

The Impact of Labor resources on the Economic Development of the Regions of the Volga Federal District

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ABSTRACT

There are various strategies developed by scientists to form criteria that contribute to stabilising the Russian economy and its growth. A strategy aimed at socio-economic transformation is used to increase the economy's growth rate. Despite this, there is a differentiation of the industrial sector and the economic and infrastructural stratification of the regions. In this regard, many social problems and conflicts have appeared. To resolve these conflicts in the Volga Federal District (VFD) regions, it is necessary to improve the quality of the socio-economic environment by implementing appropriate development strategies.

It is necessary to form a system of effective interaction between the regions, contributing to the normalisation of socio-economic relations. To form this type of strategy, it is necessary to have a detailed analysis of the development of the region, as well as to understand the specifics of the processes taking place in the region. The problems of the influence exerted on the economic development of the regions of the Russian Federation as a whole in some cases are aggravated by regional specifics, as well as increased interregional competition for labor resources. The article analyses the labor resources and their impact on the economic development of the regions. The problem of reducing the number of labor resources in the regions has been identified, directly related to the regions' demographic situation and the population's standard of living, and the most important economic indicator - the gross regional product (GRP). Recommendations are given for solving the problems of labor supply in the regions and ways of economic development of the regions.

The characteristics of the Volga Federal District regions are compared with the Chuvash Republic indicators for clarity, which helps to notice a significant difference between the regions. The instability of the socio-economic situation in the region caused by the COVID-19 pandemic is shown, which directly affected the reduction of the population and the reduction of the labor resources of the population and the quality of life of the population. This article presents the results of the analysis of socio-economic problems, due to the existence of which there is a reduction in the labor resources of the Volga Federal District and the impact on the economic situation.

Keywords: *Labor resources, Socio-economic development, Demographic situation, Migration population growth, Migration, unemployment, Gross regional product.*

1. INTRODUCTION

A decrease in the number of labor resources and a decrease in the population's income complicated the situation in the regions' labor market, worsened the

quality of life of the population and the number of potential employees and investors.

The level and quality of life of the population of the regions depend on the level of wages, career prospects, and employment opportunities for respectable job, which is typical for the Volga Federal District regions.

The analysis of labor resources and demographic processes and the level and quality of life of the population of the Volga Federal District regions allows us to assess the potential and prospects for their development from the point of view of the availability of labor resources.

Labor resources are the main factor of production. In each region, economic growth depends on the labor potential and the effective use of labor resources.

The main problem of the available labor resources in the region is their full employment and the qualitative characteristics of the population.

The solution to this problem is reflected in the population, the life expectancy of the regions of the Volga Federal District and, accordingly, the quantity and quality of the labor resources at their disposal.

The solution of this problem affects the number and life expectancy of the population of the regions of the Volga Federal District and, accordingly, the number and quality of labor resources they have. This also applies to labor resources in agriculture. [1].

Therefore, when assessing the competitiveness of each organisation in work, along with material and non-material, human resources are also allocated, characterised by the level of professional training of employees, a program for improving their qualifications, staff stability, a motivation system, etc. [2].

Global employment trends and the problem of preventing a deep jobs crisis are the subjects of close attention in the world economy [3].

The decrease in the number of labor resources in the regions and the complication of the economic situation are accompanied by a deterioration in the demographic situation in the region, in particular, a decrease in the birth rate and an increase in mortality.

The economic crisis that occurred against the background of the coronavirus infection outbreak also impacted several industries. Many entrepreneurs have transferred employees to remote work to prevent new cases of infection, while another part of entrepreneurs has sent employees on forced leave or fired due to a sharp drop in demand for products and services.

All this had a negative impact on the standard of living of the population of the Volga Federal District. Analysts predict that people will be forced to work part-time or go on vacation at their own expense.

Thus, the number and condition of labor resources and the demographic situation are essential factors in developing any region since problems in these areas can significantly affect the economy of the Chuvash Republic and the labor market and the social sphere. The essential component of the region, the basis of a

strong state and regional socio-economic development, is the population. Fertility, mortality, demographic changes, the number of labor resources, and their qualifications are essential for understanding how the state should effectively use limited resources.

Further research is vital for the formation of market relations in the economic space of the Volga Federal District regions. In this regard, the study of issues related to the impact of labor resources on the economic development of regions is of particular importance.

The purpose of the article is to identify rational ways of developing labor resources and their impact on the economic development of the Chuvash Republic and neighbouring regions of the Volga Federal District. To analyse the dynamics of the population of the Chuvash Republic and neighbouring regions, the dynamics of fertility and mortality, the number of employed and unemployed, migration growth (outflow) of the population in the Volga Federal District regions, wage dynamics and analysis of the gross regional product (GRP) as an important indicator of the economic development of the territory. To show the main recommendations for the regeneration of labor resources functioning in challenging and ambiguous demographic conditions, the normalisation of structural shifts in employment will contribute to the normalisation of the effectiveness of their use. It is also necessary to give a detailed justification for the need for mandatory economic growth, which will contribute to the development of labor resources. Economic growth is due to the development of living and working conditions of citizens, an increase in the efficiency of the labor market, and the need to implement innovations at enterprises.

2. METHODOLOGY

The methods of studying the problem include analysis of theoretical sources, comparison analysis, and statistics. The primary method of analysing demographic and economic indicators of the regions of the Volga Federal District is the analysis of statistical data.

To analyse the economic sphere of the regions of the Volga Federal District, the following indicators were selected: population dynamics, fertility and mortality dynamics, natural population growth and decline, dynamics of average wages, and the gross regional product of each region.

The study of this topic was conducted in three stages. The first stage is a theoretical analysis of the problems associated with the threats of reduction of labor resources and difficulties in the demographic sphere; the second stage is to study the dynamic indicators of labor resources and the demographic situation, and at the third stage generalising conclusions

were made about the socio-economic processes in the Chuvash Republic and the regions of the Volga Federal District.

3. DEMOGRAPHIC SITUATION OF THE REGIONS OF THE VOLGA FEDERAL DISTRICT

The basis for the formation of labor resources is, as well known, the population. Understanding the causes and consequences of demographic dynamics of the population, its forecast makes it possible to make the right decisions in the management of socio-economic development of territories [4, p. 99]. The dynamics of the population of the Chuvash Republic and neighbouring regions for the period 2018-2020, thousand people is shown in Figure 1.

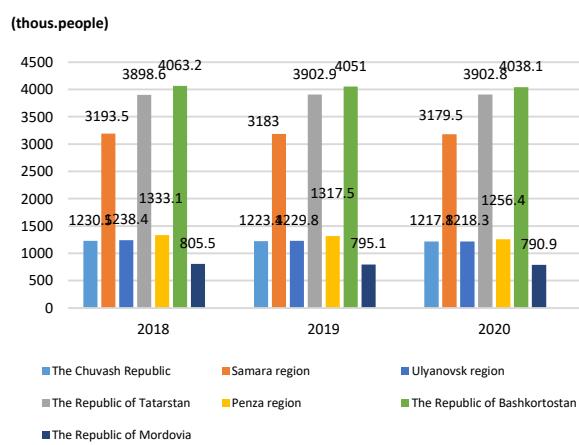


Figure 1 Dynamics of the Chuvash Republic population and neighbouring regions for 2018-2020, thousand people.

At the moment, the population of the Chuvash Republic is slightly decreasing. In 2020, compared to 2018, the number decreased by 12.7 thousand people, or 1.04% [5]. Analysing the dynamics of changes in the region's population, we can conclude that the number in the territories under consideration is decreasing, but this is most noticeable in the Penza region: from 2018 to 2020, the population decreased by 76.7 thousand people or 6.13%.

This decrease is influenced by high mortality, including from coronavirus infection (COVID-19) and the outflow of the population to other cities or abroad. However, in one of the regions under consideration, there was a population increase – in the Republic of Tatarstan, the population increased by 4.2 thousand people, or by 0.11%. This increase is primarily due to the natural increase in population and the high attractiveness of the Republic for the population of other cities.

The dynamics of the birth rate in the Chuvash Republic and neighbouring regions is shown in Figure 2.

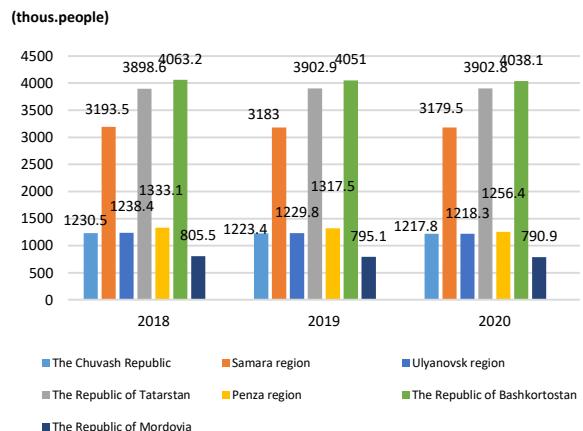
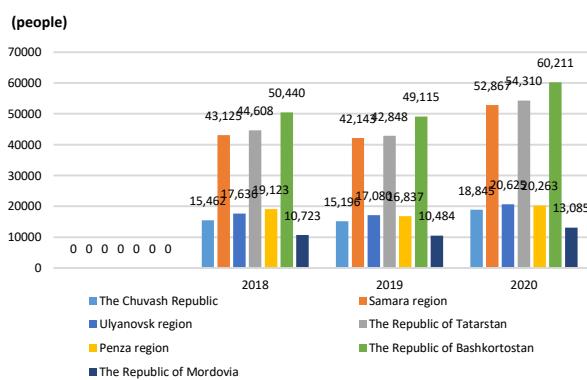


Figure 2 The dynamics of the birth rate in the Chuvash Republic and neighbouring regions for 2018-2020, people.

In the Chuvash Republic, reducing the birth rate continues, so in 2020, 11,305 children were born in the region, which is 15.56% (or 1,760 people) less than in 2018. The most significant decrease in the number of children born from the regions under consideration during this period occurred in the Penza Region (by 30.2%, or by 2,658 people), the Republic of Mordovia (by 20.55%, or by 1,134 people), the Samara Region (by 18.22%, or by 5,087 people) [6]. In many ways, this decline in the birth rate is due to the economic uncertainty for families that arose due to the epidemic and negative economic consequences (rising unemployment and falling incomes).

The pandemic has affected the birth rate and the mortality of the population. The mortality dynamics in



the Volga Federal District regions is shown in Figure 3.

Figure 3 The mortality dynamics in the Chuvash Republic and neighbouring regions for 2018-2020, people.

In 2020, there was a sharp jump in the mortality rate of the Russian population due to coronavirus infection (COVID-19). Each region has lost a significant part of its citizens, and this trend still continues to operate on the territory of our country. The mortality rate of the Chuvash Republic in 2020 increased by 17.95% (or by 3,383 people) compared to 2018. But the following regions suffered the most: Samara Region (18.43%, or 9,742 people) and the Republic of Mordovia (18.05%, or 2,362 people). The causes of increased mortality can also include circulatory system diseases, respiratory diseases, oncology, and nervous system diseases. With the reduction of the population of the regions, the shortage of personnel will continue to grow.

One of the factors determining the decline in the population of the regions is the migration policy and the processes of population growth and outflow. Migration is associated with the parameters of socio-economic development, the location of productive forces, and the intensity of urbanisation [4]. The Chuvash Republic took 39th place in ranking quality of life among all country regions by the end of 2020. Figure 4 shows the dynamics of migration growth and outflow of population.

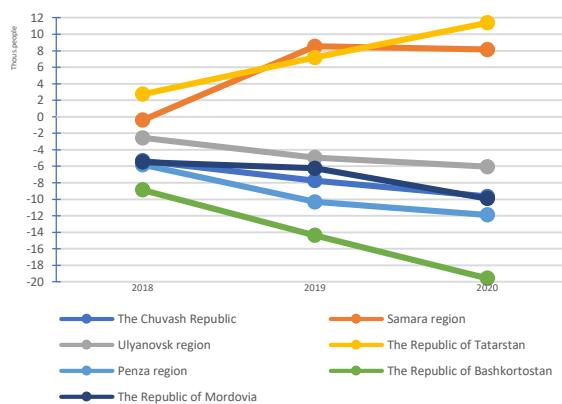


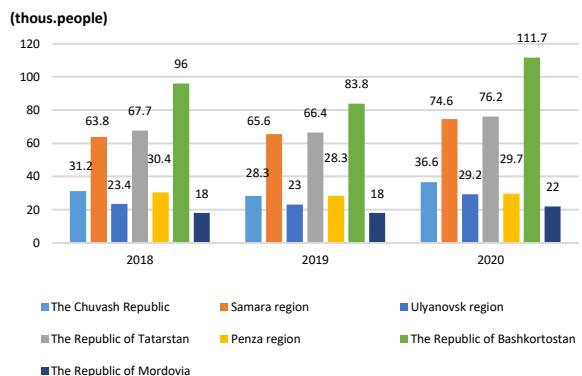
Figure 4 Migration growth (outflow) of the Volga Federal District regions population.

There is an outflow of the population in the Chuvash Republic, the Ulyanovsk Region, the Penza Region, the Republic of Bashkortostan and the Republic of Mordovia [7, 8]. The largest outflow is observed in the Republic of Mordovia – in the period from 2018 to 2020, 1.27% of the population migrated. Migration flows will only worsen the situation: citizens will leave these regions more often than they come.

At the same time, there is stable population growth in the Republic of Tatarstan and the Samara region [9, 10].

As the population declines, the shortage of personnel will increase; therefore, qualified specialists will cost enterprises more and more, which will lead to an increase in the cost of goods.

Migration processes, the pandemic, and the demographic situation directly affect the regions'



number of labor resources. The dynamics of the number of unemployed is shown in Figure 5.

Figure 5 Dynamics of the number of unemployed in the Chuvash Republic and neighbouring regions for 2018-2020, thousand people.

Currently, the number of unemployed in the Chuvash Republic is significantly increasing. In 2020, compared to 2018, the number of unemployed increased by 5.4 thousand people, or by 14.75%, the third indicator for this category from the regions under consideration. The Ulyanovsk Region is the first to increase the number of unemployed [11]. During the period under review, the number of unemployed in this region increased by 5.8 thousand people or 19.86%. The Republic of Mordovia occupy the second place [12]. From 2018 to 2020, this population category increased by 4.0 thousand people or 18.18%.

This increase was influenced mainly by the global pandemic caused by coronavirus infection (COVID-19). Since most organisations were subject to restrictions on transferring a large part of the workforce to remote operation, this entailed significant staff reductions. Many enterprises could not withstand the "covid restrictions" and were forced to reduce staff.

Also, the increase in unemployment is explained mainly by the professional discrepancy between vacancies and job seekers in different sectors of the economy, and the number of unemployed is directly dependent on the level of education [13].

Many of these problems are long-term, and their solution requires a long-term and targeted impact.

To maintain a stable situation in the labor market and create conditions for developing the social and labor sphere of the regions and a positive trend in the coming years, special attention will be paid to the development of labor resources and the economy [4].

Wages influence the development of labor resources in the Volga Federal District regions. The dynamics of

wages in the Chuvash Republic and neighbouring regions for 2018-2020, thousand rubles is shown in Figure 6.

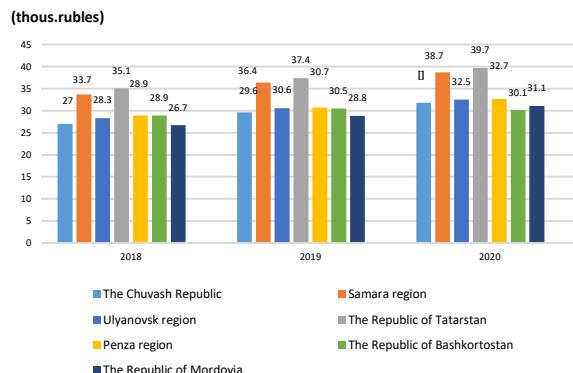


Figure 6 Dynamics of wages in the Chuvash Republic and neighbouring regions for 2018-2020, thousand people.

In the Chuvash Republic, the average wage is steadily increasing. In the period from 2018 to 2020, it grew by 15.09%. The Republic is in the first place in terms of the dynamics of the average wage growth.

The reasons for wage growth in the regions are the lack of labor resources, which was affected by the global pandemic caused by coronavirus infection (COVID-19) and rising demand and prices for goods.

4. THE PROBLEM OF REDUCING LABOR RESOURCES

The decline in the population of the regions of the Russian Federation entails changes in the age composition of the population, culture and many other components of life. The demographic crisis is also dangerous due to a reduction in the volume of labor resources, problems in education, and a decrease in Russia's defence capability [12]. The health of the able-bodied population is deteriorating since the workforce's health is a fundamental element of the quality of the workforce.

The recommended ways to solve this problem are, firstly, support for large families and families with young parents or single parents. To reduce the number of the latter, it is necessary to make decisions on strengthening the institution of the family. Secondly, it is vital to remember measures in health and education. And, thirdly, it is necessary to create and develop enterprises, providing the population with a stable source of income and the state with economic growth.

Solving the problems of reducing labor resources and their effective use will ensure the economic development of the regions and, on this basis, will increase the qualitative and quantitative indicators of the standard of living.

5. ECONOMIC SITUATION IN THE VOLGA FEDERAL DISTRICT REGIONS

The key factors that need to be taken into account to increase economic growth in the regions are the formation of an effective labor market environment, the growth of social protection of citizens, and the development of investment attractiveness of market mechanism participants.

Even though the Chuvash Republic does not have significant reserves of raw materials, it is a dynamically developing region. Considering this, it is necessary to choose an innovative way of economic development as the main direction of the Republic's development. The functioning of the economy of the Chuvash Republic in the long term will be determined by various factors.

Factors affecting the economic situation of Chuvashia:

1. Formation of investment activity directions.
2. Implementation of major investment projects.
3. Increase of innovative competitive products in the manufacturing sector and development of new sales markets
4. Improving the quality of infrastructure as part of implementing priority national projects.
5. Stimulating diversification and technological development of production, etc.

Currently, the economy of the Chuvash Republic is below average in terms of economic development among the Volga Federal District regions.

Agriculture occupies a special place in the economy in the Chuvash Republic and is a system-forming industry. Slightly less than a third of the Republic of the region lives in rural areas, which is 36.6%.

45.3 thousand small and medium-sized businesses operate in Chuvashia.

The number of employees in small and medium-sized businesses, including individual entrepreneurs, as of January 1, 2020, amounted to 154.6 thousand. The share of the average number of employees in small and medium-sized businesses in the total number of the employed population is 19.7%. The sales of small and medium-sized businesses for 2019 is estimated to be 351.8 billion rubles.

Small and medium-sized businesses should introduce innovative activity into their activities, which should be aimed at improving the quality characteristics of the product, as well as improving the organisation, its work with the external environment and the formation of an effective organisational structure of the enterprise that meets modern standards and is designed with innovation in mind.

It is an innovative product that differs from a conventional product in that this product has distinctive qualitative features that have not yet been presented on the market. By having such features, the product will be of greater interest to the consumer than the product that the consumer has been using for a certain time before.

The issue of innovative product development is the formation of a product that has qualitatively new characteristics. It is necessary to direct a large share of financial resources to the implementation and development of the product, which will subsequently pay off when the product that has received a new property is put on the market and introduced into the mass production process. This requires highly qualified specialists in all sectors of the region's economy.

The main problem of Chuvashia is the lack of highly qualified personnel. The most significant shortage of personnel is observed in the following areas: electric power and electrical engineering, mechanical engineering. And this is a limiting factor in developing industrial and energy enterprises in the region. Scientific and technical personnel, developers of innovative products are required.

To solve these problems, monitoring the labor market is necessary; targeted admission and training of specialists. In the Chuvash Republic, it is necessary to pay special attention to retraining programs for workers in various industries to increase the competitiveness of citizens in the labor market and the formation of profile mobility. The acquired skills of employees and the relevant knowledge represent a particularly valuable capital in the labor market for the growth and development of production activities.

It is vital to solving the issues of population migration, especially in rural areas. Mostly qualified, young workers are leaving. And this affects the economy of the region and exacerbates the problem of ageing personnel. Thus, the average age of mechanical engineers in rural areas is 57 years; every second is over 45 years old; only 1 in 10 is under 35 years old. Without

systematic, targeted training of young specialists, creating conditions for living in rural areas, in 5-7 years, there may be a 30-50% deficit in certain specialities. Therefore, within the framework of the integrated development of the village, it is necessary to consider the possibility of expanding the mechanism of comprehensive support for young specialists of the agro-industrial complex and veterinary medicine aimed at working in rural areas.

Today, the problem with agricultural machinery in the Republic is particularly acute. The number of decommissioned equipment exceeds the number of new ones introduced into circulation, which causes a shortage and a drop in production capabilities. In this regard, innovation is becoming a key factor in developing the entire economy of the Chuvash Republic. Organisations leading innovative activities are rapidly gaining sales and growth rates. Therefore, the task of each organisation is to increase innovation activity and intensify innovation processes. This will ensure the growth of labor productivity, increase the volume and efficiency of production, increase the competitiveness of enterprises and products, as well as increase the profitability of enterprises and organisations

Based on the above factors, it is concluded that there is a need for an integrated approach to the regulation of innovation in the agricultural sector and the development of strategies to increase the innovation activity of the agricultural industry.

In the Chuvash Republic, the share of industry in the gross regional product is 32.7%, and the percentage of agriculture is 8.3%, which is noticeably higher than in other regions of the Volga Federal District.

The economic growth of each region can be tracked using the gross regional product (GRP). Table 1 shows the dynamics of the GRP of the regions for 2018 and 2019.

In each region, the gross regional product is steadily growing. In the first place in terms of GRP growth

Table 1. Gross regional product (million rubles)

Regions	2018	2019
The Chuvash Republic	316,623	339,767
Samara region	1,625,558.7	1,687,924.3
Ulyanovsk region	386,675.4	420,318
The Republic of Tatarstan	2,622,773.9	2,795,850.6
Penza region	411,028.7	448,975.5
The Republic of Bashkortostan	1,739,362.9	1,810,091.0
The Republic of Mordovia	245,676	263,349

dynamics is the Penza region - compared to 2018, in 2019, it grew by 9.23%. In the Chuvash Republic, GRP grew by 7.3%.

Analysing the gross regional product, special attention should be paid to the value of GRP per capita. This indicator, perhaps, reflects the greatest extent the dynamics of economic activity unfolding in the regions.

Table 2 shows the dynamics of GRP per capita in the Volga Federal District regions.

GRP per capita is steadily growing in each region. According to GRP per capita growth dynamics, the Penza region is the leader, where this indicator increased by 10.31%. As in many other indicators, the Chuvash Republic is "average"; its GRP per capita increased by 7.89%.

To date, the problem of providing enterprises with qualified personnel in advanced activities is particularly acute.

The current level of economic development leads to increased competitiveness in various industries. The key element of achieving competitiveness is the availability of highly qualified personnel at the enterprise.

Economic growth is conditioned by introducing the highest quality resources and the availability of innovative activities at enterprises. Due to the rapid growth rate of the economy, the human resource potential is progressive in the field of the development of macroeconomic processes [14].

In the Chuvash Republic, it is possible to notice an increase in the stimulation of workers' work, an increase in the introduction of motivational tools, and the encouragement of the availability of competencies in innovation.

Based on the data analysis, it can be concluded that such an approach to the regulation of innovation activity in the agricultural sector is necessary to increase innovation activity.

6. CONCLUSION

To improve the indicators of the number of labor resources and the demographic situation, as well as the level and quality of life, corrective measures should be taken to improve the mechanisms for developing regional development programs within the main components of the socio-economic sphere to achieve the strategic goals of the development of the Volga Federal District regions. It is necessary to apply a differentiated approach to create a mechanism for regulating socio-economic relations depending on the region's level of development.

Having analysed the entire list of factors related to the socio-economic development of the regions, it is necessary to conclude that development trends are determined not only by generally accepted trends but also by considering the conditions prevailing in the region.

The following methods of solving the identified problem of the Chuvash Republic and other regions of the Volga Federal District can be distinguished:

1. Reduction of differentiation in the level of labor remuneration among the regions of the Volga Federal District.

2. Replenishment of labor resources by involving the unemployed, graduates of professional institutions and those working outside the region or abroad.

3. Conducting a well-thought-out and well-founded policy to develop labor resources and improve the demographic situation in the Volga Federal District regions.

4. Conducting an active employment policy of the population of the regions.

5. Strengthening state control over the implementation of the norms of working conditions, timely payment of wages and ensuring compliance with the labor rights of employees.

6. State financing of education, creating jobs in the

Table 2. Gross regional product per capita (thousand rubles)

Regions	2018	2019
The Chuvash Republic	257,992.5	278,358.9
Samara region	509,855.1	530,579.4
Ulyanovsk region	311,203.3	340,581.4
The Republic of Tatarstan	673,117.8	716,745.5
Penza region	310,238.7	342,250.5
The Republic of Bashkortostan	428,715.6	447,535.2
The Republic of Mordovia	306,987.1	332,154.8

public sector, subsidising private companies to create jobs.

7. To better ensure social guarantees in social and labor relations, it is necessary to focus on preventing unemployment and not only on helping those who have already lost their jobs.

The most effective is a combination of these methods.

The economy of the Chuvash Republic is at an average level in terms of the pace of economic development among the Volga Federal District regions - due to incomplete disclosure and loss of relevance of the available definitions, a new one has been developed based on existing ones:

Considering mentioned above, it can be concluded that only a successful socio-economic policy in the Volga Federal District regions can lead to an increase in the reproduction of labor resources and ensure further economic development of the regions.

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