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The Role of Small and Medium Entrepreneurship in the Economy of Russia

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ABSTRACT

Small and medium entrepreneurship is an important factor in the development and transformation of the Russian economy. Taking this into account, the study of the current employment structure in small and medium enterprises (SMEs) is topical. The subject of study is the role of SMEs in the modern Russian economy and the potential for its increase. The aim of the research was to assess the patterns existing sectoral and regional structure of employment in SMEs including individual entrepreneurs. The study was based on official statistical data all SMEs in Russia for 2015. For modeling we used functions of normal distribution, quality of approximation empirical data by these functions was analyzed by tests Kolmogorov-Smirnov, Pearson, and Shapiro-Vilk. The hypothesis of research - presence significant differentiation of indicators characterizing the share of SMEs employees by regions in the total number of employed population, as well for types of economic activity. Based on the results of the research hypothesis was confirmed. Trade, manufacturing and real estate operations accounted for the largest share in the total number of SMEs employees. SMEs did not play significant role in fishing and fish farming, mining, education, healthcare, production and distribution of electricity, gas and water, as well as financial sectors. The presence of SMEs development significant reserves in Russia is proved. Identified regions with high and low entrepreneurial climate. The methodology and tools that were used in the research can be applied to similar studies for countries with a significant number of territorial (administrative) units. Government, regional and municipal authorities may use the research results in the practice of formation and implementation of entrepreneurship development projects and programs, including those with the aim to increase its role in the regions and municipalities where SMEs is not sufficiently developed.

INTRODUCTION

Small and medium entrepreneurship is a complex system, including a large number of independent economic entities. Small and medium enterprises (SMEs) in Russia involve both legal entities (LE) and individual entrepreneurs (IE). The current criteria for classifying economic entities as small and medium enterprises were established by Federal Law No. 209-FZ of July 24, 2007 "On small and medium business development in the Russian Federation". The main criterion is the number of employees, which for a small enterprise should not exceed 100 people, and for a medium enterprise is in the range to 250 from 101 people. The second criterion is share state and municipal authority in the total capital of enterprises (less than 25%), and also turnover and balance price of assets**.** Maximum values of the last two parameters are set by the government and adjusted annually if necessary.

SMEs is an important factor in the economic development of many countries, including those in conditions of the economic crisis (Acs et al., 2008; Baumol, 2004; Decker, et al., 2014; Simon-Moya, et al., 2016). Today there are 5.6 million SMEs with 18 million employees in Russia. SMEs produce 20% of Russia's gross domestic product (GDP). The share of Russian SMEs in GDP and employment is twice lower than the corresponding figures for the countries of the European Union (The development of small and medium-sized businesses, 2015). To increase the role and number of SMEs, as well as the volume of goods, works and services produced by them, the state strategy for the SME development until 2030 was adopted (Strategy of SMEs development in the Russian Federation for the period up to 2030, 2016). The strategy provides for doubling SME share in GDP (up to 40%) and increasing the share of SMEs employees to 35% of the total employed population of the country. Experience of other countries shows (Sollner, 2014) that these goals are real.

The implementation of the strategy involves the formation of medium and long term plans for SMEs sector. The development of these plans should be based on the determination role of SMEs in Russian economy. Therefore, an important research problem is to evaluate the share of SMEs in the total indicators on all enterprises and firms in Russia. Such indicators can provide federal and regional authorities with the data needed to identify reserves increasing quantity of employees in SMEs. The main attention should be paid to SMEs saturation of those sectors of the national economy and regions of the country where the role of SMEs is not yet great. Foreign experience (Choi, Choi, 2015) shows, that this approach is very efficient.

Therefore, a topical problem is to assess the current structure of employment in SMEs and their contribution to total employment of the country.

1. METHODOLOGY OF RESEARCH

To assess the role of SMEs by type of economic activity, we consider it expedient to use employment indicator (the number of employees). The choice of this indicator is caused by the fact that it is less dependent on SMEs specialization, socio-economic features and geographical situation of the regions where they operate.

The aim of this study is to determine the structure of SMEs employment in different types of economic activity, as well as the share of SMEs employees in the total employment of the country. The object of the study is the number of employees of small and medium enterprises located in each of Russia's regions and engaged in different economic activities. SMEs related both to legal entities and individual entrepreneurs are considered.

To ensure comparability of indicators by types of activity and regions, the calculations are made on the basis of relative indicators. Two groups of indicators are considered. The first group includes the shares of SMEs employees relating to different types of economic activity in the total number of employees of all SMEs in the country. The second group of indicators includes the

shares of SMEs employees in the total number of employees of all enterprises and organizations relating to different types of economic activity. The indicators of the second group are determined only for those activities that are significant enough for SMEs. The hypothesis tested in the research is as follows: the indicators of the second group have a significant differentiation by the regions of Russia. To test this hypothesis, we modelled the distribution of the shares of SMEs employees in the total number of employees across all regions of the country. Normal distribution functions were used for modeling.

These functions are widely used in modern economic research. For example, Allanson P. (Allanson, 1992) presented a distribution function analysis of the evolution of the size of agricultural land, including small farming. R. Vince (1992) considered the application of normal distribution function to characterize trading activity, profits and losses in particular. S. Filatov (2008) focused on a comprehensive methodology for assessing the financial status of a group of enterprises. Marek L. and Vrabec M. (2013) discussed the possibility of forecasting the trend of wage distribution based on the functions of normal distribution. I. Pinkovetskaya (2015) considered the possibility of using density functions of normal distribution to describe the relative indicators of SMEs performance in her pilot work.

Each SME acts as an independent entity, determines its goals and objectives based on a specific situation, and conducts risky economic activity. The number of such enterprises in the regions of Russia is very large. Accordingly, a group of SMEs located in each of the regions and formed according to the above-mentioned criteria includes a significant number of enterprises or entrepreneurs. Economic, historical, climatic, demographic, educational and other features of the development of a particular region have a significant impact on the SME sector indicators. Each SME operates independently, so we can assume a probabilistic (stochastic) distribution of indicators values.

According to Chebyshev theorem (Kramer, 1962), the values of individual random variables can have a significant spread while their arithmetic average is relatively stable. A similar conclusion follows from the Central Limit Theorem (Jenish and Prucha, 2009), which states that the arithmetic average of a sufficiently large number of independent random variables loses the character of a random variable. Thus, the shares of SME employment in the total employment of the region are random variables. Their values may vary considerably, but we can anticipate their arithmetic average.

G. Kramer (1962) in his study also indicated that some random variables can have a significant spread, but their arithmetic average is stable. It should be noted that, in accordance with Lyapunov's theorem, the distribution of average values of independent random variables approaches normal distribution if the following conditions are met: all values have finite expectations and variance, none of the values differs greatly from the others. The above conditions correspond to the values of the shares of SME employees by regions. V. Gmurman (2003) noted that distribution of average values of independent random variables quickly approaches normal distribution (starting from ten variables already). The number of SMEs located in each region and relating to specific size type and specific types of economic activity varies from hundreds to tens of thousands, which far exceed Gmurman's criterion.

Thus, there are theoretical prerequisites for using the functions of normal distribution to describe the distribution of the shares of SMEs employees in the total number of employees of all enterprises and organizations in the regions of Russia. SMEs operate in all types of economic activity, except for public administration, social insurance and military security.

The source of the data used in this study is the official information of the Federal State Statistics Service of the Russian Federation collected during the so-called total (general) monitoring of SMEs. Data from such monitoring, conducted every five years, provide more accurate information than sample surveys conducted annually. Data for 2015 and 2010 were used (Federal State Statistics Service, 2018) in the research. Statistical monitoring of SMEs activities was carried out by

14 types of economic activity: agriculture; fishing and fish farming; mining; manufacturing; production and distribution of electricity, gas and water; construction; wholesale and retail trade; transport and communication; hospitality (hotels and restaurants); real estate operations; financial operations; education; healthcare; provision of communal, social and personal services. SMEs are located in all regions of Russia without any exception, therefore, the data used in the study describe the number of SMEs employees located in 82 regions of Russia, including 22 republics, 9 territories, 46 oblasts, 1 autonomous oblast, 1 autonomous district and 3 federal cities. Besides, the authors used the official statistics for 2015 for the number of employees of all enterprises and organizations (including large enterprises, as well as state and municipal enterprises and organizations) located in each of the regions (Federal State Statistics Service, 2018).

The number of observations (empirical data) is important in the development of normal distribution functions. Corresponding justifications are presented in the work by Heinhold, Gaede (Heinhold and Gaede, 1964). According to this research, the number of observations should be not less than 40. The total number of observations in our study is greater: it is 82 (corresponding to the number of Russian regions).

Quality of the developed normal distribution functions can be tested with the help of relevant criteria (tests). The analysis of literature (Bolshev and Smirnov, 1983; Hollender and Wulf, 1983; Pearson, D'Agostino and Bowmann, 1977; Shapiro and Francia, 1972) shows that Kolmogorov-Smirnov, Pearson and Shapiro-Fork tests are most frequently used in modern studies.

2. SECTORAL STRUCTURE OF SME EMPLOYMENT

Table 1 presents the structure of SMEs employment. The table describes the number of employees of legal entities and individual entrepreneurs relating to 14 types of economic activity. Column 4 of Table 1 shows the total number of employees for both types of SMEs. Column 5 shows the share of SMEs employees in each of the activities, that is, the sectoral structure of employment in the entrepreneurial sector of the Russian economy. To analyze the dynamics of indicators for five years, the corresponding values of total statistical observation for 2010 are given in parentheses.

According to the data presented in Table 1, the number of SMEs employees in Russia in 2015 amounted to 18.45 million people. The total number of employees of IE was 2.7 times less than that of LE. Moreover, the prevalence of the number of employees in LE was typical for all types of economic activity.

In 2015, the largest number of SMEs employees was in wholesale and retail trade (almost 5.9 million people). Their share in the total number of SMEs employees reached almost 32%, that is, every third SMEs employee was engaged in trade. A relatively high proportion of SMEs employees were engaged in real estate operations (over 18%) and manufacturing sector (15%). Construction, transport and communication, agriculture accounted for 5% of SMEs employees. More than 500 thousand employees were engaged in hospitality and provision of communal, social and personal services sectors. The smallest number of SME employees (up to 45 thousand people) was registered in fishing and fish farming and education.

The largest number of SMEs employees (45%) in 2015 were registered in legal entities related to wholesale and retail trade and real estate operations. While LE of manufacturing and construction sectors accounted for 17% and 12% of SMEs employees respectively. Among individual entrepreneurs, there was an absolute predominance of the number of employees engaged in wholesale and retail trade (more than 51%). While IP related to real estate operations, transport and communication accounted only for 10% of SME employees.

Table 1. SMEs employment by types of economic activity for 2015

Type of economic activity	*Number of employees, thousands of people*			*Share in the total number of SMEs employees, %*
	LE	*IE*	*SMEs*	
1	2	3	4	5
agriculture	722.1 (989.5)	278.1 (399.6)	1000.2 (1389.1)	5.42 (7.28)
fishing and fish farming	35.9 (32.2)	5.2 (6.3)	41.1 (38.5)	0.22 (0.49)
mining;	100.8 (91.8)	1.5 (0.8)	102.3 (9.,6)	0.55 (0.49)
manufacturing	2335.9 (2259.2)	432.1 (470.6)	2768 (2729.8)	15.00 (14.31)
production and distribution of electricity, gas and water	213.9 (220.1)	3.2 (3.6)	217.1 (223.7)	1.18 (1.17)
construction	1637.2 (1748.7)	145.6 (129.0)	1782,8 (1877,7)	9.66 (9.82)
wholesale and retail trade	3341.7 (3445.0)	2536.4 (3032.0)	5878.1 (6477.0)	31.86 (33.49)
hospitality	512.5 (525.1)	206.6 (161.1)	719.1 (686.2)	3.90 (3.60)
transport and communication	851.8 (828.4)	476.3 (470.8)	1328.1 (1299.2)	7.20 (6.81)
financial operations	129.3 (127.4)	24.8 (14.5)	154.1 (141.9)	0.84 (0,74)
real estate operations	2920.8 (2870.9)	52.,6 (390.6)	3445.4 (3261.5)	18.67 (17.12)
education	23.2 (21.4)	21.4 (15.7)	44.6 (37.1)	0.24 (0.17)
healthcare	342.9 (227.8)	26.8 (20.5)	369.7 (248.3)	2.00 (1.30)
provision of communal, social and personal services	349.4 (343.3)	249.7 (238.5)	599.1 (581.8)	3.25 (3.05)
Total	13517.3 (13731.9)	4932.3 (5350.1)	18449.6 (19082.0)	100.00 (100.00)
Most significant types of economic activity	12671.4	4849.4	17520.8	94.96

Source: federal statistics and own calculations.

Comparative analysis of changes in the number of SMEs employees for the period from 2010 to 2015 showed an employment decrease for legal entities by almost 215 thousand people, and for individual entrepreneurs - by 418 thousand people. The decrease in the number of SMEs employees was registered in trade, agriculture and construction. However, in most of the activities an employment growth was marked for this period. Thus, the number of SMEs employees increased in such sectors as fishing and fish farming, mining, manufacturing, hospitality, transport and communication, financial operations, real estate operations, education, healthcare, and provision of communal, social and personal services.

Analysis of SMEs employment by types of economic activity enabled us to identify eight most important activities for SMEs: wholesale and retail trade, construction, manufacturing, real estate operations, transportation and communication, agriculture, hospitality, provision of communal,

social and personal services. Each of them now employs more than 500 thousand people. In 2015 these activities accounted for slightly less than 95% of the total number of SMEs employees in Russia (last line of Table 1).

SME role in other activities (mining, production and distribution of electricity, gas and water, education, fishing and fish farming, healthcare, financial operations) was not great. Moreover, a significant increase of SMEs role in these activities in the short term is not expected for a number of objective and subjective reasons. We are going to consider them in detail. The mining of minerals by SMEs is mainly related to the development of stone quarries, the extraction of gravel, sand and clay. A significant increase of SME role in this activity seems unlikely in view of the lack of a growing demand for relevant products. Production, transmission and distribution of steam and hot water dominates in production and distribution of electricity, gas and water. This type of SMEs activity is concentrated in some regions of Siberia and the Far East of the country. In the vast majority of other regions, large corporations (mainly municipal and regional enterprises) are involved in production and distribution of steam and hot water. There are no economic and organizational prerequisites for increasing of SMEs role in relevant markets.

Financial activity of SMEs is limited to financial intermediation, which involves the use of temporarily idle funds and their provision for temporary use. Lately there has been many claims to this type of activity and now its volumes are decreasing. In the field of education SMEs participation is limited to provision of educational services for adults. Absolute majority of educational services in Russia are concentrated in state, regional and municipal institutions, and this trend has been increasing in recent years. The main reason for SMEs poor development in fishing, fish farming and healthcare is significant costs for organization and management of these activities. Since it is quite difficult for SMEs to get cheap loans, in most cases, entrepreneurs use their own funds and money borrowed from relatives. Such approach to investment financing is quite inefficient for these two types of activity. Therefore, despite the significant demand for fish products and health services in the country, there are no opportunities for increasing the role of SMEs in these activities.

3. SHARE OF SME EMPLOYEES IN THE TOTAL NUMBER OF EMPLOYEES BY TYPE OF ACTIVITY

Share of SMEs employees in the total number of employees by type of economic activity was conducted in accordance with the above methodology procedure. In this case, the contribution made by eight most significant activities was considered. Calculations were based on the share of SMEs employees (legal entities and individual entrepreneurs) in the total number of employees of all enterprises and organizations in each of the regions of Russia. These indicators were determined in the process of computational experiment based on the statistics by each of Russian regions. Values differentiation modeling of the share of SME employment was based on the development of normal distribution density functions.

These normal distribution density functions (y) describe the share of SMEs employees (x), engaged in a certain type of economic activity by the region in the total number of employees in the corresponding type of economic activity by the same region. These functions are given below:

- the share of SMEs employees engaged in agriculture, hunting and forestry

$$y_1(x_1) = \frac{465}{6 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_1-17)^2}{2 \times 6 \times 6}}; \quad (1)$$

- the share of SMEs employees engaged in manufacturing

$$y_2(x_2) = \frac{703}{9 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_2-29)^2}{2 \times 9 \times 9}}; \quad (2)$$

- the share of SMEs employees engaged in construction

$$y_3(x_3) = \frac{820}{9 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_3-31)^2}{2 \times 9 \times 9}}; \quad (3)$$

- the share of SMEs employees engaged in wholesale and retail trade

$$y_4(x_4) = \frac{1128}{12 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_4-50)^2}{2 \times 12 \times 12}}; \quad (4)$$

- the share of SME employees engaged in hospitality

$$y_5(x_5) = \frac{1025}{16 \times \sqrt{2\pi}} \cdot e^{\frac{(x_5-57)^2}{2 \times 16 \times 16}}; \quad (5)$$

- the share of SMEs employees engaged in transport and communication

$$y_6(x_6) = \frac{615}{7 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_6-23)^2}{2 \times 7 \times 7}}; \quad (6)$$

- the share of SMEs employees engaged in real estate operations

$$y_7(x_7) = \frac{820}{12 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_6-56)^2}{2 \times 12 \times 12}}; \quad (7)$$

- the share of SMEs employees engaged in provision of communal, social and personal services

$$y_8(x_8) = \frac{400}{6 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_8-22)^2}{2 \times 6 \times 6}}. \quad (8)$$

In addition, the distribution of the shares of SMEs employees in the total number of employees of all enterprises and organizations by regions was estimated:

$$y_9(x_9) = \frac{287.00}{4.30 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_9-25.01)^2}{2 \times 4.30 \times 4.30}}. \quad (9)$$

Table 2. Estimated values of statistics

Function number	*Estimated value by quality*		
	Kolmogorov-Smirnov	*Pearson*	*Shapiro-Vilk*
1	2	3	4
(1)	0.06	2.68	0.96
(2)	0.03	0.43	0.98
(3)	0.05	1,78	0.97
(4)	0.05	1.57	0.97
(5)	0.08	4.38	0.95
(6)	0.04	1.30	0.96
(7)	0.01	0.34	0.98
(8)	0.03	1.83	0.97

(9)	0.05	3.44	0.95

Source: Own calculations

According to the theory of mathematical statistics the verification of normal distribution functions is based on application of Kolmogorov-Smirnov, Pearson, and Shapiro-Vilk tests. The tests allow comparing the empirical distribution of the studied parameters with theoretically described functions of normal distribution. The tests also demonstrate the deviation of empirical data from these functions. The methodology for using the tests is detailed in the literature given in references (Bolshev and Smirnov, 1983; Hollender and Wulf, 1983; Pearson, D'Agostino and Bowmann, 1977; Shapiro and Francia, 1972). Table 2 shows the actual values of statistics from the results of the computational experiment.

Analysis of the data shown in Table 2 is provided below. The estimated values by Kolmogorov-Smirnov test (column 2 of Table 2) are to 0.08 from 0.01. It is less than the tabulated value, which is 0.152 (with a significance level of 0.05). Similarly, the estimated values by Pearson test (column 3 of Table 2) range to 4.38 from 0.34, which is less than the tabulated value of 9.49. The estimated values by Shapiro-Fork test (column 4 of Table 2) range to 0.98 from 0.95. These values are greater than the tabulated value of 0.93 (with a significance level of 0.01). Thus, all designed functions (1) - (9) have high quality in all tests and well describe approximated data.

4. ANALYSIS RESULTS OF MODELING

Normal density function allows determining average values of the current shares of SME employees relating to specific type of economic activity. The corresponding indicators are given in Table 3. The table shows the change intervals of the indicators under consideration (column 3), which are typical for the majority (68%) of the country's regions. The intervals are estimated on the basis of average values of indicators and standard deviation values. To estimate the interval limits, the specified deviation is added to or subtracted from the average value of the indicator, respectively. The average values and the change intervals of the indicators in the table correspond to the density functions of normal distribution (1)-(9).

Table 3. Characteristics of the share of SME employees in the total number of employees by type of activity, %

Type of economic activity	*average value*	*standard deviation*	*change interval*
agriculture	17	6	11-23
manufacturing	29	9	20-38
construction	31	9	22-40
wholesale and retail trade	50	12	38-62
hospitality	57	16	41-73
transport and communication	23	7	16-30
real estate operations	56	12	44-68
provision of communal, social and personal services	22	6	16-28

All types of economic activity	25	4	21-29

Source: Own calculations

Analysis of the data presented in Table 3 shows that the average values of the share of SMEs employees in the total employment differ significantly for each type of economic activity. The highest values are recorded in such types of activity as hospitality and real estate operations. The share of SMEs employees engaged in trade in total employment of all trade enterprises is slightly lower. These three activities account for more than 50% of all SMEs employees. In manufacturing and construction the share of SME employees is about a third. The share of SMEs employees in the number of employed in such sectors as agriculture, provision of communal, social and personal services, transport and communication is quite large (between 17% and 23%). Thus, the number of employees engaged in eight types of SME activities, which we consider to be the most significant, is not only high in absolute value, the share of SMEs employees in the total employment of these sectors is also quite substantial.

In general, SMEs contribution to the total employment in the country (last line of Table 3) reaches 25%. That is, every fourth economically active resident works in one of the SMEs. It is of some interest to compare this indicator with the same indicators in the foreign countries that had similar starting conditions for the formation of a market economy: Latvia (79%), Estonia (78%), Lithuania (76%), Bulgaria (75% %), Slovenia (72%), Slovakia (70%), the Czech Republic (70%), Poland (69%), Croatia (68%), Romania (66%), Georgia (44%), Armenia (42%) , Belarus (28%) [Statistics Explained. Eurostat, 2018; Shmavonyan, 2015]. These data confirm the assumption that there are large reserves for SME development in Russia.

As mentioned earlier, the values of SMEs contributions to total employment by regions of the country are well described using the obtained density functions of normal distribution (1)-(9). There can be a significant differentiation of these contributions by specific regions of the country. This conclusion stems from the meaning of normal distribution. The change intervals for the values of SMEs contributions to total employment, typical for most of the country's regions, are given in column 3 of Table 3. The hypothesis of a significant differentiation of indicators characterizing the share of SMEs employees by regions in the total number of employed population in these regions, as well as distribution of similar indicators by the most important for SMEs types of economic activity has been confirmed.

Of particular interest is the identification of the regions of the country with the indicators under consideration, the values of which go beyond lower and upper bounds of the intervals. Such information can provide federal and regional authorities with data on business climate, as well as the weak and strong development of SMEs by regions and sectors. The results of this analysis with examples of SMEs contribution to total employment in all activities and in trade sector particularly are presented below.

The values of the shares of SMEs employees in the total regional employment went beyond the lower bound (21%) in 2015 in the following regions of the country: the republics of North Ossetia-Alania, Karachaevo-Cherkessia, Tyva, Dagestan, Kabardino-Balkaria, Kalmykia and Chechnya; Murmansk, Orenburg, Volgograd Oblasts and Trans-Baikal Territory.

SMEs contributions to the total regional employment went beyond the upper bound (29%) in the following regions: the Republic of Adygea, Krasnodar Territory, Sverdlovsk, Kirov, Ivanovo, Novosibirsk, Ryazan, Voronezh, Kaliningrad, Kostroma Oblasts and the city of St. Petersburg.

As for trade sector, these indicators went beyond the lower bound (38%) in 2015 in the following regions of the country: the republics of North Ossetia - Alania, Dagestan, Kabardino-Balkaria; Murmansk, Kursk, Leningrad, Tula, Moscow, Bryansk, Amur, Volgograd Oblasts and the city of Moscow.

SMEs contributions to the total number of employees of trade enterprises went beyond the upper bound (62%) in the following regions: the republics of Sakha (Yakutia), Khakassia, Komi and Chechnya; Voronezh, Belgorod, Ryazan, Kostroma Oblasts and Chukotka Autonomous District.

This situation is caused by peculiarities of SMEs activity in the respective regions. It should be taken into account in the formation of business development programs in these regions. Russian government should create a system of incentives for SME development in the regions where the role of entrepreneurship is low.

CONCLUSIONS

The results of the study have significant novelty and originality. They allow us to draw the following conclusions:

- In 2015 the total number of SME employees in Russia was just under 18.5 million people. At the same time, legal entities employed 12.6 million people, and individual entrepreneurs - 4.8 million people.
- Wholesale and retail trade accounted for the largest share in the total number of SME employees (almost 5.9 million people).
- More than 500,000 people are employed in SMEs which specialize in each of the eight types of activities: wholesale and retail trade, real estate operations, manufacturing, hospitality, transport and communication, construction, agriculture, as well as the provision of communal, social and personal services. These activities accounted for 95% of the total number of SMEs employees.
- SMEs did not play significant role in fishing and fish farming, mining, education, healthcare, production and distribution of electricity, gas and water, as well as financial sectors.
- The density functions of standard distribution are developed, which describe the share of SMEs employees in the total number of employees of all enterprises and organizations in the following sectors: agriculture, manufacturing, construction, wholesale and retail trade, hospitality, transport and communication, real estate operations, the provision of communal, social and personal services. The developed functions have a high quality of approximation of empirical data.
- Using the developed density functions of normal distribution, the average values of SMEs contributions to total employment and by types of activity are determined.
- Differences in values of SMEs contributions to total employment by the regions of the country are confirmed. Regions with high and low values of these indicators on the examples of all SMEs and those engaged in trade sector were determined.

The results of the research can be used in scientific studies related to entrepreneurial sector development. The developed functions of normal distribution can be used to justify the concepts, plans and programs for SME development in the regions and municipalities. The methodology and tools that are used in the research can be applied to similar studies for countries with a significant number of territorial (administrative) units.

The government, regional and municipal authorities may use the research results in the practice of formation and implementation of entrepreneurship development projects and programs, including those with the aim to increase its role in the regions and municipalities where SMEs is not sufficiently developed.

The study is able to provide authorities with information on potential opportunities to increase SMEs contribution to the national economy in accordance with the Federal Strategy for SMEs Development (Federal Strategy for Development of Small and Medium Entrepreneurship in the Russian Federation for the period up to 2030, 2016).

In addition, the results of the work can be used in the current activity of state, municipal and

public organizations related to SMEs regulation and support in solving the problems of monitoring, assessing the current level and determining ways to enhance the role of SMEs. Further research may relate to the assessment of the role of SMEs in individual municipalities.

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