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**PROBLEMS OF FORMATION OF THE WAGES LEVEL  
IN KAZAKHSTANI LABOR MARKET**

Increase in wages is recognized as one of the tasks within the long-term development strategy of the country in the Address of the Head of State K. Tokayev to the people of Kazakhstan "Constructive public dialogue – the basis of stability and prosperity of Kazakhstan" (Tokayev, 2019). The successful implementation of this task largely depends on solving the extremely complex problem of forming the level of wages in the labor market. A vast amount of theoretical and statistical studies on this problem, unfortunately, are not always characterized by a deeper penetration into the mechanism of formation of the level of wages in the current Kazakhstan model of the labor market. The goal of the study is to actualize the problem of the formation of the wages level in Kazakhstani labor market. Due to the totality of complex issues, the study is limited by studying only a few of them: a quantitative analysis of the influence of the main economic and institutional factors on the formation of the level of wages in the Kazakhstan labor market. Emphasizing the attention of researchers and practitioners to raising the level of wages will allow critically rethinking the existing practice of forming the level of wages. The scientific significance of the work bases on identifying the features of the manifestation of the general patterns of wage formation in the domestic labor market. The practical significance bases on obtained results those help to modernize the labor market, to bring it closer to the best practices of developed countries. They will also be taken into account in the design and implementation of effective social and economic policies.

**Key words:** wages, labor market, economic factors, internal migration, labor market institutions, modernization of the labor market.

**JEL Classification:** J3, J38, M59

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**Қазақстанның еңбек нарығында  
жалақы деңгейін қалыптастыру мәселелері**

Мемлекет басшысы Қасым-Жомарт Тоқаевтың «Сындарлы қоғамдық диалог – Қазақстанның тұрақтылығы мен өркендеуінің негізі» атты Қазақстан халқына Жолдауында жалақы деңгейін көтеру елдің ұзақмерзімді даму стратегиясы шеңберіндегі маңызды міндеттердің бірі ретінде танылды (Тоқаев, 2019). Осы міндеттің жемісті орындалуы көбінесе еңбек нарығында жалақы деңгейін қалыптастырудың өте күрделі мәселесін шешуінен тәуелді болады. Бұл мәселе бойынша көптеген теориялық және статистикалық зерттеулер, өкінішке орай, қалыптасқан қазақстандық еңбек нарығы моделінің жағдайында жалақы деңгейінің қалыптасу механизмін терең талдауымен сипатталыпбайды. Осы зерттеудің мақсаты – Қазақстанның еңбек нарығындағы жалақы деңгейін қалыптастыру мәселесін өзектендіру. Барлық күрделі сұрақтардың ішінен авторлар тек қазақстандық еңбек нарығында жалақы деңгейінің қалыптасуына негізгі экономикалық және институционалдық факторларының ықпалын сандық талдаумен шектелді. Зерттеушілер мен практиктердің жалақы деңгейін көтеруге баса назарын аудару қазіргі бар тәжірибеге сын көзбен қарап, заманауи тұрғыдан жаңаша ойлауға мүмкіндік туғызады. Ұсынып отырған жұмыстың ғылыми маңыздылығы отандық еңбек нарығында жалақы қалыптасуының жалпы заңдылығының көріну ерекшеліктерін айқындау. Практикалық маңыздылығы келесіде: алынған зерттеу нәтижелері еңбек нарығын жаңғыртуға көмек береді, сөйтіп оны дамыған елдердің ең жақсы тәжірибесіне жақындатады. Және де алынған нәтижелер тиімді әлеуметтік пен экономикалық саясатты әзірлеу және іс жүзіне асыру кезінде ескеріледі.

**Түйін сөздер:** жалақы, еңбек нарығы, экономикалық факторлар, ішкі көші-қон, еңбек нарығының институттары, еңбек нарығын жаңғырту.

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### Проблемы формирования уровня заработной платы на рынке труда в Казахстане

В Послании Главы государства К-Ж. Токаева народу Казахстана «Конструктивный общественный диалог – основа стабильности и процветания Казахстана» одной из задач в рамках долгосрочной стратегии развития страны признано повышение уровня заработной платы (Токаев, 2019). Успешная реализация этой задачи во многом зависит от решения чрезвычайно сложной проблемы формирования уровня заработной платы на рынке труда. Значительный массив теоретических и статистических исследований по данной проблеме, к сожалению, не всегда характеризуется более глубоким проникновением в сам механизм формирования уровня заработной платы в условиях сложившейся казахстанской модели рынка труда. Цель исследования – актуализация проблемы формирования уровня заработной платы на рынке труда в Казахстане. Из-за всей совокупности сложных вопросов авторы ограничились изучением лишь некоторых из них: количественным анализом влияния основных экономических и институциональных факторов на формирование уровня заработной платы на казахстанском рынке труда. Акцентирование внимания исследователей и практиков на повышении уровня заработной платы позволит критически переосмыслить существующую практику формирования уровня заработной платы. Научная значимость выполненной работы заключается в выявлении особенностей проявления общих закономерностей формирования заработной платы на отечественном рынке труда. Практическая значимость состоит в том, что полученные результаты помогут модернизации рынка труда, приблизив его к лучшей практике развитых стран. Они также будут приняты во внимание при разработке и проведении эффективной социальной и экономической политики.

**Ключевые слова:** заработная плата, рынок труда, экономические факторы, внутренняя миграция, институты рынка труда, модернизация рынка труда.

#### Introduction

The study of the problems of formation of the wages level is relevant, because the President of Kazakhstan K. Tokayev identified the task to increase wages in his Address to the people of Kazakhstan posted on September 2, 2019. Kazakhstan also needs to overcome a serious lag behind them in terms of wages in order to become one of the 30 developed countries of the world in the future. Attempts were made to find a new model of economic growth in Kazakhstan. In particular, we the study discusses about accelerated technological modernization of the economy. In developed countries, they understand the two-way causal relationship between economic growth and wage growth. Therefore, they pay constant attention to timely reform of the labor market in order to increase the efficiency of its functioning.

The investigated topic is comprehensively and deeply considered in theoretical and methodological terms in the works of modern Western researchers. It should also be noted the significant contribution of Russian scientists. Much attention is paid to wage issues by domestic authors. However, they are mainly devoted to studying the dynamics of wages in the country and its development trends in the context of

industries, regions, as well as gender, gender, age, professional and other group characteristics.

Meanwhile, the authors of the paper assumed that a wage increase is actually achievable with the mobilization of all reserves, including the use of potential opportunities that arise as a result of labor market modernization. Such a formulation of questions is not adequately considered either in the Kazakhstani academic environment or in the practical activities of the relevant departments and organizations. In this regard, the study attempts to a deeper analysis of the mechanism of formation of the level of wages. For this purpose, methods of quantitative analysis of the influence of a number of basic economic and institutional factors on the formation of the level of wages in the Kazakhstan labor market have been applied. The analysis was carried out on the basis of statistical data of the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan (Statistics Committee), and statistical data from OECD countries were used for a comparative analysis (OECD Report, 2018). This made it possible to critically rethink the existing practice of forming the level of wages in the current labor market model. The specific results of the analysis allow us to outline ways to modernize the labor market and determine its potential in raising wages.

The increase in wages in Kazakhstan has a positive effect on the income level of the population, which in turn affects the growth of their savings; and this already affects the growth rate of the country's GDP. Thus, the results of this study can be used to make adjustments in the development and implementation of the economic and social policy of the state.

### Literature review

The theoretical and methodological foundations of the formation of the level of wages in the labor market are comprehensively covered in a large number of educational and scientific literature. These works give a thorough review of the works of the classics of economic theory, including those on the formation of wages in the labor market. Various aspects of the wage problem are often considered in connection with issues of social inequality in modern scientific literature. At the same time, various points of view are expressed: for example, that moderate inequality in a developed state can often affect economic growth. Stabilization of the dynamics of consumption of the poor in the presence of a high degree of social protection in the short term increases demand and thereby contributes to economic growth (Li and Zhou, 1998). A number of authors believe that inequality has reached the stage at which it has ceased to be effective and has become a serious obstacle to development (Stiglitz, 2012). And increasing inequality leads to an increase in household debt and inhibits economic growth (Krugman, 2013). Therefore, governments are encouraged to devote all efforts to guaranteeing employment and tight control over wages (Atkinson, 2015). There is also such an interesting opinion that in modern conditions the return on capital exceeds the growth of income and output, as a result of which the rate of increase in inequality is growing. Therefore, the state should establish a system of subsidies, introduce guaranteed employment and regulate wages (Piketti, 2016). In the light of this study, the findings of the recently published OECD report states that the size of the middle class is declining in most developed countries (OECD, 2019). It is important to keep in mind that one of the quantitative characteristics of the middle class is the size of its earnings.

Much attention of recent studies is paid to the impact of population migration within the country on wage differentiation between regions. According to neoclassical theory, population migration increases the rate of rapprochement of regions in terms of wages. The outflow of migrants from the regions contributes to a gradual increase, and the influx of

migrants into the regions contributes to a gradual decrease in their level of wages. And as a result of the movement of migrants between regions in the market, equilibrium wages are established (Barro, 200).

But representatives of the new economic geography argue the opposite: under the influence of population migration, wage differentiation between regions will increase, and the rate of convergence in wages will decrease (Krugman, 2013). Thus, economic theories do not give a clear answer about the impact of migration on wage differentiation. It should be noted that serious research on this issue is carried out by Russian scientists (Kapelyushnikov, 2017; Zubarevich, 2010; Mishura, 2011; Vakulenko, 2013; Buranshina and Smirnh, 2018). This aspect of the study is extremely important for Kazakhstan. In Kazakhstan, despite the presence of a significant turnover of internal migration, its effect on the differentiation of wages between regions remains almost unexplored. The authors also made an attempt to conduct empirical research to some extent to fill the gap in the study of the impact of internal migration on wage differentiation between the regions of Kazakhstan.

The most frequently covered issues in the field of wages in the labor market of Kazakhstan include the measurement, dynamics and trends of wages in the sectoral and regional contexts, as well as the existing wage gap between employees by gender, age, educational, qualification and other characteristics. These studies are mainly devoted to the processing of statistical data, but often, unfortunately, they are not accompanied by a deeper penetration into the mechanism of formation of the level of wages in the current Kazakhstan model of the labor market.

### Methodology

The methodological basis of the problems considered in the study is the research of foreign and domestic scientists on a wide range of problems of wage formation in the labor market. The study covers only a few of them: an analysis of the influence of the main economic and institutional factors on the formation of the wage level in the Kazakhstan labor market, and based on the results of the analysis, outline possible steps to modernize the labor market that contribute to the country's economic growth.

The most difficult task is to test the theoretical results of the study of the formation of wages in countries with emerging markets, which include the Republic of Kazakhstan. The Statistics Committee of the Ministry of National Economy of the Re-

public of Kazakhstan (SC MNE RK) provides data for various studies on state regulation of wages, the impact of economic growth on wage increases, assessing the effectiveness of state social policy, etc. But there is a lack of necessary information for an empirical analysis of the mechanism of wage formation. For example, at present it is impossible to collect complete information from statistical data characterizing changes in the wage rate for various groups of workers. There is also no data allowing the separation of workers who agreed to work for a certain wage rate from individuals who decided not to work, etc., which greatly complicates the task of conducting a full-fledged study.

The study uses the official data of the Constitutional Court of the Ministry of National Economy of the Republic of Kazakhstan on average monthly wages and internal migration in the regions of the country, and statistical materials from the Organization for Economic Cooperation and Development (OECD) were used for comparative analysis.

*Economic factors affecting the formation of wage levels.* The level of wages in the labor market is largely affected by the degree of consistency between the supply of labor and demand for it. Quantitative expression depends on the conditions for concluding the contract are fulfilled: on the one hand, the employee must meet the minimum requirements of the company regarding the level of his qualifications and, on the other hand, the proposed salary is

equal to or higher than the level of salary, claimed by the employee.

It takes some time to agree on them even if these conditions are met. In general, the conclusion of an employment contract depends on the flexibility of the reactions of both parties, the completeness of information about the workplace, the age of the employee, etc. Usually there are three reasons that impede the coordination of labor supply and labor demand:

- the lack of information that can be overcome by the organization at the modern level of labor market monitoring;
- the mismatch in the quality profiles of a job seeker and a vacant place;
- the company and the job seeker live in different regions and they are not mobile (Franz, 2013).

The study analyzed how much information deficit occurs in the labor market in Kazakhstan by using the calculation of the indicator of inconsistency (inconsistency):

$$MR = \sum_i^R |U_i - V_i| \quad (1)$$

where:  $U_i$  ( $V_i$ ) is the share of the number of unemployed (vacancies) of the  $i$ -region in the total number of unemployed (vacancies) in the whole country ( $R$ ).

The results of calculation of this indicator are presented in Table 1.

**Table 1** – Calculation of indicators of inconsistency for 2010, 2015 and 2018

Region	Unemployment rate, % ( $U_i$ )			Vacancy rate, % ( $V_i$ )			$U_i - V_i$		
	2010	2015	2018	2010	2015	2018	2010	2015	2018
1	2	3	4	5	6	7	9	10	11
Akmola	4,8	4,7	4,6	4,9	6,0	4,0	0,0	-1,3	0,6
Aktobe	4,7	4,7	4,8	1,8	1,4	2,8	2,9	3,3	2,0
Almaty	11,1	11,1	11,0	6,4	4,4	4,2	4,7	6,7	6,8
Atyrau	3,5	3,5	3,5	7,5	8,1	9,8	-4,0	-4,6	-6,3
West Kazakhstan	3,7	3,7	3,7	4,5	4,3	4,9	-0,9	-0,6	-1,2
Zhambyl	5,7	5,8	5,9	1,6	2,5	1,5	4,1	3,3	4,4
Karaganda	7,7	7,4	7,1	8,3	8,7	6,3	-0,6	-1,3	0,7
Kostanay	5,8	5,7	5,5	2,9	4,7	3,6	2,9	0,9	1,9
Kyzylorda	3,8	3,8	3,8	1,2	1,3	0,8	2,6	2,5	3,0
Mangistau	3,3	3,2	3,5	4,7	2,7	2,8	-1,4	0,5	0,7
Turkestan	14,1	14,1	14,4	2,6	2,8	3,1	11,5	11,2	11,3
Pavlodar	4,6	4,5	4,4	6,1	8,3	10,1	-1,5	-3,8	-5,7
North Kazakhstan	3,6	3,4	3,4	4,2	2,9	3,5	-0,6	0,5	-0,1

Continuation of table 1

Region	Unemployment rate, % ( $U_i$ )			Vacancy rate, % ( $V_i$ )			$U_i$ $V_i$		
	2010	2015	2018	2010	2015	2018	2010	2015	2018
East Kazakhstan	7,8	7,8	7,8	6,5	6,3	4,9	1,3	1,5	2,9
Astana city	5,1	5,4	5,4	20,3	18,0	21,4	-15,2	-12,6	-16,0
Almaty city	10,9	11,2	11,2	16,5	17,5	16,2	-5,7	-6,3	-5,0
MR							59,9	60,9	68,6

Note – calculated by authors on the basis of data from SC MNE RK

As depicted in Table 1, the indicator of inconsistency has been growing from year to year in recent years. The greatest contribution to this trend has been made by the Astana and Almaty, the former South Kazakhstan, Almaty and Atyrau regions. This suggests that there are certain problems associated with informing the population about vacant places, and as a result, there is no improvement in the coordination of labor supply and demand in the labor market.

One of the most important issues of wage formation is the problem of its flexibility depending on various factors. It is customary to distinguish three factors that determine the flexibility of wages:

- speed and measure of reaction of nominal wages to changes in the expected rate of inflation;
- labor productivity;
- the situation on the labor market.

Although it is difficult to determine a specific digital value that reflects the possible influence of these factors on wage flexibility ( $LF$ ), it is proposed in the scientific and educational literature to evalu-

ate the influence of each of them through elasticity indicators (Franz, 2013):

$$LF = |E(w_t, AQ_t)| + |E(w_t, LP_t)| - |E(w_t, P_t)| \quad (2)$$

The first term denotes the absolute contribution of the elasticity of the nominal wage growth rate ( $w_t$ ) relative to the unemployment rate in this formula. The second term denotes the absolute contribution of the elasticity of the growth rate of nominal wages relative to the level of labor productivity. The third term denotes the elasticity of the growth rate of nominal wages relative to the growth rate of inflation, for example, the price level of consumer goods.

The wage flexibility is high if the values of the first two terms are high, and the third term serves as a measure of the flexibility of real wages.

Based on data for 2000-2018 the authors first attempted to assess the value of wage flexibility ( $LF$ ) in the economy of Kazakhstan (see table 2 and 3).

Table 2 – Input data for calculating  $LF$  in the economy of Kazakhstan

Year	The growth rate of the previous year			
	$W_t$	$AQ_t$	$LP_t$	$P_t$
1	2	3	4	5
2000	121,2	94,8	108,1	109,8
2001	120,4	81,3	105,1	106,4
2002	117,5	89,4	109,6	106,6
2003	113,8	94,6	105,0	106,8
2004	122,5	95,5	106,6	106,7
2005	120,2	96,4	108,5	107,5
2006	119,8	96,3	108,5	108,4
2007	128,7	93,0	105,6	118,8
2008	115,9	90,9	100,3	109,5

Continuation of table 2

Year	The growth rate of the previous year			
	$W_t$	$AQ_t$	$LP_t$	$P_t$
2009	110,7	100,0	100,6	106,2
2010	115,3	87,9	104,5	107,8
2011	116,0	93,1	105,0	107,4
2012	112,5	98,1	102,3	106,0
2013	107,8	98,1	105,3	104,8
2014	110,9	96,2	104,9	107,4
2015	104,2	102,0	102,1	113,6
2016	113,4	98,0	99,7	108,5
2017	105,5	98,0	103,7	107,1
2018	107,9	100,0	102,8	105,3

Note – calculated by authors on the basis of data from SC MNE RK

**Table 3** – Estimated values of wage flexibility (LF) in Kazakhstan

Periods	$ E(w_t, AQ) $	$ E(w_t, LP_t) $	$ E(w_t, P) $	$LF$
	(1)	(2)	(3)	(1) + (2) – (3)
1	2	3	4	5
2000-2018	2,8	3,2	1,8	4,2

As the data in Table 3 show, on average, during the period under review, nominal wages were sufficiently sensitive to the situation on the labor market: to a lesser extent to changes in the level of prices of consumer goods and to a greater extent to changes in the level of labor productivity. At the same time, she reacted noticeably to changes in the unemployment rate.

Of considerable scientific interest is the practice of wage formation in the labor market of Kazakhstan during the periods from 2000 to

2018, when the country experienced two crises twice in 2008-2009 and 2015-2016. The economy of Kazakhstan grew at different rates and, accordingly, wage changes took place: during the period of dynamic growth of the economy (2000-2007), the growth rate of real wages and real cash incomes of the population even outstripped the GDP growth rate. But with the further development of the economy, according to the laws of the market, they decreased. This is illustrated by the data in Table 4.

**Table 4** – Average annual growth rates of GDP, wages and incomes of the population in Kazakhstan, in percent

Indicators	2000-2007	2008-2009	2010-214	2015-2016	2017-2018
1	2	3	4	5	6
GDP	110,2	102,2	105,9	101,2	104,1
Average real wage	111,1	101,1	105,5	98,3	100,0
Real cash income of the population	111,4	104,1	105,7	100,4	103,1

Note – calculated by authors on the basis of data from SC MNE RK

As depicted in figure 4, the decrease in wages was reflected in the income level of the population, which in turn affected their savings; and this already affects the growth rate of the country's GDP. It is also important to emphasize that this has accordingly affected the resolution of issues of social inequality, including inequality in wages.

According to our analysis, the inequality in wages and incomes in Kazakhstan did not decrease during the period of active economic growth (2000-2007), since the internal inequality in wages does not disappear by itself during economic growth. Since high inequality in wages limits the development of the consumer market and hinders domestic demand, it is necessary to take inequality reduction into account in the country's development strategies.

Certain shifts in the structure of inequality in wages are observed with long periods of economic growth in Kazakhstan, but in recent years, in fact, this inequality has not changed so significantly. Moreover, the share of low-paid workers is growing and it amounted to 74.8% in 2017.

Meanwhile, the picture looks different for a number of developed countries: the share of low wages in recent years has been falling (OECD). The growth of the economy of most leading developed countries entails an increase in real wages. The gender wage gap is narrowing: in OECD countries it is generally equal to 13.77% (2016) [ibid], in Kazakhstan in 2017 this indicator grew to 32.2%.

Thus, we can note the relative stability of the previously existing system of inequality in wages in Kazakhstan for the period under review. The observed rigidity of wage inequality suggests that one cannot limit oneself to the search for simple methods of income redistribution to solve this problem.

High differentiation of the regions of Kazakhstan in socio-economic development was formed during the transition to a market economy. The socio-economic growth of regions with competitive advantages (primarily the availability of natural resources) significantly exceeded the growth in other regions. These imbalances have affected regional labor markets, in particular, wage differentiation.

The highest average monthly nominal wage in Atyrau region was almost 3.5 times higher than in the Zhambyl region, an outsider in this indicator in 2000. In seven regions of 16, including the years. Astana and Almaty, the average salary exceeded the republican level.

Thus, in general, wage differentiation between regions gradually decreased, but remained at a

relatively high level, which negatively affected economic growth rates in 2000-2018.

In the Kazakhstani model of the labor market with imperfect competition, the distribution of wages is extremely uneven. Deviation from the conditions of a completely competitive labor market in terms of its influence on the distribution of wages occurs in two directions:

- information on the labor market is imperfect;
- Mobility restrictions, including those associated with mobility costs.

According to the theory of the labor market, under the influence of various factors, changes in the demand for labor occur, causing changes in wages, which result in some of the proposed salaries instead of one.

The reasons for differences in wages are not only the failure to comply with perfect competition, but also the heterogeneity of workers and jobs. A simple comparison shows that the statistical distribution of earnings in Kazakhstan has a log-normal distribution, i.e. the average value of earnings steadily exceeds the median size at different time periods.

High wage regions attract people from other areas of the country. So, the cities of Nur-Sultan and Almaty, where wages are 242,503 tenge and 202,539 tenge, respectively, are characterized by high rates of migration growth (see table 5). The minimum turnover of internal migrants in the period under review was 269,092 people in 2002 and covered almost 1.8% of the country's population, the maximum – 930820 people in 2017 (5.2% of the population). In the past two years, the scale of internal migration has increased dramatically.

To measure internal migration, in our study, the coefficient of migration growth (decrease) per 10 thousand of the population of the region is taken as the main variable.

As can be seen from the data in Table 5, in average annual terms, the largest increase in internal migrants per 10,000 people was observed in the cities. Nursultan (309.9 people) and Almaty (157.4 people). In average annual terms, the largest decrease per 10,000 people was in Zhambyl oblast (98.7 people), North Kazakhstan (49.9 people), East Kazakhstan (49.1 people).

The impact of internal migration on the convergence of regions in terms of wages can be estimated by simply comparing the indicators of internal migration in the above regions with their respective growth rates of real wages for the period under review (see Table 6).

**Table 5** – Migration growth (loss) rate by region in 2011-2018

Region	2011	2012	2013	2014	2015	2016	2017	2018	The average annual value for the period 2011-2018.
1	2	3	4	5	6	7	8	9	10
Akmola	-65,2	-22,2	-7,5	-38,8	49,4	-184,3	25,7	-44,3	-35,9
Aktobe	-37,6	-34,2	-19,5	-3,7	-18,9	-30,2	-6,8	-9,9	-20,1
Almaty	12,5	28,7	6,3	-28,0	-59,3	-18,9	-32,1	-78,9	-21,2
Atyrau	-16,6	2,1	-1,4	6,2	-0,5	-3,3	-0,3	-6,6	-2,6
West Kazakhstan	-18,6	-12,5	-2,5	-15,1	2,7	-38,5	-19,2	-14,6	-14,8
Zhambyl	-116,0	-70,9	-63,1	-71,6	-76,6	-140,4	-150,8	-100,3	-98,7
Karaganda	-13,7	-15,8	-12,2	3,9	-2,7	-50,1	-44,3	-46,0	-22,6
Kostanay	-30,8	-13,7	-14,7	-5,7	12,4	-45,7	-24,8	-8,8	-16,5
Kyzylorda	-43,3	-23,7	-30,0	-34,2	-42,6	-86,1	-59,5	-46,7	-45,8
Mangistau	57,5	41,3	15,9	17,0	11,1	-36,8	-3,7	-1,5	12,6
Turkestan	-61,5	-41,6	-46,0	-49,2	-51,5	-103,3	-50,3	-	-
Pavlodar	-29,3	-7,3	1,8	-3,5	4,5	-38,3	-40,0	-17,6	-16,2
North Kazakhstan	-64,8	-51,9	-48,0	-47,3	-27,1	-83,2	-50,1	-26,7	-49,9
East Kazakhstan	-50,3	-37,9	-35,9	-35,5	-30,2	-81,0	-69,6	-52,8	-49,1
Astana city	427,1	257,8	206,8	210,0	-28,6	834,0	343,8	228,3	309,9
Almaty city	156,1	68,5	105,6	145,8	250,7	171,2	180,1	181,5	157,4

Note – calculated by authors on the basis of data from SC MNE RK

**Table 6** – Indices of real wages of workers by region in 2011-2018, in tenge

Region	2011	2012	2013	2014	2015	2016	2017	2018	The average annual growth rate of real wages for the period 2011-2018 *
1	2	3	4	5	6	7	8	9	10
Akmola	107,1	107,0	101,9	103,9	97,7	98,9	98,3	101,7	102,0
Aktobe	110,8	110,4	100,1	100,9	98,1	103,8	98,4	103,2	103,1
Almaty	106,4	107,8	100,6	104,6	95,2	96,1	101,2	102,7	101,7
Atyrau	106,9	109,4	99,9	103,4	95,8	101,7	98,5	98,2	101,6
West Kazakhstan	103,2	103,1	101,1	108,3	94,1	104,3	90,6	105,1	101,1
Zhamby	101,1	99,3	101,3	104,4	100,4	102,6	99,0	100,6	101,1
Karaganda	110,6	110,5	100,0	99,7	97,3	99,3	97,5	102,8	102,1
Kostanay	107,5	111,7	100,1	100,0	98,3	97,7	100,0	105,5	102,5
Kyzylorda	108,9	109,2	102,8	102,8	95,8	102,2	100,5	102,1	103,0
Mangistau	107,5	108,9	100,4	99,1	94,9	97,9	96,9	98,7	100,4
Turkestan	104,9	99,8	111,0	114,0	95,8	91,2	97,0	99,4	101,4
Pavlodar	107,6	108,0	103,2	102,0	99,2	99,0	99,3	101,6	102,4
North Kazakhstan	109,7	106,7	102,6	100,6	96,4	102,3	98,7	100,5	102,1
East Kazakhstan	111,0	109,6	100,9	102,7	96,6	101,2	98,6	105,3	103,1
Astana city	109,5	105,3	102,5	103,6	100,5	93,8	98,4	99,1	101,5
Almaty city	105,2	105,2	100,0	103,4	98,4	95,7	99,7	99,2	100,8

Note – calculated by authors on the basis of data from SC MNE RK

As can be seen from the data in tables 5 and 6, the growth rate of real wages in regions with large values of the migration loss rate is significantly higher than in regions with maximum values of migration flow. This gives reason to say that in Kazakhstani practice, the migration factor “works” to bring regions closer together in terms of wages. In other words, regions with low wages “move” along their paths faster than regions with high wages. These results are similar to the results that were obtained by Russian scientists (Vakulenko, 2013; Buranshina, 2018).

Thus, the data of Kazakhstan confirms the significant impact of internal migration on the functioning of the labor market and a decrease in wage differentiation between regions. Of course, the distribution of wages between regions can also depend on the level of education of migrants and the remoteness of regions from each other, which requires a more in-depth study.

*Institutional factors that shape the level of wages in the labor market.* In the modern theory of the labor market, it is customary to distinguish between institutions and organizations of the labor market. This is a fruitful approach to research, as it allows to separately and clearly present their role and place in the mechanism of functioning of the labor market.

Institutions (institutions) and organizations of the labor market in Kazakhstan are called upon to coordinate social and labor relations in a market economy, primarily regarding the establishment of wages. They help to save significant transaction costs between the employer and employees.

Labor market institutions include normative regulations (regulators), as well as long-term samples (examples) of social relations in the world of work: individual and collective labor contracts, tariff autonomy, participation in enterprise management, etc. According to the official data of the Constitutional Court of the Ministry of National Economy of the Republic of Kazakhstan, 96.2% of employees were covered by collective agreements in 2017. The content, terms and conditions of concluding an employment contract are reflected in the new Labor Code of the Republic of Kazakhstan dated 11.23.2015, in section 3, chapters 13-14, articles 147-158 (Labor Code RK).

The negotiation process can be represented as a multiple process of concretizing the demands of trade unions to increase the level of wages. In turn, employers are always faced with the task of assessing the profitability of a particular negotiation result. Gradually the idea matured, according to which negotiations become effective if both issues

of both the level of wages and employment are resolved.

For trade unions, a tool is very important that allows you to predict a change in the level of wage rates depending on any indicators. In developed countries, a simple and common method is used for this purpose, which is based on constructing a regression equation based on data on concluded contracts (Franz, 2013):

$$W'_t = a_0 + a_1 P'_t + a_2 M'_t \quad (3)$$

$W'_t$  – growth rate of the nominal tariff average wage for the t-period;

$P'_t$  – the expected rate of inflation in the t-period;

$M'_t$  – an indicator characterizing the tension in the labor market in the t-period (as the ratio of free jobs and unemployed);

$a_0, a_1, a_2$  – coefficients obtained as a result of correlation and regression analysis.

Unfortunately, detailed data on labor contracts in our country are not available. In this regard, it would be advisable for each tariff agreement to be entered in the tariff register of the Ministry of Labor and Social Protection of the Population of the Republic of Kazakhstan.

Labor market organizations are a focused association of people for a planned and coordinated unity of action. These include trade unions, employers' unions, labor administration bodies, etc. Trade unions act as representatives and advocates of workers' interests. In developed countries, the advantages of trade unions as a tariff partner lie in their ability to negotiate more preferable collective agreements than individual agreements. And finally, trade unions become more powerful during the election period, when they could significantly affect their results.

Thus, in their actions, it is important for domestic trade unions to choose the appropriate model of behavior in the negotiation process. It is advisable to adhere to the model of effective negotiations, during which the contract is concluded in such a way that in combination to realize the level of salary and employment.

The state intervenes in the processes occurring in the labor market through the adoption of laws and other regulatory requirements. In particular, in developed countries, the tariff agreement concluded between the parties plays an extremely important role in the regulation of social and labor relations, performing the functions of reconciliation and protection, and also introduces organizing principles into the sphere of the labor market.

In Kazakhstan, this intervention is quite active. The Labor Code of the Republic of Kazakhstan (11/23/2015) made a significant step towards the liberalization of labor relations, which corresponds to the general trend of their development in developed countries. But the problem lies in the practice of its enforcement: the trade unions have so far failed to achieve an active position in the regulation of labor relations and their activities are mainly formal in nature. This is especially evident when trying to study the behavior model of Kazakhstan's trade unions. It is impossible to determine what exactly

the function of their utility for ordinary members of the union consists of, without a clear manifestation of the benefits of membership in trade unions, it will not be possible to attract workers to their organization.

The correct theoretical explanation of the wage structure and its changes is important. By changing the tariff part of wages, one can judge the nature and results of collective bargaining and the extent to which it was influenced by the actions of, on the one hand, trade unions and, on the other, employers (Table 7).

**Table 7** – Change in the share of the tariff part of wages for certain types of economic activity

Type of economic activity	The share of the tariff part of earnings, in %		
	2010	2015	2018
1	2	3	4
All economy	70,7	69,7	71,4
Agriculture, forestry and fisheries	84,6	84,8	85,4
Industry	60,7	61,1	63,1
Construction	79,4	81,9	83,6
Wholesale and retail trade; car and motorcycle repair	78,6	72,8	72,4
Financial and insurance activities	74,0	67,7	64,9
Professional, scientific and technical activities	71,9	72,1	74,0
Public Administration and Defense; compulsory social security	72,9	73,4	74,8
Education	77,8	78,4	80,3
Health and social services	75,4	74,7	77,3
Arts, entertainment and recreation	76,9	75,4	82,1
Note – calculated by authors on the basis of data from SC MNE RK			

For comparison: the share of the tariff part of earnings for the Western European economy is – 50-80%; for the United States, with its liberal model of social and labor relations, this indicator is even higher and close to 100%. In Kazakhstan in 2018, the share of the tariff part of earnings was at the level of 71.4%. A high share of the tariff part of earnings helps to strengthen the social security of staff, and prevents the transfer of the negative consequences of unjustified entrepreneurial risks from the employer to the employees. And this is important to keep in mind when concluding labor contracts, especially during times of crisis.

## Results and discussion

A large number of foreign studies are devoted to the study of the mechanism of formation of the

wage level in the labor market, but it is carried out for the first time on the materials of Kazakhstan. Based on the available methodological foundations for studying this problem, we critically analyzed the mechanism of formation of the level of wages in the current labor market model in Kazakhstan. The analysis of the main factors affecting the level of wages revealed the following problems:

- in the academic environment and in state policy, emphasis is not given to the possibilities of modernizing the labor market in raising wages;
- there are problems associated with informing the population about vacant places, which does not contribute to better coordination of labor supply and demand for it in the labor market;
- nominal wages are sufficiently sensitive to the situation on the labor market: to a lesser extent to changes in the level of prices of consumer goods and

to a greater extent to changes in the level of labor productivity; at the same time, it reacts noticeably to changes in the unemployment rate;

- the current practice of the functioning of labor market institutions in Kazakhstan is not adequately aimed at smoothing inequalities in wages and lags far behind OECD countries in this indicator;

- wage differentiation between regions gradually decreased, but remains at a relatively high level, which negatively affects the rate of economic growth;

- confirms the significant impact of internal migration on the functioning of the labor market and a decrease in wage differentiation between regions;

- institutions and organizations of the labor market have not yet gained due weight as effective elements and parties to the process of wage formation, especially this applies to the institute of tariff autonomy and trade unions;

- when concluding labor contracts, especially during periods of crisis, it is advisable to achieve a high share of the tariff part of earnings, which will contribute to greater social security of staff.

## Conclusion

For the successful implementation of the task of increasing wages and, accordingly, population incomes, it is necessary to mobilize all reserves that are associated with accelerated technological modernization of the economy. Significant opportunities will also arise as a result of the modernization of the labor market, which will contribute to the formation of a decent level of wages

for workers. How this will be implemented in practice will depend on the degree to which the researchers reveal the potential of the modernized labor market and the mechanism for its implementation in raising wages. The results of our study reveal the influence of the main economic and institutional factors on the formation of wages in the current Kazakhstan model of the labor market. Overcoming the lack of coordination of labor supply and demand, assessing the flexibility of wages in the labor market, the scientifically substantiated reduction of inequality in wages and incomes and eliminating the negative effects of other economic factors should be taken into account when modernizing the labor market. Of particular importance should be given to the institutional factors of the labor market and to the intensification of the activity of its subjects. Trade unions need to fully realize that it is they who must master the procedure for conducting effective negotiations in order to ensure in combination a decent level of wages and employment for the workers protected by them. The increase in wages will positively affect the income level of the population, which in turn affects the growth of their savings; and this already affects the growth rate of the country's GDP.

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