SPATIAL FEATURES OF SECTORAL DEVELOPMENT

Tertiarization of the Economy in Russian Regions: Deindustrialization or Postindustrialization?¹

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Abstract—The accelerated development of the tertiary sphere has long been a refrain in the world scientific discourse. At the same time, tertiarization in Russia differs from the processes taking place in developed countries. An article based on EuroStat and World Bank data compared the structures of gross value added and employment in the tertiary sector in Russia and Europe. Rosstat data are applied to analyze the results of transformation of the tertiary sector of Russia in the post-Soviet period and Russian regions are typologized according to the structure of gross value added in the tertiary sector and employment dynamics. In addition, the impact of the COVID-19 crisis in 2020 on the dynamics of the tertiary sector is considered based on quarterly tax receipt data from the Federal Tax Service. It was revealed that Russia's declining lag in the 1990–2000s in the share of the tertiary sector in the economy stabilized. However, the country did not succeed in approaching the world leaders, due to a later entry into the tertiarization process, the weighted structure of the economy, the peculiarities of the settlement pattern, and the unstable dynamics of disposable income and inertia in the transformation of the way of life. The level of development of the tertiary sphere, which played an important role in overcoming the negative social consequences of the transition to a market economy, is highly differentiated among federal subjects. Quantitative and qualitative growth of the tertiary sphere is characteristic of no more than 15 of the most advanced regions. In most of the rest, it is more of an adaptive nature against the background of a recession in other sectors of the economy. The stability of the tertiary sector in a crisis period depends on the ratio of its more inertial nonmarket and vulnerable market subsectors. Both strong regions with moderate diversification of the tertiary sector and the weakest regions, where market sectors are represented mainly by retail trade, are in the zone of greatest risk.

Keywords: service sector, structure of the tertiary sector, Russian regions, COVID-19, employment

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INTRODUCTION AND FORMULATION OF THE PROBLEM

The growth of the tertiary sphere in the economies of developed countries appeared long ago, and the term “tertiarization” has already become an integral part of scientific discourse. The schematic diagram of the “third wave,” first formulated in a holistic manner by D. Bell back in the late 1950s, later developed into the concepts of information and then network society (Castells, 2009; Toffler, 2009). Constructed in the logic of the modernization approach, it at some stage seemed to be universal for the whole world: the entry into the post-industrial era was associated with the complication of human needs and, as a result, the multifaceted development of the service sector, for which information and methods of its processing were

of key importance. However, by the mid-1970s, unequivocally positive assessments of the prospects for a postindustrial future became the subject of discussion even in relation to developed countries (Webster, 2004). Among the problems of the emerging “era of disunity” are barriers in the emerging new social stratification of society, strengthening of social differentiation, and transformation of traditional development motivations for different groups of the population. “The problem of limited distributional benefits has been replaced by the problem of limited status benefits, which, it seems, has no solution at all” (Bell and Inozemtsev, 2007, pp. 244–245).

All this also has a polyscale regional projection. For countries that do not occupy the upper tiers in the world-system hierarchy, further lag in some way behind the leaders, sources of technological and institutional innovations, is predetermined. The problems of large and asymmetric states, where innovation cores

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resemble islands in the sea of the periphery, are exacerbated by their heterogeneity (Treivish, 2009). Subjective factors also play a role: for example, according to a number of experts, Russia is one of the states that has had its hopes of becoming independent parts of the postindustrial world diminished by the economic management system and political institutions that have developed over the past two decades (Inozemtsev, 2018). Of course, it is difficult to avoid the temptation to try to discern advanced Western trends in modern Russian realities (Pilyasov, 2009; Zamyatina and Pilyasov, 2018). However, this is most likely just fixing the next waves of “instrumental modernization,” so characteristic of countries of catching up in development, when the illusion of rapprochement with leaders is created due to the concentration of material and organizational resources in individual, mainly strategic, areas in a very limited number of centers (Vishnevsky, 1998).

All of this does not negate the process of tertiarization itself, which in the countries of the global semiperiphery, including Russia, manifests itself primarily in the expansion of areas of structural dominance of the service sector and for many regions remains a form of crisis adaptation of the economy amid a downturn in other sectors of the economy. The development and complication of the tertiary sphere, associated with the ability to assimilate—adapting for oneself—external innovations and produce one’s own, is characteristic of a relatively small number of territories. As a result, a more or less wide range of regional types of tertiarization arises. The aim of this study is to try to systematize regional types based on a case study of Russia.

DEPTH OF RESEARCH

Papers devoted to the tertiary sector in Russian regional studies can be divided into three areas. The first analyzes the general logic of the postindustrial transformation of the economy from aspect of the structure of GRP and employment: similarity to the European model is combined with strong internal differentiation, including the presence of a large group of regions following the American–Asian path (Treivish, 2008). The second analyzes the internal structure of gross value added (GVA) of the tertiary sector, inter-country comparisons and typologies based on a system of formalized indices (Savlov, 2012). There are few comprehensive studies that analyze the territorial aspects of development of the tertiary sector in Russia (Ivanov, 2012). Most often, these problems are addressed either in regional socioeconomic analytics or in sectoral works, the majority of which are devoted to social services (Zubarevich, 2013) or retail trade (Rossiya ..., 2005; Territorial’naya ..., 2017; Zotova, 2006). Latter has wide territorial coverage and is better provided with information and statistical materials; therefore, it often acts as a key for analyzing the barriers

to the diffusion of innovations in the tertiary sector (Baranov and Safronov, 2019).

In recent years, the concepts and terms defining the tertiary sector of the economy have been actively discussed in domestic scientific periodicals: the narrow understanding associated with the concept of the service sector as part of the intangible sphere of the national economy, which was disappearing in the Soviet era, is being replaced by a broader interpretation from the standpoint, according to the apt expression by A.A. Tkachenko and A.A. Fomkina, of the economic approach (Savlov, 2018; Tkachenko and Fomkina, 2016; Zubarevich, 2013). In this article, the concepts “service sector,” “tertiary sector,” and “tertiary sphere” are used interchangeably and include the widest range of services, the consumers of which are not only the population, but also legal entities (Achkasova, 2013). The shift in scientific discourse that took place was influenced by both the realities of life, in which market services occupy an increasingly important place and the level of their development serves as an indicator of the state of the regional economy, and the transition to Western standards of statistical accounting.

In the foreign literature, the study of sectoral–structural developments in the economy, including shifts between the main sectors of the economy, for example, agriculture, manufacturing, and services was especially popular in the 1980s and 1990s. This sectoral emphasis has been largely on economic development and planning studies; the boundaries between productive and unproductive activity have been discussed using the theories of economic growth (Kenessey, 1987). Changes in the ratio between the main sectors of the economy were analyzed from comparable data on costs and production over fairly long periods, as well as on intermediate inputs, capital equipment per worker, and energy use by employees. In the studies of the US Federal Reserve Board, the dynamics of the distribution of output among the four main sectors of the American economy was assessed: the dominance of the quaternary sector of the economy (finance, insurance, and real estate, public administration and other services) and a decrease in the share of the primary sector with a slight change in the share of the secondary and tertiary sectors (transportation, electric, gas and sanitary services, wholesale and retail trade) was emphasized (Kenessey, 1987). With case studies of individual countries, researchers have split the tertiarization process into subperiods, emphasizing its cyclical nature and relating it to economic development phases; they have assessed the evolution of relationships between the industrial and tertiary sectors based on continuous analysis of a wide range of macroeconomic indicators (gross domestic product and the value added generated, output, aggregate investment, employment, distribution of income, real assets, and derived indicators such as expenditures of the population on services,

material, energy and imports intensities) (Stratil, 1992). At the same time, the main emphasis in such works was placed on the analysis of the rise and fall of overall employment mainly caused by the dynamics of the industrial and the market service sector (Caselli and Pastrello, 1991). During that period, the share of studies devoted to analyzing various approaches to defining the tertiary sector, its structure, and relationship to the concept of the information sector also markedly increased (Barcet, 1988).

As well, all studies of this period emphasized a significant deepening of the division of labor, an increase in the variety of services provided and, as a result, the emergence of significant statistical limitations due to the relative lack of measurements of the quantitative and qualitative performance of these industries. In aggregate, this made it difficult to assess the role and significance of the tertiary sphere and the costs of increases specialization of both public and private organizations (Helfand et al., 1984).

In the 2000s, the majority of studies analyzed the specifics of the tertiarization process with case studies of individual regions or major cities by assessing demographic and occupational indicators, household incomes, and housing prices. They primarily address the spatial implications of the development of the service sector by analyzing the location of modern shopping centers, office buildings, and other facilities in the service sector (Robira et al., 2000).

Although the labor factor has always played an important role in the development of the tertiary sector, it was in the 2000s and 2010s that the tertiary labor market model instead of the industrial one began to be assessed with special indicators of the employment system, such as the predominance of labor factor as related to the capital factor; the flexibility of labor force; and the diversity, variety, and differentiation (Costel-Ioan and Gabriela-Liliana, 2013). In addition, studies in certain ways are shifting towards sociological research examining the influence of demographic variables and personal attitudes of workers on development of the service sector (Abdoolla and Govender, 2016).

By the end of the 2010s, researchers, analyzing in depth macroeconomic variables and input and output data for national accounts analysis, were trying to answer two main questions: (1) is the decline in the industrial sector due to the decisive advance in the service sector with the almost complete disappearance of other initiatives and (2) can the decisive advance of services at a more complex and modern level of development of production stimulate the transformation of the entire system of the economy (Manera and Valle, 2018).

Finally, starting in mid-2020, studies have begun to look at the changes influenced by the COVID-19 pandemic, which has triggered an unprecedented global crisis. Such studies are primarily devoted to analyzing

the methods used in service enterprises to reduce the negative effects of the pandemic and strategies to increase their resilience (Prentice et al., 2021). Emphasis was on the implementation of resilience-building strategies for the service industry that could enhance the resilience of service enterprises in and after the COVID-19 pandemic. Successful implementation of the proposed strategies depends on several key factors, including financial, human, social, and technological capital, which are considered preconditions for implementing resilience-building strategies (Huang et al., 2021).

MATERIALS AND METHODS

The methodological problem of studying changes in the service sector is the search for indicators of the level and quality of ongoing transformation. Although ideas of highlighting the quaternary and quinary sectors of the economy were expressed by D. Bell many decades ago, to reach a consensus on their composition and to isolate them based on available statistics has not been unambiguously successful (Inozemtsev, 2000). For this purpose, the present article uses the concept of *top tier* of the tertiary sector, or *advanced services*. They include market directions focused on the final consumer, primarily legal entities, usually referred to as such services as *B2B*.² Unlike *traditional*, primarily social, services oriented towards the population, the contribution of advanced services to tax revenues of the tertiary sector is much more significant and the centers of their increased concentration are relatively few in number.

The article is based on materials from three types of sources. Intercountry comparisons on the share of the tertiary sector in GDP and employment based on World Bank data and structure of gross value added (GVA) of the tertiary sector from the EuroStat. Their correct comparison with Rosstat data became possible starting from 2016, after “harmonization” of the upper tiers of the OKVED-2 (All-Russian Classifier of Economic Activity) groupings with classification adopted in EU countries (*NACE Rev. 2*). Rosstat materials were also used for the typology of regions according to the GRP structure of the tertiary sector in 2016–2018 and analysis of transformation of the tertiary employment structure in 1990–2018. Such an analysis is possible only in general terms due to the incomparability of the OKONKh/OKVED classifiers used in different years (OKONKh—All-Russian Classifier of Sectors of the National Economy). The situation in the tertiary sector during the COVID-19 crisis is presented based on quarterly statistics of the Federal Tax Service (FTS) by type of economic activity (TEA). The types of GVA

² These include five large types of economic activity according to OKVED-2: information and communication activity, financial and insurance activity, real estate activity, professional, scientific, and technical activity, administrative activity, and related additional services.

Fig. 1. Dynamics of share of tertiary sector in some European countries and Russia in 1991–2019, %: (a) in GDP, (b) in employment. Compiled from World Bank data.

structure in the tertiary sector and the characteristics of its dynamics during the crisis are built on the basis of complex groupings according to two main and several additional features.

RESULTS AND DISCUSSION

Russia's transition to a post-industrial economy passed according to the European version, through a short (by historical standards) period of relative dominance in the structure of GDP and in the employment of the secondary sector (Treivish, 2009). Therefore, it is most logical to compare the results of transformation in different types of European countries (Fig. 1). In the states of Eastern Europe, it began later and was hampered by political factors (Gritsai et al., 1991; Nefedova and Treivish, 1994). Another reason for the slower development of the service sector, and primarily of its upper tiers, is the weighted structure of the Russian economy, slow growth and strong differentiation of the population's income. The strong territorial disunity of Russian large-city centers, which concentrate the most developed types of services, is also of serious, but not decisive importance.

At the initial stage of postindustrial transformation, it was customary to pay attention primarily to its social nature, noting that, as a rule, the level of labor productivity in the tertiary sector is lower than in manufacturing. In recent decades, due to the development of information and communication technologies, the situation began to change, primarily in developed countries (Demidova, 2006). To what extent it affected Russia, for a number of reasons, including

informational, can be judged only indirectly. It is one of the countries in which the share of the tertiary sector in employment is consistently higher than its share in the structure of GDP (by 8–10 percentage points), which is associated not only with the peculiarities of the structure of the economy and statistical accounting of the tertiary sector, but also with a lower labor productivity in the service sector.

Although in the 1990s and 2000s, Russia managed to somewhat narrow the gap in the share of the tertiary sector in the structure of GDP; throughout the 2010s, this gap remained stable. The existing dynamics still does not allow Russia to approach the leaders, and the stable position in the group of countries with transitional economies remains virtually unchanged. At the end of 2020, one can expect a subsidence of certain sectors of the tertiary sector due to the COVID-19 crisis (Kuznetsova, 2020; Monitoring ..., 2020).

In the structure of GVA in the tertiary sector, Russia is also closest to the group of Eastern European countries with a higher share of retail trade and transportation and a significant lag in advanced services, which are an indicator of the quality level of development of the tertiary sector (Table 1). The reduced share of the latter brings Russia closer to a wider range of countries of the European semiperiphery, including the countries of Southern Europe, which are less developed by European standards. Despite the gradual growth in the number of people employed in the upper tiers of the service sector, the dynamics of their share in GDP in this group of countries remains unstable (Fig. 2). The share of social services varies considerably and does not directly characterize the situation in

Fig. 2. Share of advanced service sectors in tertiary sector in some European countries and Russia in 2010 and 2018 (2019), %: (a) in GVA, (b) in employment. *Compiled* according to EuroStat data.

the tertiary sector, since it is rather related to the peculiarities of the national health and education systems, as, for example, in Norway.

Employment in the Tertiary Sector

One of the key social functions of the tertiary sector is maintaining the stability of the labor market. The role of tertiary employment in the Russian economy has grown significantly over the past 30 years, having crossed the 50% mark back in 1997. The absolute number of workers in the service sector in most Russian regions has also significantly increased (Fig. 3). Among individual sectors of the tertiary sector, the highest growth, almost 2.3 times, was in retail trade, which took over a significant part of excess employment of the 1990s (Rossiya ..., 2005). It is difficult to assess the dynamics of advanced sectors due to the lack of comparable data series. The obvious decline of the 1990s, mainly associated with the reduction of scientific and technical personnel, gave way in the 2000s to gradual growth, but this time at the expense of specialties that supported entrepreneurial activity. However, it was halted by a series of crises in the mid-2010s. Interregional differences in the rate of development of the service sector were largely determined by the unevenness of the post-industrial transition, the peculiarities of the structural transformation of regional economies and the diffusion of innovations.

At the regional level, there is a tangible positive trend in the absolute number of workers in the tertiary sector in 1990–2018 (1.5–2 times) was typical for two contrasting types of regions. One type comprises 15 of the most developed, migration-attractive federal subjects with large, growing centers, where the tertiarization process was occurring both quantitatively and qualitatively, significantly changing the structure of the economy. Another type is regions in which growth

of employment, both in the entire economy and in the tertiary sphere, was largely associated with small and medium-sized entrepreneurs coming out from the shadow economy, the growth of retail trade versus a decline in manufacturing, and persistence of excess employment in agriculture (in most of the North Caucasian republics).

Significantly more regions have moderate and even insignificant growth in workers in the tertiary sector, taking place against a decrease in total employment in the economy (1.1–1.6 times). In this context, one can consider, first, crisis tertiarization, a decrease in the number of employed in the tertiary sector with a sharp increase in its share, while the market services sector has become a refuge for labor released from other sectors of the economy. Such processes were characteristic of regions with a contracting settlement pattern, crisis phenomena in the economy, and intensive migration outflow in northern European Russia and the Far East (see Fig. 3). Second, so-called false tertiarization, representing an increase in the significance of simple services against a low level of economic development (in the least developed national republics).

Although, from a quantitative point of view, the tertiary sphere in the post-Soviet period played the role of an important social damper, the transformation of the employment structure that took place, as a rule, led to a decrease in social status and an inefficient use of the potential of workers in other sectors of the economy, and in most regions did not stimulate the growth of qualifications of employed people.

Tertiary Sector in GRP of Russian Regions

The share of the tertiary sector in the total GRP of Russian regions exceeded 50 percent relatively late—only in 2004. Having reached a maximum of 57% in 2014, the share again decreased to 54% in 2018. This

Table 1.³ Structure of gross value added in the tertiary sector in European countries, on average in 2016–2018, % of total volume of tertiary sector*

TEA	Russia	Great Britain	France	Germany	Greece	Spain	Norway	Ireland	Czech Republic	Poland	Romania	Turkey
Wholesale and retail trade	23.5	13.4	13.1	14.5	15.1	17.2	12.5	13.0	18.1	27.5	18.0	22.1
Transportation and storage	11.2	5.1	5.7	6.5	9.4	6.4	7.5	3.8	9.6	11.0	10.8	15.1
Hotels and food service	1.4	3.7	3.6	2.4	8.6	8.4	2.3	3.0	3.1	2.0	3.5	5.6
Information services	4.1	8.6	6.8	7.1	3.9	5.2	6.8	21.7	9.5	6.7	9.6	4.7
Finance and insurance	7.0	8.6	5.3	5.7	6.7	5.4	8.3	10.3	7.2	6.8	4.4	5.6
Real estate operations	15.8	16.9	16.2	15.3	21.2	15.7	12.0	9.8	13.9	7.5	13.7	12.8
Professional, scientific activity	6.9	10.0	10.3	9.4	4.2	6.4	7.3	7.7	8.7	9.2	8.6	4.1
Administrative services	3.8	6.7	7.4	7.5	2.2	5.6	4.5	10.9	3.2	4.0	4.6	5.4
Public administration	12.6	6.2	9.8	8.9	12.7	8.3	10.4	5.6	9.4	8.3	8.3	8.8
Education	5.4	7.2	6.7	6.4	6.9	7.1	8.2	4.4	6.9	7.0	5.9	7.7
Healthcare	5.7	9.5	11.6	11.1	5.4	8.9	17.1	7.7	7.1	6.7	7.1	4.6
Culture, sports, leisure	1.6	2.0	1.8	2.0	2.0	2.9	1.5	1.3	1.7	1.2	3.1	1.7
Other types of services	1.0	2.2	1.7	3.2	1.8	2.5	1.6	0.9	1.6	2.1	2.4	1.8
Total	100	100	100	100	100	100	100	100	100	100	100	100
Including:												
advanced services	37.7	50.8	46.0	45.0	38.1	38.4	38.9	60.4	42.4	34.2	40.9	32.6
traditional services	25.2	24.9	30.0	28.4	26.9	27.1	37.2	18.9	25.1	23.2	24.3	22.8
<i>For reference:</i>												
Share of tertiary sector in total GVA, %	58.9	78.8	78.9	68.6	79.6	74.0	64.6	59.8	61.8	64.3	63.6	61.3

* In 2018 prices in national currencies.

Calculated from: Russian statistical yearbook. Moscow: Rosstat, 2019; EuroStat.

situation is related to both inherited from the Soviet period industrial imbalance in the economy, and with the strengthening already in the post-Soviet period of its raw materials sectors. The average Russian level in the share of the tertiary sector in GRP³ (from 60 to 70%) is exceeded only by cities of federal significance and federal subjects with capitals that act as interregional service centers. The upper part of the rating also includes underdeveloped national republics with false tertiarization. It is topped by oil and gas producing

regions (up to 35%) and regions specializing in export-oriented sectors.

In analysis, one has to take into account that the share of the tertiary sector recorded by statistics, as experts have noted, is most likely somewhat overestimated (Kuznetsova, 2018). This is due to the peculiarities in organizing statistical accounting, e.g., inclusion in the tertiary sector, in the R&D section, and production units of research organizations that produce goods. Therefore, despite the fact that in 1999–2018, the growth rates of the tertiary sector outstripped the growth rates of GRP as a whole (2.5 times versus 2.1 times, respectively), the question of the quality and content of the tertiarization that took place remains open. The list of regions with an increased level com-

³ In the table and figures, abbreviations of the names of the OKVED-2 sections are used, e.g., “Wholesale and retail trade; repair of motor vehicles and motorcycles”—wholesale and retail trade; “Public administration and military security; social security”—public administration; etc.

Fig. 3. Employment in tertiary sector by Russian regions in 1990–2018.
Compiled from EMISS data.

pared to the national average *per capita GRP in the tertiary sector* in 2016–2018 was small: only 11; excluding transport services, only 10. In addition to the two capitals and Moscow Oblast, these include either oil and gas producing regions with favorable budgets and increased purchasing power of residents, or regions with a high operation cost of social infrastructure, which cannot be adjusted by any correction coefficients commonly used for interregional comparisons⁴ (Fig. 4). For many regions of Asian Russia and the European North, the increased social expenditures of budgets and high cost of nonmarket services are two factors that mutually reinforce each other.

During 1999–2018, per capita GRP in the tertiary sector in comparable prices in Russia as a whole increased by 2.3 times; excluding transport and logistics services, by 2.4 times. In analyzing the dynamics, these types of services were excluded from the calculations, since they distorted the picture, improving the performance of remote regions with high transport costs, confusing tariffs, and a developed technological transport network, as well as underdeveloped regions

with a low level of development of other subsectors of the tertiary sector.

Except for Moscow Oblast, where intensive development of services in the belt immediately adjacent to the borders of the capital allowed it to become one of the leaders, the main changes are most significant in the second or third deciles of the ranking (see Fig. 4). The state's redistributive policy pulled up regions with leading major-city agglomerations (Novosibirsk, Sverdlovsk, Voronezh, Leningrad oblasts), as well as regions that had successfully realized their existing potential or newly discovered development opportunities (Yaroslavl, Belgorod oblasts) to the average Russian level, but no higher than that.

However, such regions are few in number. Almost half the leaders in growth rates are regions with a low base, where growth was primarily due to improvement in social nonmarket services or infrastructure projects. Perhaps the main exception is St. Petersburg (growth in 1999–2018 excluding transport services was by 3.2 times), the financial capabilities of which significantly improved in the 2000s. This is important in contrast to Moscow, where the figures were already high and have increased by only 60% in 20 years. The achieved per capita GRP level in the tertiary sector in the capital, where the divisions of large companies

⁴ For example, "The cost of a fixed set of goods and services" by federal subjects, regularly published by Rosstat.

Fig. 4. Average annual per capita GRP in service sector and its dynamics in Russia's regions: (1) in 2016–2018, thous. RUB/person (columns, neglecting transport services; points, including transport services); (2) ratio of average annual GRP in service sector, adjusted for cost of living in 2018 prices, in 2016–2018 to 1999–2001, %: 1, less than 200, 2, 200–240, 3, 241–300, 4, 301–330, 5, more than 330, 6, no data. *Compiled from EMISS data.*

serving foreign trade operations are registered, is also most likely somewhat overestimated.

Despite the almost twofold reduction in the gap between leaders and outsiders in 20 years, which occurred mainly due to uplifting of the most lagging regions against the slower growth of leaders, one-third of federal subjects still experienced a level of per capita GRP in the tertiary sector (excluding transport and logistics services) of no more than 50% of the average Russian level. Almost a third of federal subjects in 1999–2018 showed reduced growth rates of per capita GRP in the tertiary sector with an initially relatively low base.

Types of Regions by the Structure of GRP of the Service Sector

The main differences between federal subjects in the structure of aggregate GRP of the tertiary sector are determined by the contribution of retail trade, transport, and public administration costs to it. In 2016–2018, they accounted for more than two-thirds of the added value created in the Russian service sector. This allows us to divide Russian regions into four types (groups) and distinguish several subtypes, from subjects with the most diverse structure of the tertiary sector to territories where it is actually reduced to social services, which predominantly have a nonmarket character and per capita financing (Table 2, Fig. 5).

The *first type (I)* includes economically developed regions with the most diverse and balanced composition of the tertiary sector. They are few in number: they host the leading interregional service centers (*I-i*). Moscow and St. Petersburg stand out (*I-c*), in which the diversity is complemented by both the level most accessible in Russia and the exclusivity of a whole range of services provided (see Fig. 5).

There are no prerequisites for expanding this group: even in the “fat years” (2000–2008), the superconcentration of everything and everyone, from finance to human resources, in two federal cities (Moscow and St. Petersburg) and the limited number of large agglomerations prevented fundamental changes to the structure of the service sector in other regions (Zubarevich, 2007). The only exception is Tyumen Oblast, which, owing to resource rent, managed to increase the share of the upper tiers of the service sector over the past two decades.

The *second type (II)*, the most numerous group, includes the majority of ordinary Russian regions in the structure of the tertiary sector of which trade and social services dominate (*II-m*). In total, they account for at least 50% of the GRP of the tertiary sector (excluding transport). An increased share of public administration services is typical of weaker regions with a deep or peripheral location in Russia and for the base of the Black Sea Fleet, Sevastopol (*II-p*).

Table 2. Types of Russian regions by structure of GRP in service sector in 2016–2018

Type	TEA of tertiary sector	Subtype		Number of regions	Share in structure of value added in service sector				
					social services	trade	public administration	transport services	real estate transactions
I. Service	Balanced and multiprofile structure	<i>I-c</i>	Capital	2	8–16	25–37	4–6	9–14	13–13
II. Trade and social	Multiprofile	<i>I-i</i>	Interregional	5	13–15	22–32	6–8	12–24	7–15
	Trade and social services	<i>II-m</i>	Main	25	14–24	18–43	8–16	8–19	2–13
			With increased share of:						
		<i>II-p</i>	Public administration	7	17–28	22–32	13–25	5–16	3–12
		<i>II-tr</i>	Transport services	17	14–29	15–32	6–16	15–30	5–14
		<i>II-r</i>	Real estate transactions	13	12–22	22–37	8–15	7–16	14–21
III. Social–administrative	Social services and public administration	<i>III-m</i>	Main	5	26–41	13–19	25–36	3–13	1–5
			With increased share of:						
		<i>III-tr</i>	Transport services	5	14–22	5–15	10–23	20–51	4–11
IV. Trade and resource	Wholesale trade, leasing services, scientific activity in servicing mining sectors	<i>III-t</i>	Trade	4	25–32	20–27	23–29	5–7	3–10
		<i>IV</i>	With increased share of transport services	2	11–18	13–33	6–8	19–29	5–9

Compiled from EMISS data.

The third type (*III*) consists of the least economically developed national republics and peripheral regions. Along with social services, a disproportionately large share is made up of public administration services (*III-p*). In total, these two TEAs give from 50 to 73% of the regional volumes of the GRP of the tertiary sector (excluding transport). Trade in them is less developed; its share exceeds 20% in only three North Caucasian republics (*III-t*).

More than a quarter of all regions belong to the subtype with an increased share of transport services (*II-tr* and *III-tr*), in which the leading role is played by freight transport. Some of them specialize in producing and export of minerals (the Komi and Sakha republics); others, due to their favorable transport and geographical position, have a developed transport complex (Krasnodar and Primorsky krais; Leningrad, Murmansk, and Arkhangelsk oblasts). A number of regions benefit from their border or transit location on important transport routes (Smolensk, Bryansk, Kurgan oblasts; Zabaykalsky Krai). In Kalmykia, a record 42% of the contribution of transport to the GRP of the tertiary sector is associated with maintenance of the

main oil pipeline passing through its territory (the Caspian Pipeline Consortium (CPC)).

A significant group comprises regions with an increased share of real estate transactions (*II-r*). As a rule, these are federal subjects with dynamically developing areas of major-city settlement patterns, in which, due to favorable economic and natural-climatic conditions, more active development of the construction complex is taking place. Two regions, Krasnodar Krai and Leningrad Oblast, can be attributed to two subtypes (*II-tr* and *II-r*).

Two oil and gas producing okrugs have a particular structure of the tertiary sector, placed in a separate type (*IV*). They have a large share of transport, as well as “administrative activity and related additional services,” behind which is engineering and technical and project support for projects in the oil and gas sector. An increased share of this TEA is also typical of the Komi Republic and the Nenets Autonomous Okrug, which have much in common with the Western Siberian okrugs in the structure of the economy. In addition, in the Yamalo-Nenets Autonomous Okrug, the share of trade, primarily wholesale, associated with

Fig. 5. Types of Russian regions by structure of GRP of tertiary sphere.

the sale of products of the gas production sector, has increased.

Territories with an increased share of advanced services do not make up an integral group (see Fig. 5). In addition to regions from type I, it may include some federal subjects from subtype II-r, as well as Tomsk Oblast, which has developed science activity.

COVID-19 Crisis

The complex COVID-19 crisis of 2020 raised the question of economic stability, or resilience, of the tertiary sphere and showed other features of its structure less captured by standard statistics.⁵ Although the shock social restrictions during the spring lockdown affected the entire tertiary sector to some degree, the most acute phase of the crisis affected its subsectors to varying degrees.

⁵ As an express indicator of the scale of the recession in April–July 2020, one can use quarterly data on the receipt of taxes and fees in the consolidated budget of the Russian Federation by TEA. This information makes it possible to assess the economic activity of most sectors of the tertiary sector in which there are no significant, uncertainly “blurred” over the months of the year, volumes of VAT refunds, other taxes, and excise taxes, such as transport.

The relatively small impact of the crisis affected nonmarket services with a high share of personal income tax in the structure of tax payments—public administration, education and healthcare (Fig. 6). After a slight decline in the second, most difficult, quarter, they gradually reached the level of the corresponding period of 2019. Emergency financial injections into healthcare and increase in the volume of COVID aid had no significant impact on tax deductions and apparently failed to compensate for the decrease in volume of other medical services, the quality and availability of which significantly decreased.

Subsectors that, even taking into account inflation, demonstrated *small growth* are retail trade, which began rapid restructuring as a result of development of the *online* segment; information services, the demand for which has grown significantly; and administrative services due to a significant increase in demand for the services by companies⁶ providing cleaning and disinfection in government agencies, retail chains, medical and transport organizations, as well as in other premises for various purposes.

⁶ According to the OKVED-2, cleaning services are included in the section “Administrative activity and related additional services.”

Fig. 6. Dynamics of tax revenues by TEA, 2020 compared to corresponding period of 2019, %. *Compiled from:* Federal Tax Service data, https://www.nalog.ru/rn77/related_activity/statistics_and_analytics/forms/.

The strongest recession was observed in sectors that provide market services and have a higher share of profit tax in deductions: most of them did not manage to restore at least the pre-crisis level by the end of the third quarter. In addition to hospitality, food service, culture, sports, and leisure institutions working for the end consumer, this group also includes most of the sectors that provide services to legal entities. The prospects for restoration of the latter are associated not only with the normalization of social life, but also with the general prospects for resumption of economic growth.

Although at the initial stage of the crisis, an important factor in the dynamics was the depth of a region's position in Russia, which directly influenced the timing of restrictive measures, ultimately, the *territorial projection of the crisis in the tertiary sphere* was determined by the contribution of market and non-market subsectors to its gross output. In addition to the capital regions, the tertiary sphere of large urban agglomerations and centers with a developed and diversified structure of services (Novosibirsk, Voronezh) proved more stable and adaptive. A strong decline is noted, first, in the more industrial regions of the Russian Federation where the decrease in people's effective demand aggravated the reduction in volume of *B2B* services provided mainly to enterprises of export-oriented sectors (Fig. 7). Second, a strong recession was noted in the national republics with a

poorly diversified economy, where social restrictions led to a reduction in retail trade, the main market sector in the tertiary sector.

In the regions of Asian Russia and the European North with a focal type of development, the settlement pattern factor apparently had a negative impact on the situation. This leads to an increased concentration of services in a limited number of large urban centers that are more epidemiologically vulnerable.

CONCLUSIONS

(1) In *the role of the tertiary sector in the economy*, Russia occupies an intermediate position in Europe, between the most developed states and weaker countries with transitional economies. The lag in the share of the tertiary sector in the structure of GRP and employment, which slightly decreased in the early 1990s, has hardly changed in the decade of crises. The main reasons for the lag are not only the historical delay in development of the tertiary sector, but also the persisting weighted structure of the economy, the features of the settlement pattern, and inertia in lifestyle transformation.

(2) The modern *GVA structure of the tertiary sector* in Russia is closest to Eastern European states with a higher share of traditional sectors—retail trade and transport—and a significant lag in advanced services. In addition to other countries with a weighted struc-

Fig. 7. Types of Russian regions by ratio of share of tertiary sector (excluding transport) in tax revenues in 2019 and dynamics of tax revenues by Russian regions in II quarter of 2020 compared to corresponding period of 2019, %. *Compiled from:* Federal Tax Service data, https://www.nalog.ru/rn77/related_activity/statistics_and_analytics/forms/.

ture of the economy, Russia still has a gap between the share of the service sector in GDP and in employment, which is indirect evidence of persistently lower labor productivity in it.

(3) Growth of *tertiary employment*, which did not affect only regions with a strong migration outflow in the European North and Far East, was significantly territorially differentiated. Only in 15 more developed and migration-attractive regions of the Russian Federation were the growth rates of tertiary employment not lower than the average Russian level or combined with qualitative changes in the tertiary sector. In the North Caucasian republics, high growth rates were more likely associated with the partial exit of small and medium-sized businesses from the shadow economy. In other regions, this process had the nature of forced adaptation of the labor market in the face of job cuts in other sectors of the economy.

(4) In general, for most Russian regions, *differences in the GVA structure in the tertiary sector* were relatively small. Against the nearly ubiquitously dominant social services and retail trade in different proportions, the main differentiating role is played by transport services, which disproportionately burdens the tertiary sector of peripheral regions, and advanced services concen-

trated in a limited number of remote from each other interregional centers, the centers of large agglomerations.

(5) There are few regions whose *per capita GRP* in the tertiary sector in 1999–2018 grew significantly. Half of them are regions with a low base, where growth is associated with improvement in provision of social nonmarket services or implementation of infrastructure projects. Almost a third of federal subjects showed reduced growth rates with an initial not too high base. Despite the almost twofold reduction in the gap between leaders and outsiders, in one-third of regions, the level of per capita GRP in the tertiary sector is no more than 50% of the national average.

(6) The COVID-19 pandemic has shown that the stability of *tax revenues from the tertiary sector* depends primarily on the ratio of nonmarket and market sectors. While the former are rather inertial and relatively stable, the latter are experiencing a double load under conditions when decrease in consumer demand is intensified by a decrease in business activity in the leading specialization sectors. Therefore, it is natural that the economy of the tertiary sphere of strong regions with moderate diversification of the tertiary sector suffers the most; the weakest territories in which

market sectors are represented only by retail trade are also at risk.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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