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**INFORMAL EMPLOYMENT TRENDS IN REGIONAL LABOR
MARKETS**

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Abstract

The article analyzes the structure of the regional labor market using the example of the Samara region in the context of identifying trends in informal employment. The study of changes in various employment groups, both in Russia as a whole and in individual regions, made it possible to determine the reserves of the labor market, identify the causes of informal employment and propose directions for developing regulation of social and labor relations. To identify trends in the number of employed and unemployed in the Samara region, indicators were calculated over time. Based on calculations of employment and unemployment indicators, the causes of changes in labor market indicators and measures that should contribute to the achievement of a higher level of employment were identified. The determination of trends in the number of employed and the number of unemployed allowed making a short-term forecast of these indicators. The dynamics of informal employment were also analyzed. To make a forecast of the number of all employed, unemployed and informally employed, a polynomial trend was chosen, since it corresponded to the highest value of the coefficient of approximation. To obtain a generalized statistical trend assessment, an analytical alignment method was used. According to the analysis and calculated forecast values, there is an insignificant positive trend in the number of employees in the short-term period. The number of unemployed in recent years has decreased, but there is a significant increase in employment in the informal sector, which reduces the effectiveness of the state employment policy.

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Keywords: Unemployment, employment, employment indicators, point forecast, unemployment rate, level of informal, employment.



1. Introduction

The labor potential of people is realized through their employment. One of the main objectives of the state macroeconomic policy is to achieve a high level of employment. Realization of this goal contributes to an increase in the quantity of the social product, and thus to a greater extent allows satisfying the material needs of the population, which is confirmed by classical theories of employment (Keynes, 1937).

The number of employees is one of the main indicators of the country' economy (OECD, 2016). The situation on the Russian labor market, despite periodic and deep enough crises, shows relative stability and does not lead to significant social conflicts. Nevertheless, the regulatory mechanisms used contribute to squeezing a significant part of the population into the sphere of unregulated state labor relations (Benach et al., 2014), which represents significant risks for both the state and workers (Thurik, Carree, van Stel, & Audretsch, 2008). It is interesting to analyze changes in various employment groups both in Russia as a whole and in individual regions in order to determine labor market reserves, identify causes contributing to depreciation of negative economic processes, develop directions for regulating social and labor relations (Baimurzina, 2010).

The dynamically changing means of labor, the conditions for their use transform social and labor relations, and new forms of interaction in the labor market arise, which make it possible to earn income on fundamentally new principles of interaction between the parties to labor relations. The existing legislative structure, both in Russia and in other countries, despite the constantly emerging innovations, sets a fairly rigid framework within which the labor process can take place, which ensures the transparency and legitimacy of actions of all subjects on the labor market. However, despite a wide regulatory impact of the state, as a guarantor of rights and obligations of the parties to labor relations, new options for interaction are constantly emerging, or we face forms that are not under responsibility or grey market forms not contradicting the legislation (Kalleberg, 2009). These are the following forms:

- Shorter working day or work week;
- Part-time employment;
- Dismissal by agreement of the parties;
- Increase in self-employment;
- Online forms of income without employment;
- Informal employment and so on.

2. Problem Statement

The existing forms of relationships in the labour market, combined with the practice of super flexible wage systems that allow regulating the wage fund depending on the financial situation at a particular enterprise, leads to the phenomenon of stability or reduction of unemployment even in times of economic crisis. Analysis of official data in this situation allows determining trends only in part, only to the extent that organizations show legal processes. Other data can be assessed only in an expert and analytical way and in order to understand to what extent they will affect the situation on the labour market (OECD, 2016).

The number of employees is one of the main indicators of the country's economy. A high level of employment indicates the well-being of the population, the prosperity of the country's economy, and the decrease in the number of crimes. A low level of employment, in turn, indicates a crisis in the economic sphere of the country, an increase in social tension and an exacerbation of the crime situation. The problem of employment of the population is a very topical issue for state policy (Law of the Russian Federation "On employment of the population in the Russian Federation").

The authors consider how the number of people employed in the Samara region changed from 2006 to 2016 (Fig. 01).

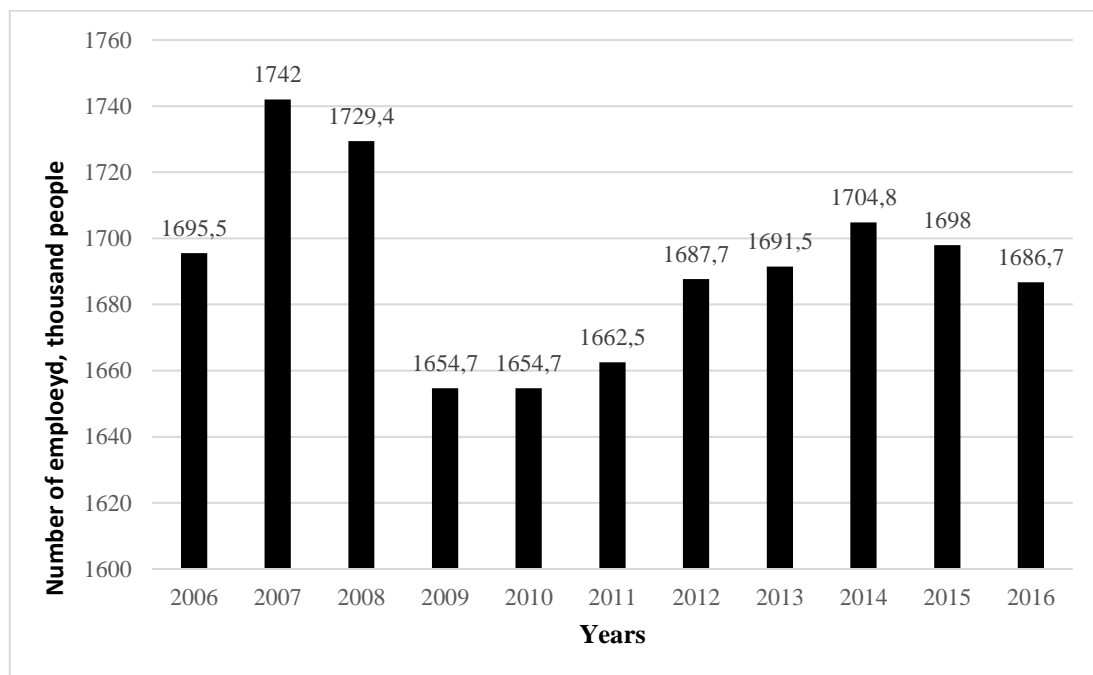


Figure 01. Dynamics of employment in the Samara region (calculated by the authors based on materials of Rosstat).

Figure 01 shows that the maximum number of employed was 1742 thousand in 2007, and the minimum number of employed was 1654.7 thousand in 2009 and 2010. In general, for the period 2006-2016, there was a positive trend in the level of employment (Table 01). The increase in the number of employed is directly related to the state employment policy (Porotova, 2016).

Table 01. Employment figures (authors' calculations based on Rosstat)

Years	Number of economically active population, thousand people	Number of employed, thousand people	Employment rate, %	Employment rate of economically active population, %	Load factor per employee	Number of unemployed, thousand people	Unemployment rate, %
2006	1770,4	1695,5	52,56	95,77	0,902	74,8	4,23
2007	1817	1742	54,03	95,87	0,851	75	4,13
2008	1804,8	1729,4	53,69	95,82	0,862	75,4	4,18
2009	1762,2	1654,7	51,36	93,90	0,947	107,5	6,10
2010	1755,8	1654,7	51,46	94,24	0,943	101,2	5,76
2011	1751	1662,5	51,71	94,95	0,934	88,5	5,05

2012	1747,7	1687,7	52,51	96,57	0,904	60	3,43
2013	1747,2	1691,5	52,64	96,81	0,900	55,7	3,19
2014	1757,9	1704,8	53,09	96,98	0,884	53,1	3,02
2015	1758,1	1698	52,85	96,58	0,892	60,1	3,42
2016	1758,6	1686,7	52,61	95,91	0,901	71,9	4,09

The presence of large industrial facilities in the Samara region (AvtoVAZ, Electroshtiel, Samara Refinery, Motorostroitel, Aviakor) helps provide employment for a large proportion of the population, which definitely helps achieve a high level of employment.

According to the above calculations (see Table 01), the highest level of employment was in 2007 (54.03%), and the lowest result of this indicator was in 2009 (51.36%). Analyzing the level of employment of the economically active population, one can see that the highest level was registered in 2014 (96.98%), and the lowest level was in 2009 (93.9%).

The employment rate of the population in the period 2006-2016 changed slightly (see table 01). It decreased or increased by 0.1-2%. The largest decline in employment was recorded in 2009 and amounted to 2.33%. The employment rate of the economically active population in the same period changed in the range of 0.05-1.7%. Only in 2009, the number of the economically active population decreased by 1.92%. The employment forecasts made for different countries are generally consistent with calculations and trends identified (ILO, 2008).

3. Research Questions

The load factor per employee diminished in almost every year in the period 2006-2016. Only in 2008, this figure increased by 0.012, in 2009 by 0.084, in 2015 by 0.008 and in 2016 by 0.009. Thus, the most difficult was the situation in 2009, when there was an increase in the number of unemployed in the economy by 84 people per 1,000 people employed, and as a result, the workload rose to 947 people. The largest decrease in this ratio was recorded in 2012 and amounted to 0.030, that is, the number of unemployed decreased by 30 people.

Analyzing the calculations from Table 1, it can be seen that an increase in the number of employed leads to a decrease in the number of unemployed. The highest indicator of unemployed was in 2009 (107.5 thousand people), while the lowest indicator of unemployed was in 2014 (53.1 thousand people). The highest and lowest values of the unemployment rate were 3.02% and 6.10% in 2009 and in 2014, respectively. In general, during the period under study, the unemployment rate changed by 0.05–0.71%. Only in 2009 there was an increase of this indicator by 1.92%, and in 2012 its decrease was 1.62%.

The study of employment trends to justify necessary management decisions in order to reduce informal employment is of scientific interest.

4. Purpose of the Study

To continue the study, the main goal was formulated - to identify trends in the number of employed and unemployed using the example of the Samara region in order to identify and forecast informal employment. The achievement of the stated goal is possible when solving the following tasks:

- Calculate the dynamics of studied indicators;

- Identify the causes of changes in indicators;
- Draw up an action plan to improve the values of indicators;
- Use the identified trend of changes in indicators, define forecast values.

5. Research Methods

The authors use the method of analytical alignment to obtain a generalized statistical assessment of the trend. A polynomial trend was chosen, since it corresponds to the highest value of the approximation coefficient (84.38%). The main content of the method of analytical alignment in dynamics series is that the main development trend is calculated as a function of time $\hat{y}=f(t)$.

To determine the employment trend, 8 years (2009-2016) were analyzed, then to simplify the calculations, time values were taken from 1 to 8, where the initial and final values refer to the first and last year of the study period (by 2009 and 2016) respectively. Thus, the predicted value of the number of people employed in the Samara region for 2018 is 1,687.9 thousand people, which is 1.2 thousand more than in 2016. In 2018, according to forecasts, the number of employed is expected to drop again by 8.4 thousand people compared to the previous year.

We make a short-term forecast of the number of unemployed for 2018 and 2019. Since the number of unemployed for 8 years (2009-2016) was analyzed, to simplify the calculations, time values were taken from 1 to 8, where the initial and final values refer to the first and last year of the study period (by 2009 and 2016) respectively. Thus, the predicted value of the number of unemployed in the Samara region for 2018 is 81.4 thousand people, and for 2019 it was 107.3 thousand people. It can be concluded from the forecast that the number of unemployed in coming years will increase, which will become a negative phenomenon for the region.

Reduced employment and increased unemployment in 2008, 2009 and 2015 was caused by economic crises. Due to the difficult economic situation, some enterprises were forced to close, while others reduced costs. As a result of optimizing the number of employees at many enterprises in the Samara region, the financial situation of a part of the population deteriorates and the level increases (Simonova, Bazhutkina, & Berdnikov, 2015). Recently, there has been a significant increase in informal employment.

The International Labor Organization (ILO) considers informal employment as an activity of small business units producing and distributing goods and services and consisting mainly of independent, self-employed producers and takes them into account when drawing up employment trends (ILO, 2016). They use the labor of family members and employees (Abdulaeva, 2015). Consider how the number of people employed in the informal sector of the economy has changed in the Samara region (Table 02).

Table 02. Employment rates in the informal sector (calculated by the authors based on Rosstat)

Years	Number of people employed in the informal sector, thousand people	Number of people employed in the informal and formal sectors, thousand people	Total employed in the informal sector, thousand people	Employed in the informal sector to the total number of employed population, %
2009	181,5	37,7	219,2	13,39
2010	125,6	25	150,6	9,18
2011	173,3	20,2	193,5	11,74

2012	177,9	21,4	199,3	11,806
2013	180,2	19,6	199,8	11,812
2014	181,3	32,9	214,2	12,56
2015	183,2	32,3	215,5	12,70

Table 02 shows that the number of people employed in the informal sector, starting from 2010, is growing from year to year, so it is not by chance that the largest value of this indicator was 183.2 thousand people in 2015 (the last analyzed year). The largest growth of all employed in the informal sector was 42.9 thousand people in 2011, including by increasing the number of people employed in this sector alone by 47.7 thousand.

To draw up a short-term forecast of the number of people employed in the informal sector for 2016, 2017 and 2018, a line of the polynomial trend was added to the graph (in Figure 02) reflecting the dynamics of the number of informally employed, since it corresponds to the highest value of the approximation coefficient (90.5%).

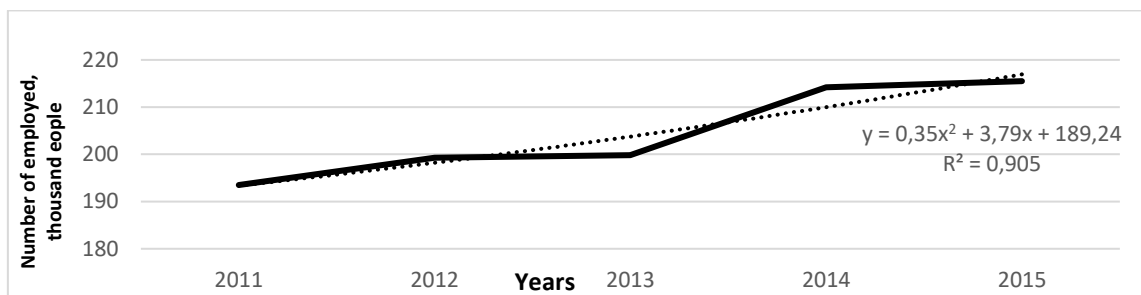


Figure 02. Polynomial trend in the number of people employed in the informal sector in the Samara region (authors' calculations based on Rosstat).

After analyzing the number of informally employed for 5 years (2011-2015), and to simplify calculations, time values were taken from 1 to 5, where the initial and final values refer to the first and last year of the study period (by 2011 and 2015), respectively.

To calculate the predicted values of the number of informally employed in the Samara region for 2017, the value $t=6$ was substituted into the resulting trend equation (forecast for 2016):

$$\hat{y} = 0,35 \cdot 6^2 + 3,79 \cdot 6 + 189,24 = 224,6 \text{ thousand people}$$

The forecast of the number of informally employed for 2017 was obtained as follows ($t=7$):

$$\hat{y} = 0,35 \cdot 7^2 + 3,79 \cdot 7 + 189,24 = 232,9 \text{ thousand people}$$

The forecast value of the number of informally employed in 2018 will be ($t = 8$):

$$\hat{y} = 0,35 \cdot 8^2 + 3,79 \cdot 8 + 189,24 = 242 \text{ thousand people}$$

Thus, the predicted value of the number of people employed in the informal sector in the Samara region for 2016 was 224.6 thousand people, for 2017 it was 232.9 thousand people and for 2018 - 242 thousand people. That is, the growth trend will not change.

Due to an increase in the number of employed in the informal sector, a law came into force in 2017 that invited informally employed to register with the tax service in exchange for a two-year tax holiday (it has not been decided yet which system can be used to pay taxes in two years).

6. Findings

The number of people employed in the informal and formal sectors does not have a definite trend of change (Tsarev, Vershina, Novikov, & Utkina, 2017). This indicator is unstable, from time to time it increases, then it decreases in the range of 0.6-4.8 thousand people. Only in 2010, the number of people employed in the informal and formal sectors decreased by 12.7 thousand people, and in 2014 it increased by 13.3 thousand people. As for the level of employment in the informal sector, we can say that it increases slightly - within 1%. It stands out in 2011, when there was an increase of this indicator by 2.56%.

The reasons for the growth of informal employment are:

- Reducing the standard of living of the population;
- Excess supply of labour;
- Low wages in the public sector;
- Systematic wage arrears of employers;
- General instability of employment in the formal sector.

There is a tendency that women are less involved in informal employment than men. This is due to the fact that women more value the importance of formal labour relations. Official employment allows them to rely on some support and protection from the state, including the payment of various social benefits and the right to have a paid leave to care for a child.

It is also noted that young people aged 15 - 24 years old prevail in informal employment. It can be explained by the fact that young specialists experience difficulties in finding employment due to the lack of work experience, which leads to the lack of sufficient practical skills among university graduates and reduces their competitiveness in the labour market.

The development of informal employment is a negative phenomenon in the economy, as it has the following disadvantages:

- Employers do not pay insurance contributions to state social extra budgetary funds for people employed in the informal sector (Pension Fund of the Russian Federation, Social Insurance Fund of the Russian Federation, Federal Fund for Mandatory Medical Insurance);
- Activities of those employed in this sector are virtually beyond the control of official government agencies;
- People employed in the informal sector do not pay taxes, as well as other mandatory payments, which leads to the lack of money in the state budget of the country;
- Population employed informally loses the rights stipulated by the Labour Code of the Russian Federation for labour experience; this category of employees is not subject to the rights to compulsory social and pension insurance guaranteed by the Constitution of the Russian Federation.

Informal employment can be divided into three types: self-employment, informal employment and irregular employment (Bobkov, 2017). According to the Ministry of Economic Development, there are about 16 million self-employed in Russia. In particular, these include seamstresses, manicurists, tutors, nannies, governess, domestic workers, etc. Today, millions of Russians work independently in various

fields - from minor repairs and construction to car-care centers. But they prefer to stay in the shadows so as not to face various payouts and constant checks.

The Pension Fund of Russia (PFR) annually loses 710 billion rubles due to a high proportion of informally employed Russians. Such an assessment is contained in the analytical review of Sberbank "Russia: informal employment as a new phenomenon" (Tseplyaeva & Sonina, 2014).

According to statistics, the number of webmasters and freelancers who earned on the Internet in 2014-2016 increased 3.3 times. The volume of demand for services in the spring of 2016 amounted to 279 million rubles, and in the fall it was already 1.023 billion (Karpushkina & Cherepanova, 2016). The total cost of services placed through the platform increased by 700 percent. According to forecasts, in 2018 it will increase another three times - up to 7.5 billion rubles.

The reasons for the growth of self-employment are:

- Failure to employ under a formal employment contract due to the lack of required work experience, necessary qualifications or shortage of jobs;
- Unwillingness of employers to provide the best conditions;
- Workers need a flexible work schedule (relevant for young professionals);
- Due to the unwillingness of employees to perform static, routine and uninteresting work for official employment, which does not give prospects for development and self-realization in the future;
- Self-employment provides independence from the authorities and mobility, provides more free time, independence of decision-making, the ability to more express themselves and remain free and independent;
- Possibility of ensuring autonomy and minimization of control in the process of labour activity.

Reducing employment in the informal sector is a pressing and serious problem for the state as a whole (Tarasova & Andriyanova, 2017). At the moment, the decision of this problem is seen in creating new enterprises, expanding the number of jobs in existing organizations and in improving working conditions. Increasing the need for labour will help people leave the informal sector. It is important to improve the quality of employment regulation, provide workers with independence and opportunities to implement their own ideas in solving some problems in the labour process, as well as reducing barriers when finding young professionals (barriers may include: work experience, necessary qualifications and practical skills).

As for the Samara region, in 2018 this region continues implementing measures aimed at reducing the informal employment of citizens, in the framework of which unscrupulous employers who evade registration of labour relations with workers in accordance with the current labour legislation, as well as active awareness-raising work among the population about the negative effects of informal employment are identified.

According to the monitoring data on the decline in informal employment in the Samara region, as of January 31, 2017, 3,707 persons were identified working without formal employment relations. At present, labour contracts have been concluded with all citizens. In general, this year it is planned to legalize labour relations with more than 48 thousand people.

As of February 1, 2017, the Samara region ranks 1st among the constituent entities of the Russian Federation in achieving the benchmark for reducing informal employment established by the Federal Service for Labour and Employment for 2017. The Samara region does not stop at this, it will continue to carry out the planned activities to reduce the number of informally employed.

7. Conclusion

Thus, according to the calculations made, it can be concluded that in the Samara region there is a positive trend in the number of employees. The number of unemployed in recent years mainly decreases. There is a significant increase in employment in the informal sector. The authors believe that the measures planned by the relevant department in the field of reducing informal employment will be productive and will result in growth trends in coming years.

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