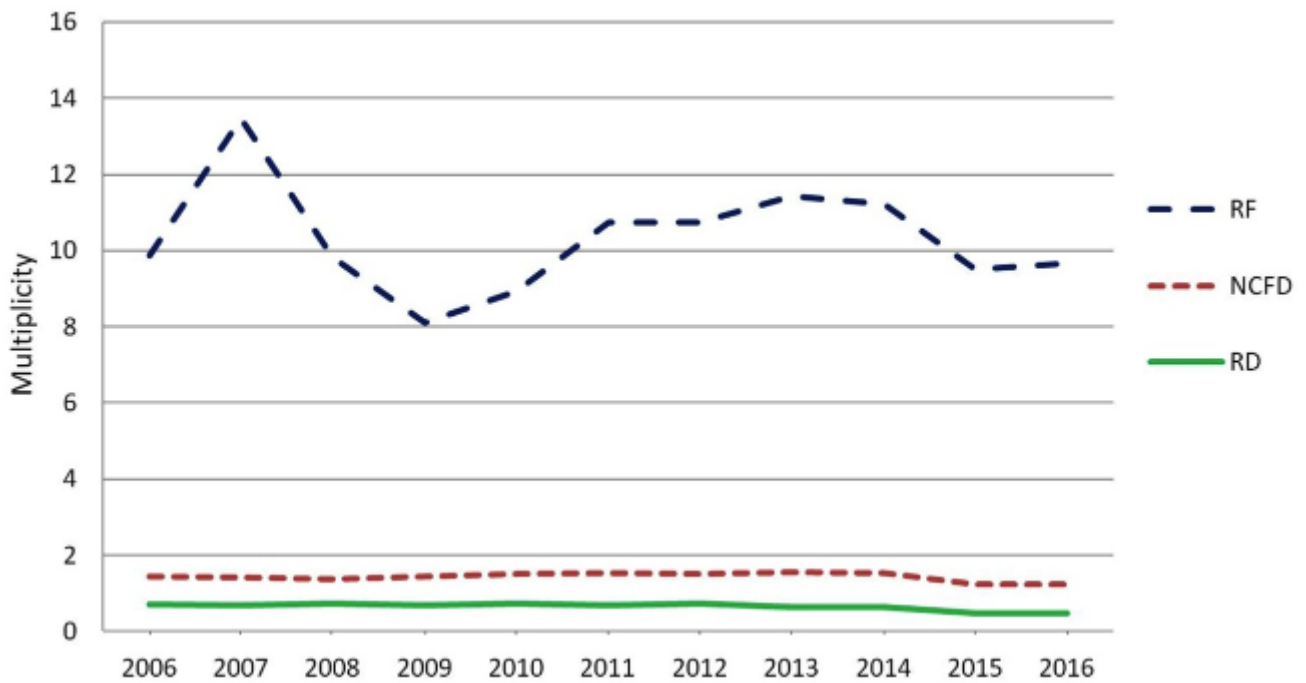
## 4. Discussion

Currently, there is a unidirectional trend of a widening gap between indicators of growth in industrial and agricultural output in the direction of industrial growth both across the RF and across the NCFD. With the RD, the situation is opposite: the share of industry in the combined output of the sectors of the republic's economy is nearly two times smaller than that of agriculture.

The authors' analysis can be summarized by a time series of correlations between industrial and agricultural output in Dagestan, the North Caucasus, and Russia as a whole covering the period 2006–2016 (Figure 1).

**Figure 1**

Dynamics of industrial and agricultural output across the Republic of Dagestan, the North Caucasus Federal District, and the Russian Federation (2006–2016)



Calculations by the authors, based on data from "Regions of Russia" (2017).

As evidenced by the diagram above, the output of industry across the RF as a whole is nearly 10 times (around 1,000%) that of agriculture, with the figure reaching its highest in 2007 – nearly 14 times. Within the NCFD, the average figure is 150%, and within the Republic of Dagestan it is around 50%. Note that this trend is associated not with growth in agriculture in the country's most southern region but declines in industrial production in it. This is causing declines in revenue in the regional budget and a further exacerbation of the issue of its trailing behind the rest of Russia's constituent regions.

The deindustrialization of the economy trend is characteristic of all of Russia's constituent regions that make up the group of southern national-peripheral regions. It stands to reason that these regions are in need of an economic policy that, above all, will be aimed at the development of the industrial sector, which should result in a boost in tax receipts paid into the regional budget, decreased subsidies from the federal center, and improvements in the standard of living of the region's population.

The findings from this study indicate a need to comprehensively develop the industrial sector in the Republic of Dagestan by modernizing it and embracing innovation-driven models. It is this type of trend that must be seen as a priority for the RD's leadership going forward.

## 5. Conclusions

1. The authors' analysis has helped reveal a set of quite contradictory trends in the development of industry and agriculture overall across the RD, the NCFD, and the RF. Consequently, there is a need to lay a foundation for relevant principles for coordinating economic policy at the level of regional and federal authorities.
2. When it comes to federal-level strategic planning, it may be worth giving more consideration to the special regional characteristics of industrial policy. With that said, the nation's central and outlying regions may need to be viewed as a single industrial system, in which the development of the national republics of the North Caucasus would tie in with plans for the industrial development of the entire country.
3. We currently are witnessing an attempt to lay a foundation for and develop a strategy for the socio-economic development of Dagestan based on the "Strategy for the RF – Strategy for the NCFD – Strategy for the RD" unitary-hierarchical scheme. This kind of approach is making it virtually impossible to engage the RD's scientific-academic potential in the creative process of strategizing the region's economic development. Only overcoming this project hierarchy will provide hope that the so-called "Southern Breakthrough" can be achieved.
4. Industry is what creates the latest means and objects of production, serves as a basis for the development of high technology in all areas of activity, and is a key means of propelling the regional economy along the innovative path of development (Smirnov, 2013; Sukharev, Strizhakova, 2016). Therefore, under today's socio-political conditions governing national

development, when it comes to designing industrial policy for its regions, the authors find it hardly advisable to embrace the "growth point" concept, as it can provide a rationale for concentrating resources in regions with a better developed industrial base and infrastructure, to the actual disadvantage of the rest.

5. It stands to reason that the state's policy of evening out regional economies cannot serve as a remedy (Romanova, 2014). It must be taken into account here that the uneven development of the production sphere in the regions is largely associated with a number of objective external and internal factors, as well as their historical economic specialization.

6. When it comes to NCFD regions, there is a need to develop and implement an economic policy that is aimed at the reciprocal supplementation of backbone production operations, as well as the creation of interregional chains in the form of both industrial and agricultural clusters (Kurbanov, 2008; Eldarov et al., 2015).

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Revista ESPACIOS. ISSN 0798 1015  
Vol. 41 (Nº 08) Year 2020

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