

FORECAST TRENDS OF THE WORLD LAB OR MARKET. Liliia Mykhailishyn, Yuriy Korovchuk, Vladyslav Kalinin. Annual International Scientific Forum. „NETWORKING ON SUSTAINABLE SECURITY IN DYNAMIC ENVIRONMENT”, May 26-28, 2020,

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## FORECAST TRENDS OF THE WORLD LABOR MARKET

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DOI: 10.13165/PSPO-20-24-34

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**Annotation.** The article examines the forecast aspects of the world labor market in the context of the prospects of labor supply of the global economy. The demographic situation in the world as an initial component of the labor market analysis is analyzed. The problem of employment in the context of global economic transformations is considered. The hypothesis of significant strengthening in the perspective of heterogeneity and uneven development of labor markets of regions and countries is expressed and confirmed. The forecast employment trends in the global and regional context are estimated. It is concluded that despite the growing projected employment trends, the most important problem in the world labor market remains unemployment. It is substantiated that it is expedient to combine forecasts of unemployment dynamics with forecasts of employment dynamics in order to determine the future number of vacancies in the labor market. It is concluded that there are labor deformations on a global scale in qualitative and territorial terms, which in the future will lead to intensification of international migration. It has been established that both current and projected unemployment has a clear qualitative nature, which raises the issue of developing forecasts of promising supply of skilled labor at the country level. It is proved that international labor migration will play an important role in providing employment in the world economy, first of all, in the highly skilled segment of workers. It is stated that the process of substitution migration is widespread in all groups of countries - when the jobs of workers who left for developed countries are replaced by workers from countries with incomes below the average and developed countries. It is emphasized that due to the differences in existing approaches to the analysis and forecasting of the need for workers in the world economy, the development of multi-scenario forecasts based on systematic monitoring of current and future volumes of labor supply and demand becomes especially important. The development of multi-scenario forecasts will use employment forecasting models to determine the total and additional labor needs in the context of changing sectoral structure of the economy, as well as model trends of increasing or decreasing demand for educational and vocational skills as a basis for making optimal decisions.

**Keywords:** labor market, employment, unemployment, forecasting, migration.

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## INTRODUCTION

The effects of the global economic crisis have caused profound transformations in the world labor market, exacerbating the instability and structural imbalances of the latter: increasing polarization of opportunities between highly skilled jobs, unemployment and underemployment, increasing income inequality worldwide. Accordingly, the importance of studying the forecast aspects of the evolution of the world labor market in order to develop ways to overcome the crisis of labor supply of the global economy in the future. Forecasting allows you to apply some logic to analyze and develop scenarios to overcome possible adverse trends in the labor market.

**The aim of the article** is to estimate the projected trend of the global labor market.

**Objectives:** 1) to develop a forecast of employment in the context of modern global economic transformations; 2) develop a forecast of unemployment in the world labor market; 3) assess the prospects of labor supply of the world economy; 4) identify promising approaches to forecasting the labor market.

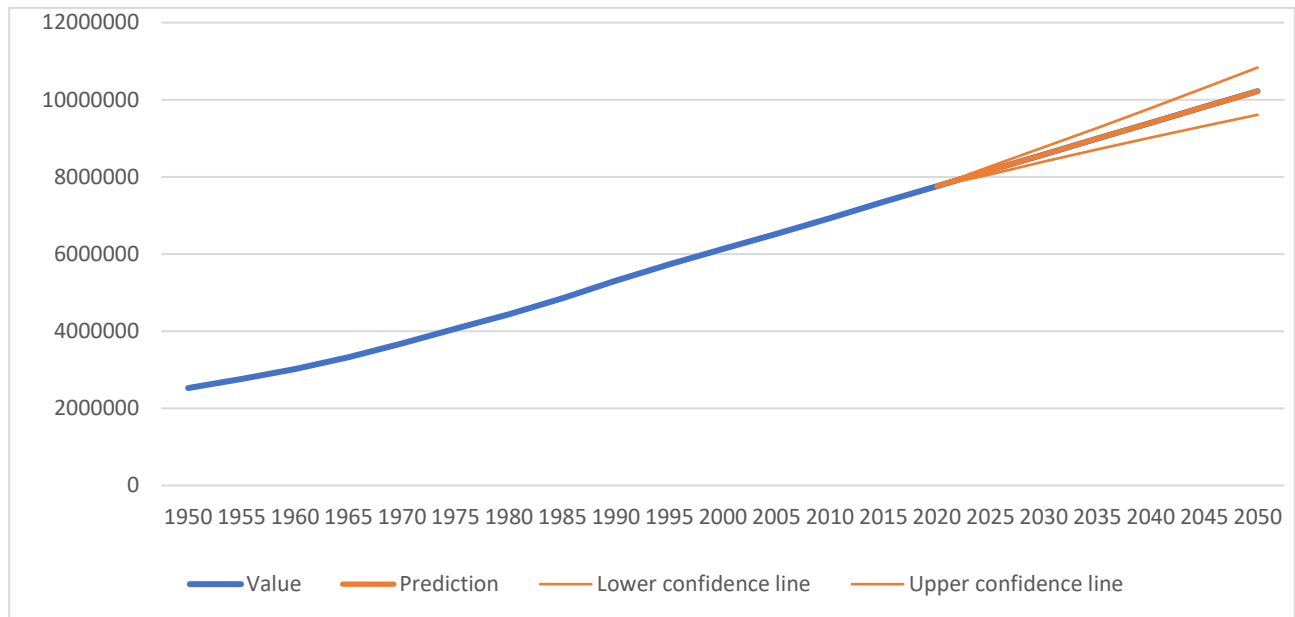
The **object** of the study are trends in the world labor market.

**Study methods:** the method of forecasting and generalization of the obtained results was used during the research.

## STUDY METHODOLOGY

The situation on the labor market can change due to many reasons: reduction of production and employment, changes in the demographic situation, the turnover of professionals and the need to replace them, labor migration flows and so on. The demographic situation in the world, as a source component of labor analysis, shows positive trends, which are confirmed by a variant scenario forecast of the dynamics of the world's population until 2050 (Fig. 1). These time frames were chosen taking into account the need to respond to a comprehensive human resources perspective in the global and regional context (monitoring the effectiveness of relevant management influences by states and international institutions).

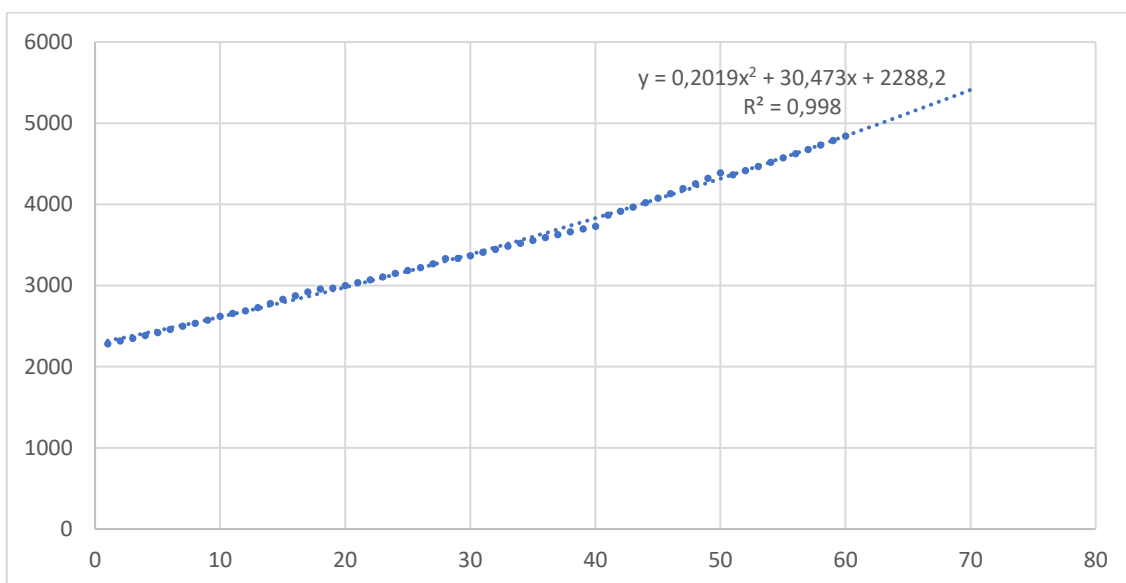
As can be seen from the data in Fig. 1, positive forecast trends in the demographic situation will be maintained in all variant scenarios. Therefore, it is important to analyze what will be the trends of employment and unemployment in the forecast period. Relevant forecasts will be based on the extrapolation of retrospective trends, and may be adjusted to take into account expected changes in production and technology used.



**Figure 1.** Dynamics of the world's population in 1950-2050, thousand people.

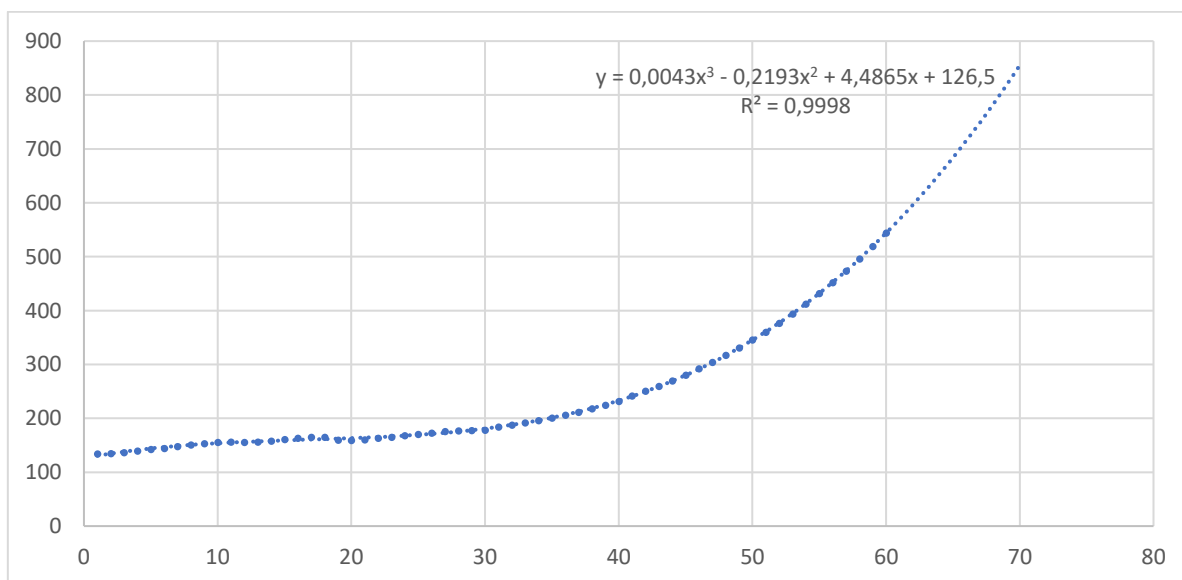
**Table 1.** Dynamics of the world's population in 1950-2050, thousand people.

Timeline	Value	Prediction	Lower confidence line	Upper confidence line
1950	2525149,312			
1955	2758314,525			
1960	3018433,828			
1965	3322495,121			
1970	3682487,691			
1975	4061399,228			
1980	4439632,465			
1985	4852540,569			
1990	5309667,699			
1995	5735123,084			
2000	6126622,121			
2005	6519635,85			
2010	6929725,043			
2015	7349472,099			
2020	7758156,792	7758156,792	7758156,79	7758156,79
2025	8168773,862	8168773,862	8064645,32	8272902,40
2030	8579383,365	8579383,365	8391922,81	8766843,92
2035	8989992,867	8989992,867	8710101,53	9269884,21
2040	9400602,369	9400602,369	9018718,13	9782486,61
2045	9811211,871	9811211,871	9318230,74	10304193,01
2050	10221821,37	10221821,37	9609184,97	10834457,77



**Figure 2.** Dynamics of employment in the world in 1991-2050, million people.

The problem of employment should be considered in the context of modern global economic transformations. The world economy has entered a rather long period of instability with unclear contours of the labor global division and the configuration of the global labor market, which suggests that the heterogeneity and uneven development of labor markets in regions and countries will increase significantly.



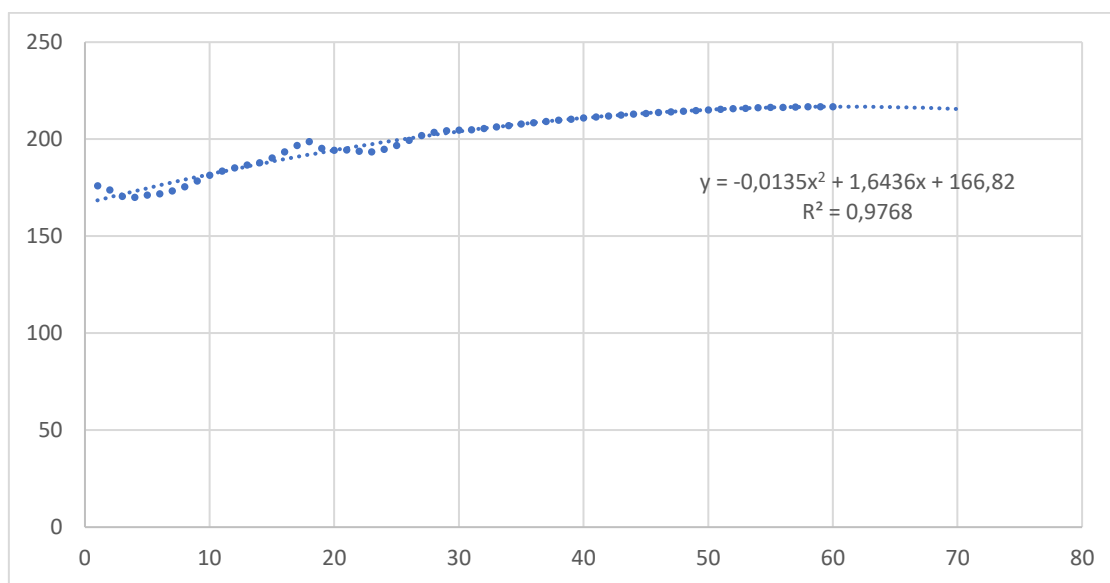
**Figure 3.** Dynamics of employment in the North American region in 1991-2050, million people.

To confirm this hypothesis, it is necessary to assess the projected employment trends. Despite the fact that the general trend of employment dynamics on a global scale, while

maintaining a positive trend, does not show serious fluctuations (Fig. 2), the situation differs significantly in the regional context.

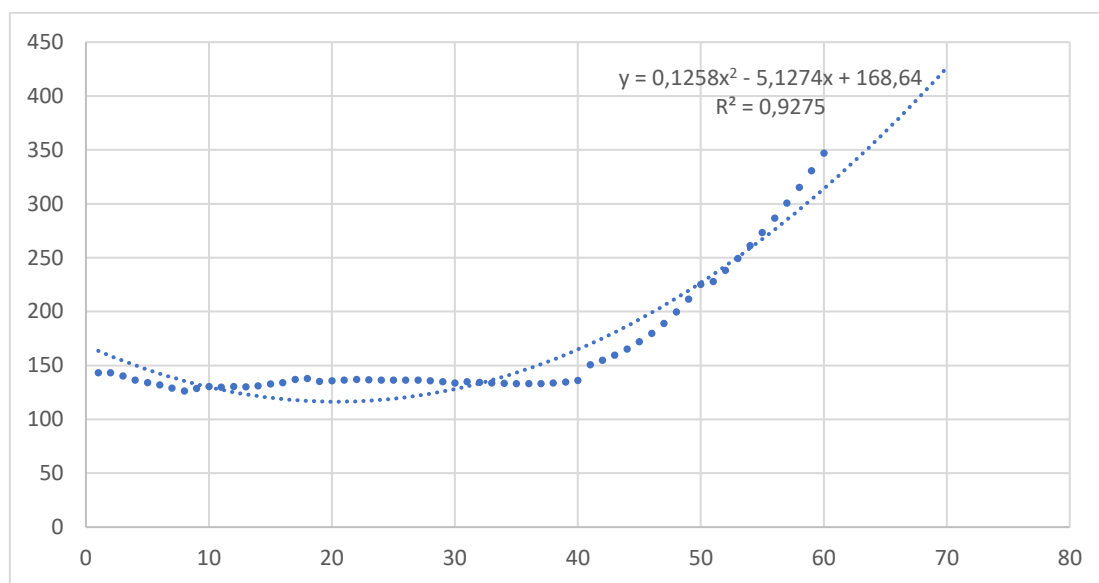
Thus, the most significant growth in employment is expected in the North American region (Fig. 3), which seems quite expected, given the dynamics of economic development of the countries representing the region - the United States, Canada. At the same time, given the current labor shortage in the region and the high level of economic development of these countries, it can be argued that North America will continue to play the role of host region for international migrants, primarily as a center of gravity in the highly skilled segment .

The dynamics of employment in Europe with a general positive trend differs significantly by region. If in Northern, Southern and Western Europe employment growth is quite moderate (Fig. 4), in Eastern Europe (Fig. 5) the trends are more pronounced. At the same time, in the European region there is a situation of formation of employment by substitution: the number of those who retired or left the labor force (resulting in the creation of vacancies) is almost ten times higher than the number of vacancies arising from economic growth [3] (75 million vs. 8.5 million [2]). The value of forecast estimates of employment is enhanced by the fact that market demand for labor is determined indirectly in the form of employment, their occupational and age structure. Demand for expansion, demand for replacement and shortage of staff, as well as the mismatch of supply and demand for professions and qualifications, can be interpreted as different types of demand that must be met in the process of labor supply of the economy.



**Figure 4.** Dynamics of employment in the region of Northern, Southern and Western Europe in 1991-2050, million people.

The employment situation is particularly difficult in Latin America, the Arab world and Africa. Despite the projected positive trends in employment, the problem of unprotected employment and poverty of working people is extremely relevant in these regions. Of the 1.2 billion people facing the problem in the world as a whole,  $\frac{3}{4}$  work in two regions - South Asia and Africa.



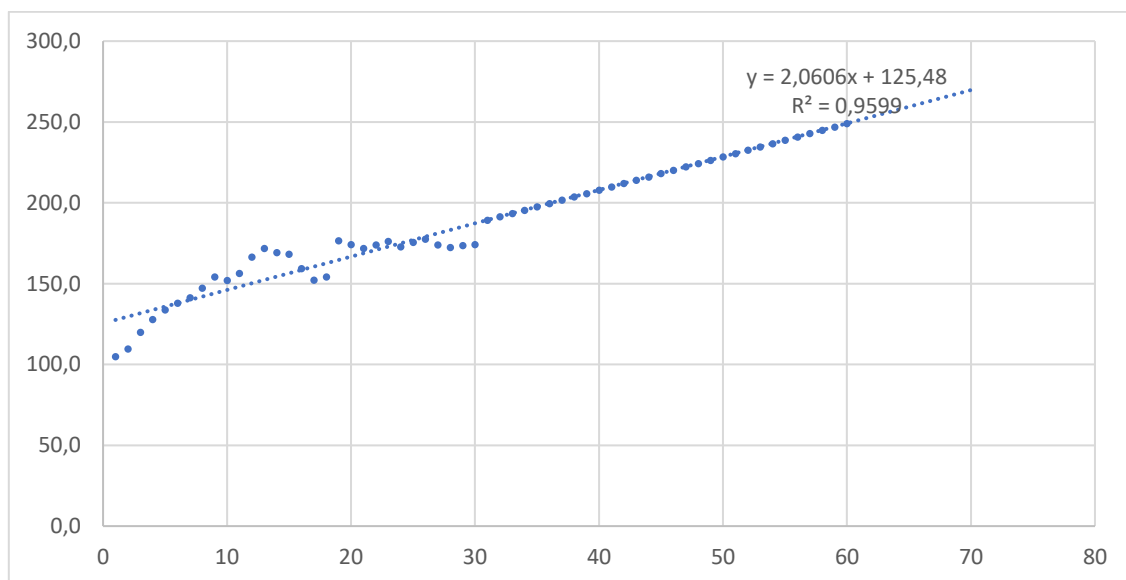
**Figure 5.** Dynamics of employment in the region of Eastern Europe in 1991-2050, million people.

At the same time, a significant fight against unprotected employment is observed only in the East Asian region (if in 2007 the share of vulnerable workers in the region was 50.2%, in 2019 this figure dropped to 38.9%), which, among other things, led to rather moderate growth of forecast employment rates in the region. In general, the increase in social instability caused by the deterioration in employment is the latest global trend.

Estimates of the number of employees (jobs) are extremely important because they provide information for understanding future employment opportunities. However, such opportunities also arise as a result of the withdrawal of labor from the employed for various reasons, which requires an assessment of unemployment as the main indicator of the state of the labor market. Unemployment dynamics forecasts should be combined with employment dynamics forecasts in order to determine the total number of vacancies created: in the vast majority of cases, vacancies are created not due to employment growth (labor demand), but as a result of layoffs. Thus, according to available forecasts, for example, in the US over the next 5 years, 60% of vacancies will arise due to occupational mobility. [7]

Indeed, despite the above-mentioned rising employment trends, unemployment remains a major problem in the global labor market. Thus, since the beginning of the last world economic crisis (since 2008), more than 61 million people have lost their jobs, and, according to ILO estimates, in the future the number of unemployed will increase by 8 million people annually. [5] As of the beginning of 2019, there were 172.5 million unemployed in the world, ie about 30-45% of the working age population are looking for work or are partially employed. To solve the problem of unemployment, by 2020 it was necessary to create 280 million jobs in the world economy. [8]

According to the forecast assessment of the unemployment dynamics in the world (Fig. 6), after a certain stabilization of the situation starting in 2021, the ILO forecasts for an increase in the number of unemployed in the world labor market are confirmed. Given the positive forecast trends in employment in the world economy (Fig. 2), we can make assumptions about the presence of labor deformations on a global scale in qualitative and territorial terms, which in the future will inevitably lead to global labor shifts, especially to intensify international migration. In support of this opinion, we should consider the results of forecasting the dynamics of unemployment in the world economy in the regional context.

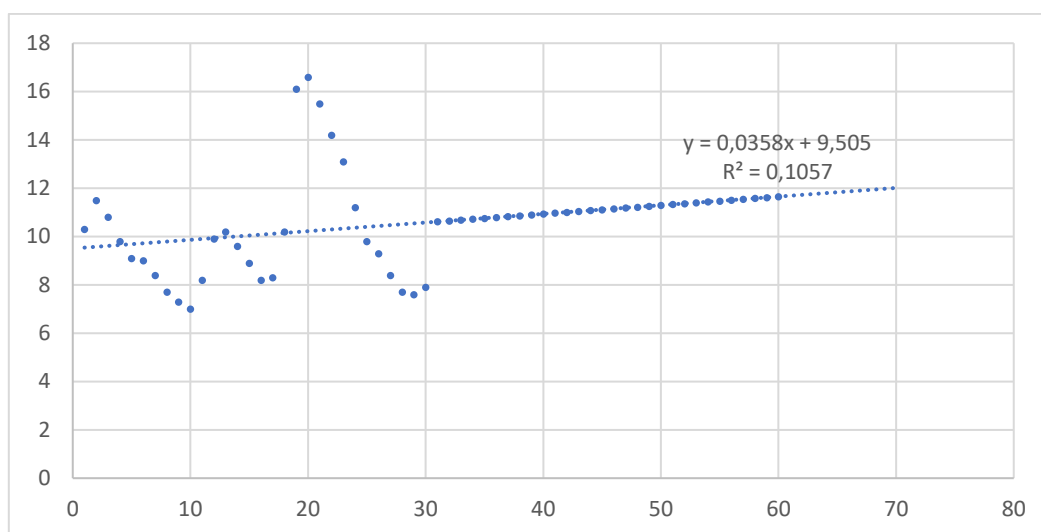


**Figure 6.** Dynamics of unemployment in the world in 1991-2050, million people.

Thus, in North America, fluctuations in the unemployment rate are quite significant (Fig. 7) with a stable employment situation in the region (Fig. 3). Given the inverse cyclical relationship between economic activity and unemployment, it can be argued that there is a fairly



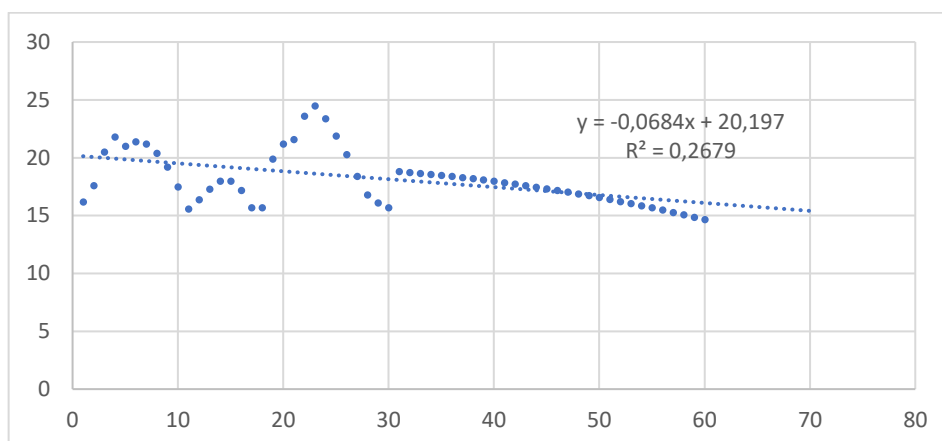
rapid replacement of vacancies (or the creation of new obsolete as a result of structural changes in the economy), and therefore both existing and projected unemployment has a clear qualitative nature. It should be noted that both the United States and Canada are engaged in forecasting the future supply of skilled labor. However, from a practical point of view, it is advisable to forecast the demand for skilled labor only in the sectoral context (even if there is a surplus of workers in some areas and a shortage in others, this will not necessarily lead to intra-country relocations). Given the lag of the labor market, as well as the labor shortage situation in North America with a high standard of living, an important substitute role in employment will be played by international labor migration, especially in the highly skilled segment of workers.



**Figure 7.** Dynamics of unemployment in the North American region in 1991-2050, million people

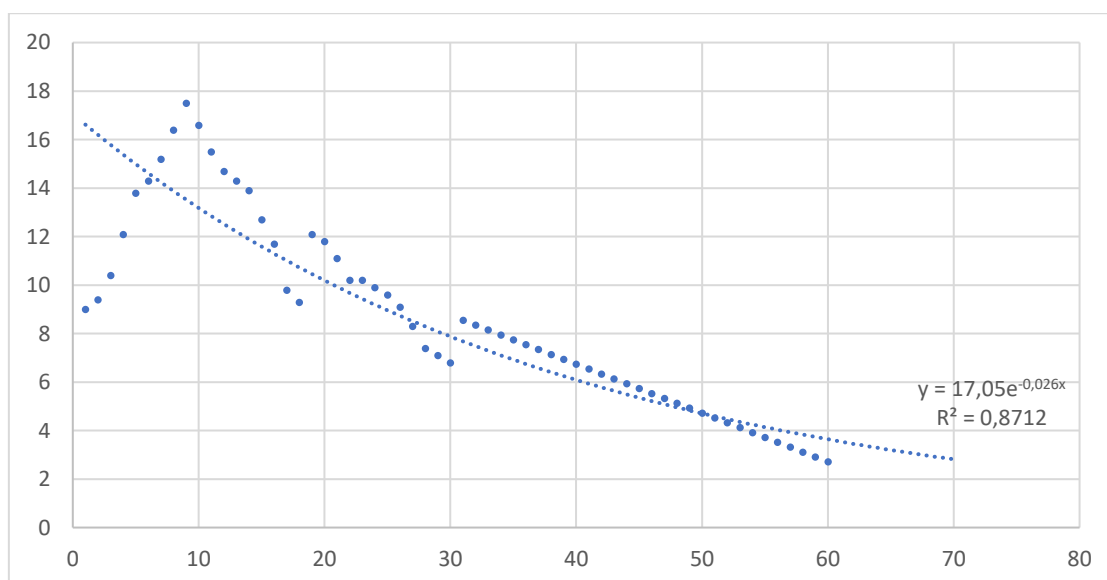
In contrast to the global and North American, the situation in the European region shows a downward forecast of unemployment (Fig. 8). Against the background of positive employment dynamics (Fig. 4), the situation in the labor market of Northern, Southern and Western Europe is quite stable, but given the negative demographic trends and migration flows from Europe to the US and Canada in the highly skilled segment, we should expect intensification of substitute migration to the region from less economically developed countries.

This conclusion is confirmed by the dynamics of unemployment in the Eastern European region, when against the background of a fairly significant increase in employment (Fig. 6), there is a tendency to reduce unemployment in the regional labor market (Fig. 9).



**Figure 8.** Dynamics of unemployment in the region of Northern, Southern and Western Europe in 1991-2050, million people.

Reducing the burden on job vacancies against the background of declining demographic trends in Europe can lead to an increase in employment only if there is a strong replacement migration, which is observed in the world. At the same time, the host countries give priority to stimulating highly skilled migration at the state level, while migration in the less qualified segment has the role of mechanical (quantitative) replacement of labor shortages (which weakens the role of regulatory influence by the state in the labor market and may lead to increased informal employment).



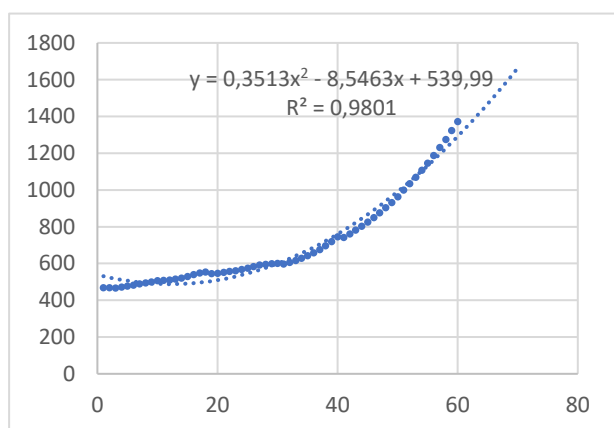
**Figure 9.** Dynamics of unemployment in the region of Eastern Europe in 1991-2050, million people

Considering unemployment in less economically powerful regions, it should be noted that the majority of the unemployed here are young people (in total, almost 75 million young people

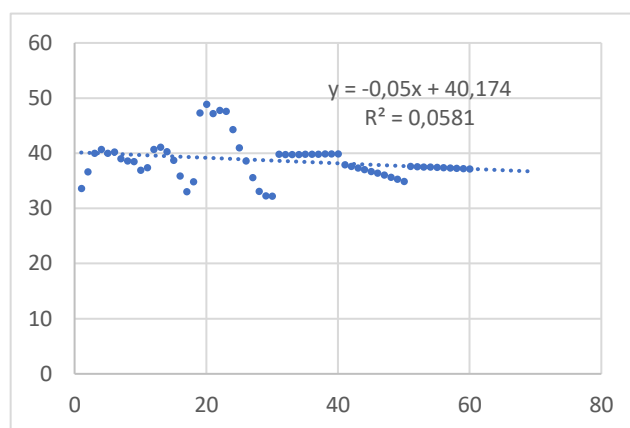
in the world today are officially unemployed [4]), and by 2025 the number of young people in labor markets developing countries will exceed the total labor force in developed countries (estimated at 600 million people). The workforce in less developed countries is expected to be 3 billion. in 2020 and 3.6 billion people. in 2040. A younger age structure and rapid population growth in developing countries (in particular, by 2025, almost all countries with a population of 60% or more of young people under 30 will be located in sub-Saharan Africa), inevitably will expand the territorial boundaries of the sphere of employment in the world, intensifying migration processes against the background of shortage of workers, especially skilled, in developed countries. [6]

Given that at the beginning of 2020 the shortage of skilled workers in the world economy is estimated at 40 million people, we should expect further global labor transformations, which will be based on international labor migration, especially in the highly skilled segment of regions with lower economic levels. development and less favorable conditions for employment (in terms of wages, opportunities for professional self-realization, etc.) to more economically developed regions, as evidenced by forecast trends in labor demand in a group of developed countries, which cannot meet these countries.

To confirm this opinion, we compare the forecast data on the development of the employment and unemployment situation for the selected forecast perspective in different groups of countries depending on the level of economic development.



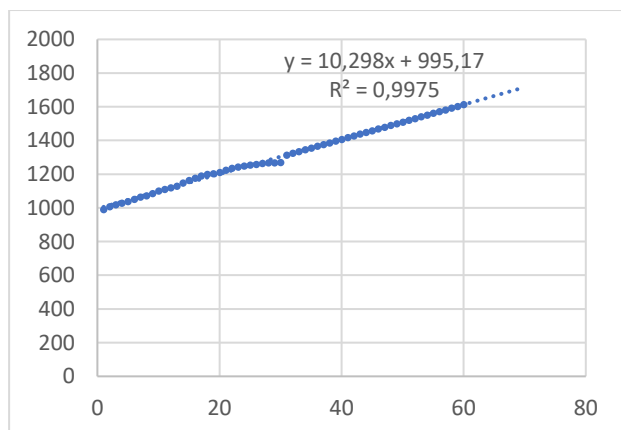
**Figure 10.** Dynamics of employment in the group of developed countries in 1991-2050, million people



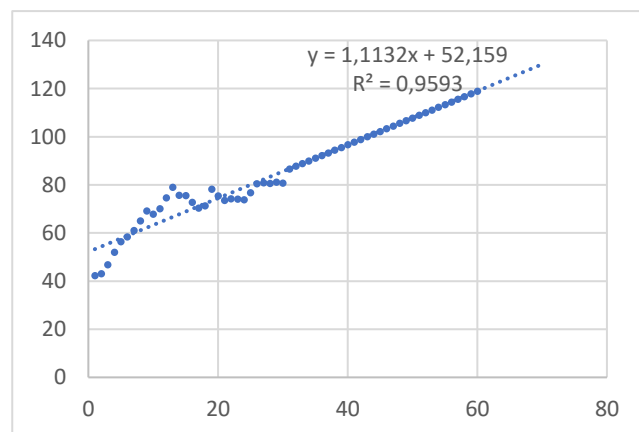
**Figure 11.** Dynamics of unemployment in the group of developed countries in 1991-2050, million people

Thus, in the group of developed countries, the dynamics of employment shows a clear upward trend (Fig. 10), while the dynamics of unemployment - the opposite (Fig. 11). The characteristic feature of unemployment trends is the cyclical nature of the latter, which is quite understandable, given that a group of developed countries generates impulses of economic development for the rest of the world. At the same time, this role of developed countries determines the peculiarities of their labor supply, namely, the imposition of ascending periods of employment growth, on the one hand, and unemployment, on the other, exacerbates the problems of ensuring quality characteristics of the workforce. which confirms the conclusion about the inevitable intensification of migration processes from less economically developed countries to countries with a higher level of economic development.

A similar situation, but with less pronounced amplitudes of employment and unemployment is observed in the group of countries with above-average incomes (Fig. 12, Fig. 13), which indicates the spread of the process of substitution migration to other groups - when jobs went to developed countries. countries are replaced by workers from countries with incomes below the average and developed countries. At the same time, it is obvious that although the qualitative component of labor supply will also play an important role, the quantitative-substituting aspect of labor supply will be of paramount importance.



**Figure 12.** Dynamics of employment in the group of countries with incomes above the average in 1991-2050, million people



**Figure 13.** Dynamics of unemployment in the group of countries with higher than average income in 1991-2050, million people

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## CONCLUSIONS

Given the above and taking into account the differences in existing approaches to the analysis and forecasting of the need for workers in the world economy, the development of multi-scenario forecasts based on systematic monitoring of current and future volumes of labor supply and demand [1, p.449] creates an opportunity to adapt the relevant regulatory policy to specific circumstances. The development of multi-scenario forecasts seems to be an even more important task that none of the used methods and models of forecasting can be considered satisfactory from the point of view of realization of forecasting goals and application of the obtained results in practice. [1, p.451-452]

In addition, the development of multi-scenario forecasts will use employment forecasting models to determine the total and additional labor needs in the context of changes in the sectoral structure of the economy, as well as assess projected changes in the structure of occupations within industries after forecasting future changes. This reasoning is extremely important in the context of lag processes in the labor market.

The development of multi-scenario forecasts will identify and model trends of growth or reduction of future demand for educational and professional skills, which should be the basis for making practical decisions on ways to optimal labor supply of the economy (labor markets themselves will not be able to eliminate imbalances). Otherwise, the consequences of imbalances in the labor market and the subsequent impact on the competitiveness of economies will be quite serious.

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