

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Economics**



**Bachelor Thesis**

**Impacts of unemployment and suggested solutions in the  
Republic of Kazakhstan**

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# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

## BACHELOR THESIS ASSIGNMENT

Yeldos Ismailov

Economics and Management

Thesis title

**Impacts of unemployment and suggested solutions in the Republic of Kazakhstan**

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### Objectives of thesis

Unemployment is a macroeconomic problem, which has the most direct and strong impact on every person. Loss of work for most people means a decrease in the standard of living and causes serious psychological trauma. It is therefore not surprising that the problem of unemployment is often the subject of political discussions. The purpose of the thesis is to examine the unemployment essence, the characteristics of its types, causes of unemployment or how it develops, to analyze unemployment rates in the Republic of Kazakhstan for the period 2010-2018. The thesis will also involve suggestions to solutions for combating unemployment.

### Methodology

The methodology will involve a statistical and visual analysis of the unemployment rates in Kazakhstan of 2010-2018. The methodology will also include a forecasting attempt of unemployment rates in Kazakhstan for the years 2019, 2020, 2021 using a combination of linear regression function and pseudo-forecasting. The forecasting will be taking into consideration that all other factors will remain constant (*ceteris paribus*). The final part of the methodology will be about researching unemployment reduction strategies that have already been implemented and examine the effectiveness.

**The proposed extent of the thesis**

35 – 50 Pages

**Keywords**

Unemployment; Republic of Kazakhstan; Unemployment reduction strategies; prediction

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Heyne, P. (1997). The Economic Way of Thinking. Seattle, the USA: Catallaxy.

Jeffrey, D. Sachs, & Felipe, Larrain B. (1993). Macroeconomics in the global economy. London, England: Prentice Hall in Englewood Cliffs, N.J.

Nazarbayev, N.A. (1996). Kazakhstan-2030. Almaty, Republic of Kazakhstan.

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### **Declaration**

I declare that I have worked on my bachelor thesis titled “Impacts of unemployment and suggested solutions in the Republic of Kazakhstan” by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on

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**Yeldos Ismailov**

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I would like to express my sincere gratitude to doc. Ing. Mansoor Maitah, Ph.D. et Ph.D. for the supervision of my thesis, professional advice and valuable assistance throughout my work.

# **Impacts of Unemployment and suggested solutions in the Republic of Kazakhstan**

## **Summary**

Topic of this bachelor thesis is Impacts of Unemployment and suggested solutions in the Republic of Kazakhstan. Unemployment affects all states, no matter how they are developed. Unemployment is the most discussed macroeconomic problem of our society and is one of the most important indicators of the state economy. There are different impacts of unemployment. They are mainly economic, social and political problems, which affect the functioning of the entire state. These problems are mainly reflected in the state budgets of the country as with the rise of unemployment, expenditure on welfare for the unemployed people naturally grows, which reduces revenues of the state budgets.

The theoretical part of the bachelor thesis focuses on general information about unemployment, describes its problems, and examines characteristics of its types. The practical part deals with the development of unemployment between 2010 and 2018. The next objective is to research the reduction strategies and suggested solutions, and to predict the unemployment rates in Kazakhstan for 2019, 2020, 2021.

**Key words:** unemployment, unemployment reduction strategies, prediction, Kazakhstan

# Dopady nezaměstnanosti a navrhované řešení v Kazachstánu

## Souhrn

Tématem bakalářské práce je Dopady nezaměstnanosti a navrhované řešení v Kazachstánu. Nezaměstnanost postihuje všechny státy, bez ohledu na to, jak rozvinuté jsou. Nezaměstnanost je nejdiskutovanější makroekonomický problém naší společnosti a je jedním z nejdůležitějších ukazatelů státní ekonomiky. Nejzávažnější následky nezaměstnanosti jsou ekonomické, sociální, a politické, a ovlivňují funkčnost celého státu. Tyto následky se promítají hlavně ve státním rozpočtu, kdy s růstem míry nezaměstnanosti, stoupají i výdaje na podporu nezaměstnaných a tím pádem se zmenšují příjmy do státního rozpočtu.

Teoretická část bakalářské práce je zaměřena na obecné informace o nezaměstnanosti, popisu její problémů, zkoumání charakteristik její typů. Praktická část se zabývá vývojem nezaměstnanosti mezi roky 2010 a 2018. Dalším cílem je prozkoumat strategie snižování a navrhované řešení, a provést předpověď míry nezaměstnanosti v Kazachstánu na roky 2019, 2020, 2021.

**Klíčová slova:** nezaměstnanost, strategie snižování nezaměstnanosti, předpověď, Kazachstán

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# 1 Introduction

Unemployment is a problem for any state. In connection with unemployment comes the dissipation of the main productive force – the labor force, occurs the reduction of the gross domestic product and the national income of the country. Also, the state needs to pay the costs of unemployment benefits, the retraining of the unemployed and their employment. If it does not use available labor resources fully, the economy of the country will have limited growth opportunities. Also, unemployment leads to social problems, such as deterioration of the financial situation of unemployed families, the growth of crime and so on.

Unemployment in Kazakhstan has been in a state of contractility, but it somehow continues to exist and harm the economy of the country. To understand this problem, it is necessary to consider the main causes of unemployment and ways to solve it. The purpose of this thesis is to analyze the current state of the problem of unemployment, the unemployment rates in the Republic of Kazakhstan, suggestions to solutions for combating unemployment in Kazakhstan.

Tasks of the thesis:

- To study the essence, types, causes and forms of unemployment;
- To study the unemployment rates in the Republic of Kazakhstan;
- To analyze the dynamics of unemployment;
- To describe the measures of state influence directed at combatting the problem of unemployment;
- To research suggested recommendations for reducing unemployment in Kazakhstan;
- To make a forecast for the reduction, and in addition, make predictions for 2019, 2020, 2021 years.

The object of this study is unemployment, and the subject is its features and methods of combatting it in Kazakhstan.

The theoretical significance of this work is the totality of knowledge about unemployment, its causes and features in Kazakhstan. The practical significance is the development of new suggestions to reduce unemployment, which can be included in one of the programs of the country directed at reducing unemployment.

## **2 Objectives and methodology**

### **2.1 Objectives**

Unemployment is a macroeconomic problem, which has the most direct and strong impact on every person. Loss of work for most people means a decrease in the standard of living and causes serious psychological trauma. It is therefore not surprising that the problem of unemployment is often the subject of political discussions. The purpose of the thesis is to examine the unemployment essence, the characteristics of its types, causes of unemployment or how it develops, to analyze unemployment rates in the Republic of Kazakhstan for the period 2010-2018. The thesis will also involve suggestions to solutions for combating unemployment.

### **2.2 Methodology**

The methodology will involve a statistical and visual analysis of the unemployment rates in Kazakhstan of 2010-2018. The methodology will also include a forecasting attempt of unemployment rates in Kazakhstan for the years 2019, 2020, 2021 using a combination of linear regression function and pseudo-forecasting. The forecasting will be taking into consideration that all other factors will remain constant (*ceteris paribus*). The final part of the methodology will be about researching unemployment reduction strategies that have already been implemented and examine the effectiveness.

## **3 Literature Review**

### **3.1 Essence of unemployment**

The first signs of unemployment arose in the UK at the beginning of the XX century, but until the end of the century it did not become massive, it grew only during economic crises. In the twentieth century unemployment becomes massive and chronic, embracing the economies of developed countries even in the phase of revival and recovery. According to most economists, unemployment is a central problem for advanced economies.

Unemployment is an indicator of the complexity of the process of interaction of labor with demand for it. This process, viewing on a country-wide scale, directly depends on how big the territory is and how the natural and climatic conditions differ in it, what is the structure of the economy and what place does the industry take in this structure, what industries and types of enterprises are represented. But the main role is played by the political structure of society. It depends on it, to what extent the coordination of supply and demand takes into account the specificity of labor hire. Also, the stage of economic development is especially important.

Thus, unemployment is an objectively existing companion of the labor hire. Regardless of whether the economy is recognized as a market economy or not, whether an official estimate of the number and registration of the unemployed are made or not. This is a complex, diverse socio-economic phenomenon which is inherent in a society with a market economy, when a part of the able to work population, unoccupied in the production of goods and services, cannot realize its labor force in the labor market because of the lack of suitable jobs and therefore deprived of wages as the main source of the necessary livelihood.

By the definition of the International Labor Organization, unemployment is the loss of earnings, because it is impossible to get a suitable job in relation to a person who is able to work, who is ready to work, and who is really looking for a job.

The population of the country according to the degree of its labor activity is divided into employed, unemployed, economically active population, economically inactive population.

Economically active population (labor force) is the part of the population at the age set to measure the economic activity, providing the supply of labor for the production of goods, jobs and services. Labor force is determined on the basis of the age structure of citizens of the country. Normally, the entire population is divided into three large groups: from 0 to 19 years old, from 20 to 64 years old, from 65 years old and older. The category of economically active population stands out from the second group. Concurrently, the military men, representing an independent category, also belong to the economically active population. However, when measuring unemployment, only people who have attained the age of 16 are taken into account, and people in jails, in psychiatric hospitals, and the military men are excluded from a calculation.

The employed are those who, during the review period, performed paid employment as well as income-generating self-employed work with and without the involvement of employees. These include people who performed work as assistants in a family enterprise, people who were temporarily absent at work, as well as people employed in the household to produce goods and services.

The unemployed are people at the age set to measure the economic activity of the population, who during the review period met the following criteria: a) did not have a job (income); b) were looking for a job, what means they appealed to the state or commercial employment service, used or placed ads in the press, directly talked to the administration of the organization or the employer, used personal connections, etc. or took steps to organize their own business; c) were ready to begin to work during the review period. Students, pensioners and the physically challenged are counted as unemployed if they are looking for a job and are ready to start.

Thus, we can make a conclusion that unemployment is the excess of the supply of labor over the demand for labor. The unemployed are those that are part of the economically active population who are waiting or looking for a job, can work and are ready to start working, but cannot find it.

## 3.2 Causes of unemployment

Unemployment is never evenly spread out among the population of any country. Statistics show that women make up about 65% or almost twice as many as men of the total number of the unemployed at all ages. This is explained by the fact that at the moment one of the main requirements for candidates for vacancies is the presence of special technical education. According to Almaty city Employment Center, vacancies offered by employers in the technical field make up about 40%.

### 3.2.1 The youth

Unemployment is mostly spread out among people under 25-year-old. Its share is 41,2% of the total number of the population who applied for a job in employment centers. This is usually explained by the fact that they immediately want to find a job which they like, and they are considered unemployed while searching. This is also explained by the fact that with our rate of unemployment, vacancies are filled mainly by specialists with a certain work experience. And young people who have no experience do not even have the opportunity to receive it. But, by time to time things start to go different. According to the “TradingEconomics” Kazakhstan youth unemployment rate decreased to 3.90 percent in the second quarter of 2018 from 4 percent in the first quarter of 2018. Youth unemployment rate in Kazakhstan averaged 4.9 percent from 2010 until 2018, reaching an all-time high of 6.6 percent in the first quarter of 2010 and a record low of 3.90 percent in the third quarter of 2016.

**Figure №. 1: Youth unemployment rate in Kazakhstan**

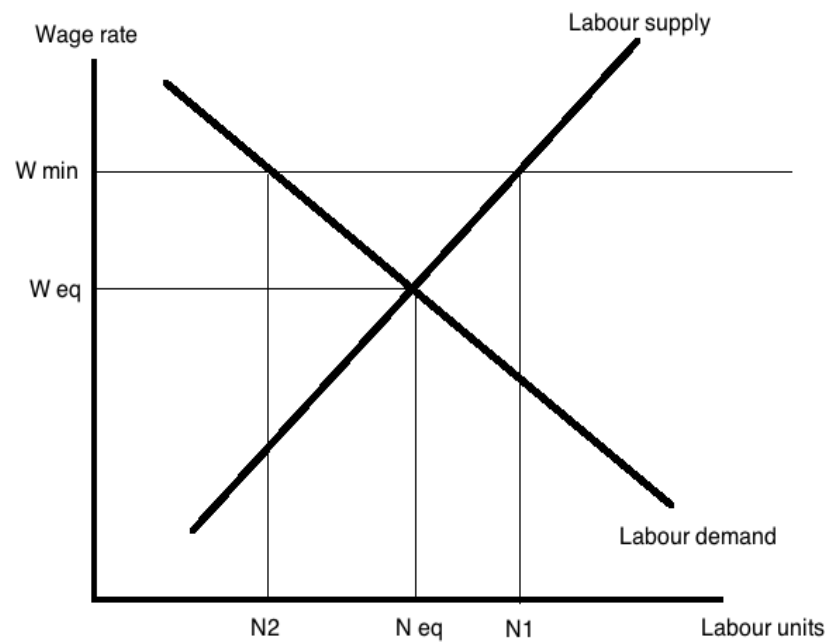


Source: <https://tradingeconomics.com/kazakhstan/youth-unemployment-rate>

### 3.2.2 Minimum wage

The establishment of the minimum wage above the equilibrium point leads to an increase in unemployment, which is due to the fact that more people want to work for this money and only few employers are willing to pay them. In this case, the minimum wage creates a surplus of labor supply, which unlike goods is not destroyed and not bought up by the state, and therefore forms unemployment. Such situation occurs due to the fact that artificially high minimum labor rates increase the costs of an enterprise, which in order to maintain the level of profitability or profitability of a business, have to hire fewer employees. Thus, it can be affirmed that the establishment of the minimum wage improves the lives of people whose wage-rates have been increased, but it affects the interests of those who have not been hired.

**Figure №. 2: Minimum wage**



Source: <https://marketmonetarist.com/tag/minimum-wage/>

### **3.2.3 Labor unions**

A labor union, also called a trade union, is an organization representing the interests of the workers. This union helps workers unite to negotiate with employers about wages, hours, benefits and other working conditions. The labor unions are often industry-specific and, as a rule, more common in manufacturing, mining, construction, transport and the public sector. In the case of the labor market, this means that wages will be higher, but so will unemployment.

### **3.2.4 The unemployment benefits**

Most economists believe that an abolition of unemployment benefits would reduce the unemployment rate. When benefits are high, it is more advantageous for the unemployed to be financially supported by the government than to take a lesser paid job.

## **3.3 Unemployment classification**

Economic science, depending on the reasons identifies many forms of unemployment. The main forms of unemployment in Kazakhstan are frictional, structural and cyclical.

### **3.3.1 Frictional unemployment**

Frictional unemployment is associated with the search of work and awaiting it. This form of unemployment is among people for whom the searching for a job that matches their qualifications and individual preferences, requires a certain amount of time.

We can identify the following causes of frictional unemployment. Since information about job vacancies is not perfect, then people who are looking for a new job will need a lot of time, which will prolong their being among the unemployed. The next reason is the territorial movement of labor, it also takes time. And the third reason is that part of the employees quit their jobs of their own will due to changes in their professional interests, place of residence, etc. Consequently, frictional unemployment is voluntary and short-term

in character: this category of the unemployed already has some work experience and skills that can be sold in labor market.

### **3.3.2 Structural unemployment**

The discrepancy between the structure of demand for labor and the structure of its supply underlies the structural unemployment. The structure of demand for labor is changing faster than the structure of its supply. The most important factors of structural changes in good conditions are scientific and technological progress and globalization which affect all areas of public life.

Big changes occur in the economic structure of the leading industrialized countries, like complication of the overall structure of production, the emergence of new products, new branches, and the displacement of obsolete products and some old industries) and the content of labor under the influence of scientific and technological progress. Consequently, the retraining of workers who are about to be laid off, requires a significant amount of time.

### **3.3.3 Cyclical unemployment**

And the third form of unemployment is cyclical. It is associated with a decline in production. Cyclical unemployment is a deviation of the actual rate of unemployment from natural. In cyclical unemployment due to prolonged periods of inactivity, the qualifications of employees might be lost, what may subsequently lead to a significant reduction in wages or new dismissals.

### **3.3.4 Other forms of unemployment**

Another form of unemployment is seasonal. It is associated with the seasonal character of wage labor, more often in agricultural production, construction and other areas. Seasonal unemployment is similar to cyclical unemployment, but unlike it, the seasonal unemployment can be predicted, since it depends on the geographical environment of the population and its social and cultural consequences.



Voluntary unemployment is an independent type of unemployment. In any society there are people who for various reasons do not want to work, because it is more profitable for them not to work.

When analyzing the situation in the labor market, unemployment should be considered and grouped into youth, female, general and professional education, workers and specialists, etc. Therefore, the components of the social structure of unemployment are belonging to a socio-demographic, occupational group, class, level of education, nationality, and one of the most important indicators – income level.

Unemployment also varies in duration: temporary (up to 4 months), stable (from 4 to 12 months), chronic or long-term (over a year). A particular danger to an individual is chronic unemployment, which leads to a loss of qualifications of an employee, a decrease in his living standard and adaptation opportunities.

Full unemployment means that a person who for some reasons has lost his job does not work anywhere but is looking for it.

Partial unemployment more refers to part-time employment when a person does not work full-time.

After the emergence of market relations, the hidden unemployment began to turn into the open one but remains. By open unemployment we usually understand that unemployment which is officially registered by the employment service agencies. This includes those who are permanently or partially unemployed and are in search of a permanent job.

From the above mentioned, it can be concluded that the main forms of unemployment are frictional, structural and cyclical. The main causes of unemployment are mostly forced than voluntary. Frictional unemployment is voluntary, while structural and cyclical are forced. Also, unemployment is divided by socio-demographic, occupational group, class, by level of education, by nationality, and by one of the important indicators – income level.

### **3.3.5 How Marxism distinguishes unemployment**

Karl Marx distinguished three forms of unemployment: current, hidden and long-term. To the current, he attributed the periodic repulsion and gaining over of labor force. The main reason for this is repeating recessions in market economic conditions. Another reason is the uneven development of individual branches and regions. To the hidden Marx attributed agrarian overflow of population. According to the definition of the International Labor Organization, hidden unemployment should include a part of the employed population who are forced to work part-time, and also are on administrative leave without saving wages or with partial pay. Long-term unemployment alternates from time to time with random jobs and extremely low wages, what almost completely leads to the loss of work motivation and the criminalization of the able-bodied population. The long-term unemployment spans the part of the able-bodied population that has lost their job, lost their right to receive unemployment benefits, who are despaired of finding jobs, and lost all interest in active work.

## **3.4 Unemployment rate**

The unemployment rate is the share of the labor force that does not have a job, expressed as a percentage. This is a lagging indicator (a measurable economic factor that changes only after the economy begins to follow a certain model or trend), meaning that it usually rises or falls as a result of changes in economic conditions, rather than anticipates them. When the economy is in poor condition, and the number of jobs is limited, we can expect an increase in unemployment. When the economy grows at a healthy pace and the number of jobs is relatively large, we can expect a fall. The unemployment rate can be also defined as the ratio of the number of unemployed and the labor force, or as the ratio of the percentage of unemployed who lose their jobs every month and the amount of this share with the share of the unemployed every month.

The unemployment rate is calculated as the percentage of the number of unemployed to the total number of workers. It is known as U3, what defines unemployed people as those who are willing and available to work, and who have actively sought work within the past

few weeks. Those who has temporary, part-time or full-time jobs are considered employed, as are those who do at least 15 hours of unpaid family work.

To calculate the unemployment rate, we divide the number of unemployed people by the number of economically active population, which consists of all employed and unemployed people. The ratio is expressed as a percentage:

$$\frac{\textit{Unemployed}}{\textit{Labor force}} \times 100 = U(\%)$$

**Figure №. 3: Kazakhstan Unemployment Rate**



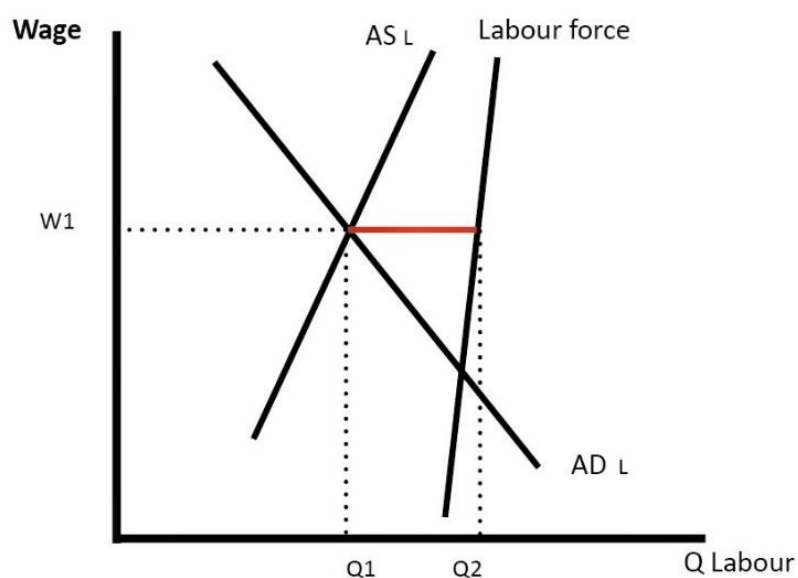
Source: <https://tradingeconomics.com/kazakhstan/unemployment-rate?embed>

In Kazakhstan, the unemployment rate measures the number of people, who are actively looking for a job, as a percentage of the labor force.

Frictional and structural unemployment always exist in the labor market of Kazakhstan and therefore do not allow the unemployment rate to drop to zero. Unemployment Rate in Kazakhstan remained unchanged at 4.90 percent in September from 4.90 percent in August of 2018. Unemployment Rate in Kazakhstan averaged 5.69 percent from 2003 until 2018, reaching an all-time high of 9.70 percent in March of 2003 and a record low of 4.80 percent in June of 2018. (TradingEconomics, 2018)

The combination of structural and frictional unemployment forms the natural rate of unemployment (or the unemployment rate at full employment) corresponding to potential GDP. But some economists find it inappropriate to use the term "natural" (natural unemployment occurs when the labor market is in equilibrium) towards unemployment caused by structural changes. The unemployment rate is also defined as the proportion of the unemployed in the economically active population (expressed as a percentage). The natural rate of unemployment is its level, which corresponds to full employment, due to natural causes (labor turnover, migration, demographic reasons), and is not associated with the dynamics of economic growth.

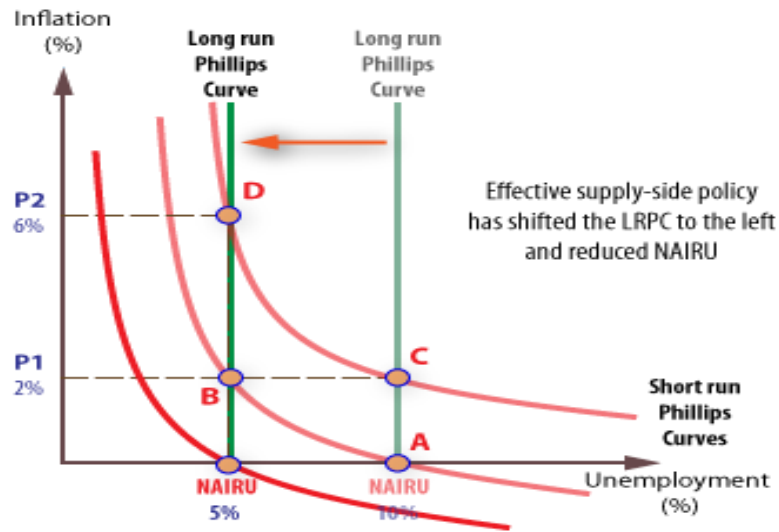
**Figure №. 4: The Natural rate of unemployment**



Source: [https://www.economicshelp.org/macroeconomics/unemployment/natural\\_rate/](https://www.economicshelp.org/macroeconomics/unemployment/natural_rate/)

Therefore, the term NAIRU (non-accelerating inflation rate of unemployment) is widely used in the macroeconomic literature, which focuses on the fact that this steady rate of unemployment stabilizes inflation.

**Figure №. 5: Non-accelerating inflation rate of unemployment**



Source: <http://www.economicsonline.co.uk/Definitions/NAIRU.html>

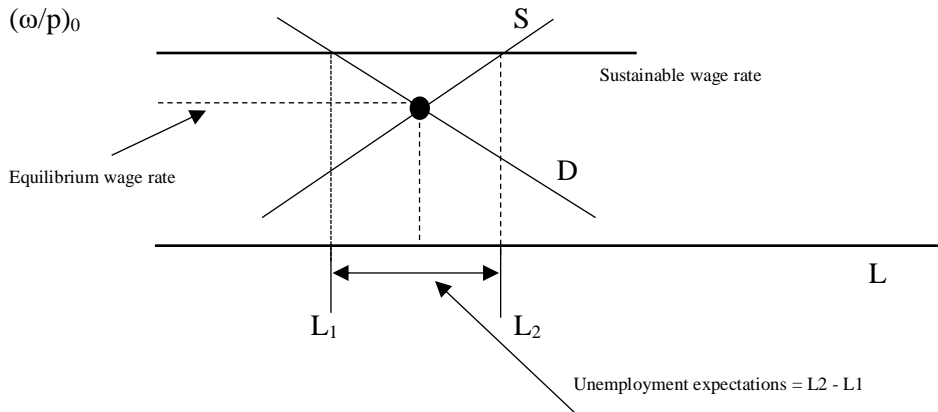
### 3.4.1 The natural rate of unemployment

The natural rate of unemployment is determined by averaging the actual rate of unemployment around which the economy of the country fluctuates over the previous 10 years (or a longer period) and the next 10 years.

Let's consider the main causes of the natural rate of unemployment.

First, the increase in the time of searching for work in the conditions of unemployment insurance. The payment of unemployment benefits relatively reduces incentives for quick employment - the unemployed need more time to find a suitable job, for retraining, etc. To solve this problem, the government needs to invest in the infrastructure of the labor market. For example, the development of various systems of retraining, increasing their professional and geographical mobility, improving information about vacancies, and so on. In the short term, financing of employment regulation programs may worsen the situation of the state budget, but in the medium term, this will reduce the natural rate of unemployment.

Secondly, the sustainability of wages that generates unemployment expectations. Unemployment expectations arise because of the excessive real wage rate above its equilibrium value.



The sustainability of wage (Y. Ismailov)

The sustainability of wages leads to a relative shortage of jobs: employees become unemployed because at a given wage rate  $(\omega/p)_0$  the supply of labor  $L_2$  exceeds the demand for labor  $L_1$ , and people simply expect an opportunity to get a job at a fixed wage rate.

Actual or observed unemployment is usually not equal to natural. During periods of economic boom, the demand for labor is so high that the number of people leaving production is reduced compared to the usual norm, and the percentage of the unemployed who found a job exceeds the average, what causes lower unemployment than natural. During periods of economic recession reverse processes take place, and actual unemployment rises above the natural.

The possibility of the existence of a positive relationship between the price of labor and its productivity can be explained by following reasons:

1. The growth of the wage rate allows to fully restore the ability to work and creates a favorable psychological attitude of an employee;

2. Increased wages stimulate the employee's conscientiousness, which is important when information about his abilities is asymmetric;
3. With higher wages, you can attract the best specialists in every profession to your company.

Thus, we can make a conclusion that in order to calculate the rate of unemployment it is necessary to have data about number of unemployed people and the labor force. As we said before, there is always a natural unemployment rate, which is formed by frictional and structural unemployment, since they always exist in the labor market and do not allow the unemployment rate to drop to zero.

## **4 Analysis of unemployment in the Republic of Kazakhstan**

### **4.1 Dynamics of unemployment for the period of 2010-2018**

We can begin from the study of unemployment in the Republic of Kazakhstan with an analysis of its dynamics over the past ten years.

According to the statistics Agency of Kazakhstan, in 2010 the unemployment rate was 5.8%. The number of unemployed that year was amounted to 496.5 thousand people. In 2010, officially, 76.4 thousand people were registered in the employment agencies of the Ministry of Labor and Social Protection of the Population of the Republic of Kazakhstan. The proportion of registered unemployed was 0.9% of the economically active population. The long-term unemployment rate was 2.2%. The rate of hidden unemployment in 2010 was 0.6% out of the economically active population. The youth unemployment rate was 6.6%.

The number of unemployed in 2011 was 479.2 thousand people, the unemployment rate was 5.4% out of the economically active population, according to a report by the press office of the statistics Agency. According to the Ministry, the number of people registered in the employment agencies as unemployed in 2011 was 0.4% of the economically active population. The long-term unemployment rate was 2.1%. The rate of hidden unemployment was estimated at 0.4% of the economically active population. The youth unemployment rate was 6.1%. As we see the difference was significant, rate of unemployment was decreasing from 5.8% to 5.4% compared to 2010.

In the economy of the country in September 2012 were employed 8.5 million people. Relative to the same period last year, their number increased by 98.4 thousand people or 1.2%. The number of unemployed in September 2012 was estimated at 475.3 thousand people, the unemployment rate was 5.3%. Officially, at the end of September 2012, there were registered in the employment agencies of the Ministry of Labor and Social Protection of the Republic of Kazakhstan - 54.7 thousand people. The share of registered unemployed was 0.6% out of the economically active population. According to estimates, in September 2012, the rate of hidden unemployment was 0.3%.



The number of unemployed people in Kazakhstan in February 2013 was amounted to 493,2 thousand people. The unemployment rate was 5.25% of the economically active population of the country. The number of people registered in the employment agencies as unemployed at the end of February 2013 was 55 thousand people or 0.6%, and the rate of hidden unemployment was 0.5%.

The unemployment rate in Kazakhstan for January 2014 was 5.2 percent. 8.6 million people were employed in the country's economy. Over the last year, their number increased by 21.5 thousand, or 0.2 percent. 472.9 thousand people were considered unemployed, of which 42.5 thousand people were registered in the employment agencies. The rate of hidden unemployment (involuntary underemployment) was 0.4 percent of the economically active population. The unemployment rate in Kazakhstan was planned to be maintained at around five percent until 2020. For this, it was necessary to annually provide employment for 508 thousand Kazakhstanis.

The unemployment rate in the country in 2015 was 5%. The number of the unemployed in March this year amounted to 455.8 thousand people. It was not changed until July of this year. By January 2016 unemployment rate changed by 0.1%, and 8.5 million people were employed in the economy of the republic, what is less than last year. According to the IV quarter of 2015, unemployment was significantly rising. The rate of hidden unemployment for this period was 0.4% (33.3 thousand people) of the economically active population.

**Figure №. 6: Changes in unemployment rate 2015-2016**



Source: <https://tradingeconomics.com/kazakhstan/unemployment-rate?embed>

In February 2018, the number of unemployed Kazakhstanis was 440.7 thousand people. In the first two months of 2018, the number of unemployed increased by 400 people. At the same time, in the long-term dynamics, the number of unemployed people in recent years has been generally declining, although in crisis 2015 there was a new jump. However, already in 2016, the positive dynamics aligned and continued in 2017. So, in the IV quarter of 2017 in the Republic of Kazakhstan there were 439.3 thousand unemployed - 0.4% less than in the same period a year earlier. The unemployment rate in the country has remained at 4.9% since the beginning of 2017.

According to the data of the Agency of the Republic of Kazakhstan, the dynamics of the number of unemployed in percentage is as follows:

**Table №. 1: Dynamics of the unemployed in Kazakhstan (2010-2018, %)**

2010	2011	2012	2013	2014	2015	2016	2017	2018 June
5,783%	5.39%	5.292%	5.225%	5.2%	5%	4.96%	4.9%	4.8%

Source: <https://tradingeconomics.com/kazakhstan/unemployment-rate>

**Figure №. 7: Kazakhstan unemployment rate**



Source: <https://tradingeconomics.com/kazakhstan/unemployment-rate?embed>

As we see, there is a downward trend in the unemployment rate, and we can say that government methods to combat unemployment are effective. But we must not forget that in fact the unemployment rate is much higher than the official data.

Actually, the situation with unemployment in Kazakhstan does not look threatening and, moreover, there are clearly visible tendencies towards its improvement. The unemployment rate in Kazakhstan is significantly lower than in the developed countries - the USA, Germany, the UK, etc. Kazakhstan has a very high rate of self-employed workers - 2.7 million people, which means every third citizen of the republic provides himself with work and does not depend on the employer.

## **4.2 Causes and features of unemployment**

The explanation for the persistence of unemployment in the state's economy is that searching for a job takes a certain amount of time. People have different preferences and professional skills, and information about vacancies and job seekers is spreading among firms and households quite slowly.

One of the basic causes of unemployment in Kazakhstan, as in other countries, is associated with voluntary dismissal. Reasons can be different: dismissal due to bad relations in a team or with managers; moving to another city, and thereafter search for a new job; not satisfied with the salary; overworking that is not evaluated or rewarded; constant stress at work; the impossibility of professional growth; desire to find more interesting job and other similar reasons. These reasons correspond to frictional unemployment. Also, for voluntary reasons, it is possible that the unemployed people receiving benefits begin to detain a job search, since they have enough money to live on. However, this is not it. There are many other causes, consequences what are more serious.

To the main causes of unemployment in Kazakhstan we can relate following:

- Excessive care by parents of their children. Parents do not allow children of all ages to become independent, they are not allowed to work at least part-time (to earn some pocket money) while studying at schools of higher education, etc.;

- Consequences of the crisis from the 90s of the last century, when parents were under the layoff, they were not paid their salaries on time, as a result of which they were forced to get down to business or trade in the market. Therefore, they cannot help their children find a job after graduation, because they do not work by their professions.
- Employers. The rapidly changing world, a high rate of life, technology, and competition force employers to initially strive for personnel optimization, high productivity and efficiency, forgetting about moral and ethical obligations. Therefore, they do not want to hire people over 40, women (due to the fact that they can go on maternity leave), but instead recruit inexperienced (mostly untaught) young people, they can be fired without problems under a fictitious cause, and also employers fire those who often have sick leave;
- The last main reason is of course the need for certain specialists in the labor market. The applicants radically changed values from moral to material. They want to do nothing and get a lot of money for it, want to become bosses. Therefore, they choose, as they believe, prestigious specialties, such as customs, banking, finance and credit, economics and management, translation studies, law, but the labor market is full of employees of this specializations. Not all specializations are in demand in Kazakhstan. They are either in weak demand, or there is no need for them, or simply they have not become widespread in the country yet.

Another important explanation for unemployment is the mentality that has developed under the socialistic system and the population's inability to adapt to a market economy. If it is supposed that every person in the republic is a subject or an independent institution, then every free economic micro-institution must find partners for itself, determine the type of its occupation, solve problems within the institute independently. But at present time, not all micro-institutions can cope with this problem.

The true causes of mass unemployment in Kazakhstan are as follows: many refer to education, to the fact that educational institutions began to train unqualified people, as a result of which graduates cannot find work. But not everything is that simple. We can agree that educational institutions train theorists without paying attention to practice, but not

everything depends on them. The applicants themselves are not aware of what they will do after receiving the specialty. There are many educational institutions where low-quality specialists graduate from - this is mainly the presence of extramural studies, corruption, etc. Thus, the possession of a diploma of higher education does not guarantee that the graduate will find a job.

Thus, we can conclude that the main voluntary causes of unemployment in Kazakhstan are detaining the job search, in order to receive benefits, not good relations in a team or with managers, residence change, constant stress at work, low wages. The main involuntary causes include structural changes in the economy, lack of experience, decline in production, age, and lack of demand for some professions. All these reasons entail consequences, which are reflected in the country's economy. And of course, GDP is directly related to unemployment, because as soon as the GDP begins to fall, then this situation is immediately reflected on the citizens through a contracting labor market, which further leads to an increase of unemployment rate.

### **4.3 Consequences of unemployment in the country**

Any unemployment rate leads to some consequences. Let us consider the consequences of unemployment, which are observed in the Republic of Kazakhstan.

The consequences of unemployment are divided into economic and non-economic. The non-economic consequences of unemployment are social, psychological and political consequences of losing a job. Very often, only the economic effect of unemployment is considered in the form of the number of workers laid off and the amounts of benefits paid, and the non-economic effects that are difficult to identify and cumulative in nature are hardly ever taken into account. However, the degree of negative impact of unemployment on the situation in the country depends on the specific parameters of non-economic effects. If we consider the non-economic consequences at the individual level, then they are that if a person cannot find work for a long time, this often leads to psychological stress, desperation, nervous (up to suicide) and cardiovascular diseases, and family breakdown. Around 70% of suicide reasons among Kazakhstanis are unemployment and lack of permanent place for living. If a person loses a stable source of income, it can push him to a

crime, asocial behavior. And at the level of society it leads to the social consequences of unemployment, which are an increase in morbidity and mortality rates in the country, as well as an increase in crime rates. The costs of unemployment include the losses incurred by society in connection with the costs of education, professional training and providing a certain level of qualification to people who as a result are unable to use them and therefore cannot pay back.

Based on the non-economic consequences, you can bring the following statistics. Cardiovascular diseases are ranked as first among the causes of disability and mortality in Kazakhstan. Approximately 8% of Kazakhstanis suffer from cardiovascular diseases. About three thousand suicides are committed in Kazakhstan in a year. In 2015, the number of divorces reached its highest rate – it was 53 293. These numbers also include those who suffered from the consequences of unemployment.

The economic consequences of unemployment at the individual level are a decrease in current income, as well as loss of qualifications and therefore a decrease in the chances of finding a well-paying, prestigious job in the future (that is, a possible reduction in future income levels).

At the public level, the following consequences are highlighted: underproduction of products, underutilization of the production capacities; a significant decline in the standard of living of people who are unemployed, since for them work is the main source of livelihood; wage cuts of employees as a result of competitions in the labor market; an increase of taxes on employees due to the need for social support for the unemployed, benefits payments and compensations, etc. From statistics we can refer to an example of the share of the population with incomes below the subsistence minimum level and the share of the population with incomes below the food (ration) basket. If in 2015 the share of the population with incomes below the subsistence minimum was 2.7%, then by 2018 this level increased to 4.7%. And the share of the population with incomes below the cost of the food basket has decreased from 0.2 to 0.1. The change in these levels, besides other reasons, was also influenced by the change in the unemployment rate, that is, if unemployment decreases, then the consequences also, and if it increases, the consequences also increase.

But there are also positive consequences of unemployment.

The positive social consequences include: increasing the social value of the workplace, as people value their work more, fearing to be among the unemployed; an increase in personal free time, this plus applies only to the unemployed, since the people receive benefits and can do anything else in their own interests, but this is a minus for the state; increasing of the freedom to choose a job, the more unemployed, the more vacancies, and more choices are provided for the unemployed in search; an increase in the social significance and value of labor, a person, who lost his job begins to value it more.

The positive economic consequences include: creating a reserve of labor for economic restructuring, that is, the population that is now unemployed, during technical changes in the economy, will be able to offer their skills, which will be in demand during the change; rivalry between workers as an incentive for the development of abilities to work, unemployment pushes people to improve, to do their jobs better and faster; a break in employment for retraining and raising the level of education, while looking for a job can contribute to the improvement of employee skills; unemployment also stimulates an increase in the intensity and productivity of labor.

But still, the effects of unemployment largely leave a negative impact on the economy and on social life. And if the search for work has been delayed for a long time, it can become a significant problem in people's lives and be accompanied by serious financial and psychological difficulties, as well as negatively affect the economy. The standard of living of people decreases, production decreases, the level of wages decreases, the taxes increase. Therefore, to avoid these consequences, the state has a series of measures to reduce unemployment.

## **5 Ways to solve the problem of unemployment in the Republic of Kazakhstan**

### **5.1 Government measures aimed at combating the problem of unemployment**

A number of measures are used to prevent the growth of unemployment in Kazakhstan. Let us consider the state measures aimed at combating the problem of unemployment in the country. However, to begin with them, we will define some problematic issues in the economy.

In Kazakhstan, the problem of high taxation still persists, which forces enterprises in a crisis to reduce the number of their staff. There is also the problem of the lack of scientific and technological achievements, which could be solved by active funding of fields of scientific research. At present, the National Academy of Sciences of the Republic of Kazakhstan named after Satpayev has excellent graduates, which are appreciated even abroad, but for some reason our government keeps ignoring their problems.

The lack of effective work of employment centers is also a big problem. In Almaty city because of the inability to find work through employment organizations, the unemployed and the inactive population formed their labor exchange - this is Seifullin Avenue. And there are also organizations in many other cities of Kazakhstan.

In his message to the Kazakhstanis in 2009, President N.A. Nazarbayev noted: *“We have opportunities for the development of the labor market, we don’t need to think of them. And for that we direct the allocated funds. Firstly, it is the reconstruction and modernization of utility networks. These are water supply, heating, energy and sewerage facilities and networks. Secondly, it is the construction, reconstruction and renovation of local roads, as well as the renewal of social infrastructure, first of all schools and hospitals, and thirdly, objects of local importance in each particular settlement. The expansion of social jobs and the organization of youth practice. “*

So, what was done in this direction?



Work has begun and is actively carried out on the career guidance of young people to demanded professions through a system of grants. After graduation, the young man can easily get a job. And another measure to combat youth unemployment is different contests for which young people put forward their business plans. The winner receives the required amount for the implementation of his/her business plan.

The state program "Employment – 2020", the implementation of which began on July 1, 2011, aims to increase the income of the population by promoting sustainable and productive employment. The implementation of this program will reduce the level of poverty in the country from 8.2 to 6%, and the unemployment rate will not exceed 5.5%. And in his message in 2018, the President of Kazakhstan noted: *“The well-being of Kazakhstanis depends primarily on the steady growth of income and quality of life. Incomes grow when a person is hardworking, is a professional in his field, gets a decent salary or has the opportunity to open and develop his own business. Only by cooperative efforts we can create a Universal Labor Society. Firstly, I instruct the government to raise the minimum wage by 1.5 times from January 1, 2019 - from 28 to 42 thousand tenge (to 112.53 USD). This will directly affect 1 million 300 thousand people who work in all sectors of enterprises of various forms of ownership. The increase will cover 275 thousand employees of budgetary organizations, wages will grow by an average of 35%. For these purposes, from the State budget for 2019–2021, it is necessary to allocate 96 billion tenge annually (262040916.60 USD). At the same time, now the minimum wage will not be tied to the subsistence minimum. The new minimum wage will be a catalyst for the growth of wages in general in the whole economy. I hope this initiative will be supported by large companies in terms of raising wages for low-paid workers. Secondly, it is necessary to form stable sources of business growth, to stimulate private investment and promote market freedom. It is business that creates new jobs and provides most of Kazakhstanis with income.”*

Tasks of "Employment – 2020" program:

1. Involvement of self-employed, unemployed and population with low-income in productive economic employment;
2. Development of human resources for the implementation of the industrialization program;
3. Improving the system of directed social assistance.

The program is aimed primarily at training, employment, assistance in organizing their own business at the place of residence, and in the absence of such opportunities, it promotes voluntary moving to the points of economic growth.

The program will be implemented in the following three areas:

1. Training and employment assistance for the self-employed, unemployed and population with low-income in the labor market.
2. Promotion of rural entrepreneurship.
3. Increased labor mobility.

The program is proposed to be implemented in three stages:

2011 was a pilot year, it allowed to work out mechanisms for the implementation of the program and its legal support. In 2011, 84.7 thousand people applied to employment centers for participation in the program, 68.1 thousand of them expressed their desire to participate in the program. 61,504 people applied for participation, of which 58,619 signed a social contract. At the same time, according to the employment program, 38,500 people found a new job, including 6,289 people without additional training.

The second stage: 2012-2015 and the third stage from 2016 to 2020.

In order to implement the program, the Ministry of Labor and Social Protection of the Republic of Kazakhstan is working to improve the regulatory framework.

The reciprocal obligations of the program participants will be strengthened by social contracts.

For the usage of existing and created jobs, primarily on the projects of the Industrialization Map and the Business Roadmap – 2020, an automated Database of current and prospective jobs will operate in real time.

The implementation of the state program "Employment – 2020" also stimulates the development of agriculture. It is expected that the annual involvement of the population in projects in this area will reach 24-26 thousand people.

Government support, including the opportunity to get training in the basics of running a business, get a loan on preferential terms, helps many people to make a decision about starting their own business. For example, in 2012, 27.4 million tenge was allocated for teaching the basics of entrepreneurship, and they were fully mastered.

Also, this program is combatting the problem of youth unemployment. If before a young man without experience could not find a job, then thanks to the "Roadmap to employment - 2020", he has such an opportunity. The employer accepts an employee who although has a small salary, it is paid by the state. Thus, this program breaks a vicious circle. The first results were already there. Youth unemployment in the third quarter of 2012 was 5.4%. And in subsequent years, it dropped significantly - by the second quarter of 2015, youth unemployment was 4.2%. It was allocated to spend 204.2 billion tenge for the implementation of the second stage of "Employment – 2020".

We should also note the methods that were carried out in the third stage of the program. The third direction is considered in case there are no real prospects for the program participants to engage in hired labor or in their own business after going through the previous two directions.

Priority right will be given to rural youth. Because, the following criteria are established for participation in resettlement: a participant must be one of self-employed, unemployed or low-income population; live in settlements with low economic potential; have aggregate monthly income not exceeding the subsistence minimum for each family member living together.

Taking into account the real conditions in the labor market, perhaps will be organized works on shifts basis (a special form of the labor process outside the place of permanent residence of workers when their daily return to the place of permanent residence cannot be provided). In this case, the types of support offered are: relocation subsidies; the provision of a rental housing with the right of buyout; training in a new place of residence; psychological adaptation. More details regarding the providing types of government support in all areas will be reflected in the rules currently being developed by the Ministry of Labor and Social Protection of the Republic of Kazakhstan.

Local executive bodies will be directly involved in building standard rental housing and social infrastructure. And after the actual relocation, a participant in this direction can take part in the first or second direction of the program. The regional commission takes the final decision on the inclusion of citizens and returnees among the participants in this direction of the program and sends relevant information to the district commissions and local employment agencies.

For the effective implementation of the program it is planned to create employment centers at the district (city) level.

But all this cannot be achieved without the support of the people of the Republic of Kazakhstan. As president N.A. Nazarbayev said at the presentation of his new strategy of bringing the country out of the crisis, "Kazakhstan - 2030" – "... *we (the government) cannot implement all these reforms without the proper support of the people of the republic, since it is the people of Kazakhstan who can only lift the country out of crisis. You cannot always hope that a foreign businessman will come, will invest millions of dollars in the country and will live better. This will not happen.*" And I think that not only I agree with this statement.

It can be concluded that the government of the Republic of Kazakhstan is actively combating the problem of unemployment. According to the statistics, the measures taken to combat unemployment are giving results, albeit small ones. Unemployment is declining every year. And if in the future Kazakhstan will adhere to these measures, then unemployment will gradually decrease, and only a small natural rate will remain which there is no way to get rid of.

## **5.2 Suggested solutions to reduce unemployment in the country**

As was revealed in the previous paragraph, the state is struggling with the problem of unemployment, but these measures are not enough, since unemployment continues to exist, although it is decreasing. Of course, there is no way to completely get rid of this problem, since there is always a natural rate of unemployment, and it should be remembered that there must be some "reserve" in the labor market to maintain the natural condition of competition. Otherwise, with an excess of jobs, the demand for labor and, accordingly,

wages will increase. But if it is impossible to compensate costs with the production funds in our state, manufacturers will raise prices for goods and services, which will cause a jump in inflation. However, despite this, we will try to offer additional measures to reduce unemployment in the Republic of Kazakhstan.

As mentioned in previous chapters, unemployment among young people under the age of 25 years is widespread in Kazakhstan, due to a lack of work experience. In this regard, we may need to act like Germany. There exists a highly developed system of vocational training, professionally oriented schools and training directly at workplaces, which minimizes the period of unemployment at the beginning of a person's career. It is also worthwhile to carry out more activities to orient young people to popular professions in schools. We have to inform them more about the prospects of these professions. The interaction of colleges and universities with schools, hospitals, factories and other organizations could also significantly reduce unemployment. Schools should be closely associated with factories, schools, hospitals, etc. Employment agencies should be intermediaries between them and these agencies will be responsible for regulating the balance of the country's professions. For example, in the medical university occurs an ordinary graduation of students. The employment centers appeal to the city hospital with what kind of employees the hospital needs. The hospital provides a list of vacancies and criteria for a new employee. The employment centers, having received this list, sends it to the university, and the university according to the criteria chooses a new hospital employee from a number of graduates. And we also should mention supporting the creation of private enterprises by young people. This can be done as follows: give small loans to them to start their own business. These loans will be considered for a long term, and so even if the enterprise does not bring large incomes, the young man will still be able to repay the loan.

The next way is to create convenient conditions for the labor force, that is, equality of the parties. It is necessary to overcome the alienation of the employee from his labor force, to bring the price of labor in line with the standards of the civilized world. The new labor market model implies the elimination of all forms of forcing people to work; free choice of fields of professional activity; free flow of labor between industries, professional groups, territories; the formation of wages according to the laws of demand, supply and prices of labor; creation of a system of state guarantees, social protection of citizens from unemployment. These measures can be applied in the Republic of Kazakhstan with the help

of thorough state checks. Compliance of the level of wages of subordinates in accordance with their work should be also checked, the state should help people to find a new job in case of residence change, there should also be an opportunity for career growth and conditions for changing jobs in a short time.

One of the important suggestions to solve the problem of unemployment in the country can be considered a direct creation of new jobs at the government's expense, most often for performing works such as community (public) works in the public interest. They allow people to retain useful work skills or even improve them, to re-enter the work rhythm of life. Public works programs have a long history. They can play a large positive role in the economy with their good organization. Public works can basically be divided into two types: the participation of the unemployed in the work on the creation of basic infrastructures, on the strengthening of labor collectives of housing and communal services, on construction organizations, etc.; giving social services to the superannuated and disabled. Other forms of participation of the unemployed in social activities are also possible, for example, works in the field of environmental protection, the construction of roads and railways, cleaning places of residence from garbage and so on. This approach is part of the Keynesian economic model. It showed its effectiveness during the Great Depression in the United States. In total, in 1933 – 1939 in the USA, the number of people employed in public works on the construction of canals, roads, and bridges reached 4 million people.

Also, one of the ways to solve the problem of unemployment can be considered the stimulation of large and small enterprises, which allows to relatively quickly create new jobs. It is supposed that by developing the enterprises will create new workplaces, promoting employment of the population. The main source of stimulation of small businesses is the banking system, whereas their support is mainly a state prerogative. In countries with market economies, state intervention in the economic activities of enterprises is primarily indirect, that is, by regulating taxation, credit and financial mechanisms. Along with financial, there are administrative methods of regulation, which in countries with market economies are reduced to the adjustment of legislation and control over its implementation. In general, loan interest rate subsidies and tax cuts are most often applied. If the state also takes a series of measures to implement these solutions, it will also help reduce unemployment.

It is also worthwhile to implement a series of measures to combat female unemployment. One of the main measures to solve this problem is to increase the number of kindergartens. The state should expand places of kindergartens, as well as stimulate the opening of private ones, for example, reduce taxes for private kindergartens. The opening of new kindergartens also creates new vacancies.

Thus, it can be concluded that the main suggested solutions to reduce unemployment that should be implemented by the government are to stimulate large and small businesses, to create highly developed vocational training systems for young people, to create professionally oriented schools and trainings directly for future professions, supporting the opening of private enterprises by young people by giving them loans, to stimulate the opening of private kindergartens, to develop public works, to create new jobs and convenient conditions for the workforce.

### **5.2.1 Suggested solutions to reduce main forms of unemployment**

Diversity of unemployment complicates the task of reducing it. It is impossible to improve the situation with the use of only one method. As we have mentioned in previous sections, we identify main forms of unemployment such as frictional, structural, and cyclical. In this chapter I would like to focus specifically on these forms of unemployment.

Information about job vacancies has never been perfect in Kazakhstan. As I mentioned in “Unemployment classification” chapter, the lack of information about vacancies is related to frictional form of unemployment. To combat frictional unemployment, I propose to improve information support of the labor market. This provision in all countries is handled by the labor exchange – an employment organization that collects information about job vacancies from employers. And elimination of factors that have negative impacts on labor mobility could also help: the creation of a more developed housing market; an increase in the number of new residential areas; the absence of administrative barriers when moving from one locality to another can help. In the first half of the 90s of last century, quite a lot was done in this direction – mass privatization of housing was carried out, the sale of real estate was permitted.

To reduce structural unemployment, the most appropriate option is a professional retraining program due to the lack of skills that are currently required in a particular profession. This is the only option I could suggest.

The most difficult to deal with cyclical unemployment. Some of the following measures are suggested/taken to solve it:

- creation of conditions for the growth of demand for various goods and services. Employment is growing, unemployment is decreasing, if there is a demand for goods and services on the market, it means more vacancies will be open. Many politicians support the idea of infusing large amounts of money, which will undoubtedly increase the level of demand for goods and services, which will reduce unemployment by expanding production. However, this method is dangerous since there is a likelihood of accelerating the rate of inflation caused by increased demand and poor progress. Therefore, the best way will be to stimulate the growth of exports, which will lead to an increase in production and, accordingly, to an increase in the number of jobs;
- encouragement and support of investments in the reconstruction of the enterprise to increase its competitiveness. By increasing market share, the company will increase production; encouraging investment in the country's economy, which will result in the creation of new industries.

Also, effective ways are:

- creating conditions for increasing the growth of self-employment, that is, programs that help people start their own business, for example, a small business support program;
- as mentioned before, programs of support for young workers, the purpose of which is to create centers for training young people in the most popular professions, creating jobs for young people and their economic incentives.



In order to retain social tranquility and prevent the impoverishment of citizens of a country, society must strive to ensure that unemployment does not exceed the natural rate and create a system of assistance in finding work for the unemployed.

### **5.3 Estimates of implemented measures and forecasting unemployment rates for subsequent years**

As already mentioned, according to statistics over the past years, unemployment in Kazakhstan is decreasing every year. This implies that measures taken by the state are effective, and if it continues to adhere to its measures to combat unemployment, and undertakes new more efficient solutions, the unemployment rate will continue to decline.

The government of Kazakhstan, adhering to the measures already taken to combat unemployment, has reduced it significantly each year from 2010. So, here we can conclude that in the future it will be possible to keep reducing unemployment. In 2019, the unemployment rate will probably be 4.5%, in 2020 4.3% and so on, but you should not forget that there is always a natural rate of unemployment, and in some year, despite the taken measures, unemployment will cease decreasing. It is also worth to consider the fact that it will still be necessary to undertake new measures, because in the future the old ones will definitely stop giving results.

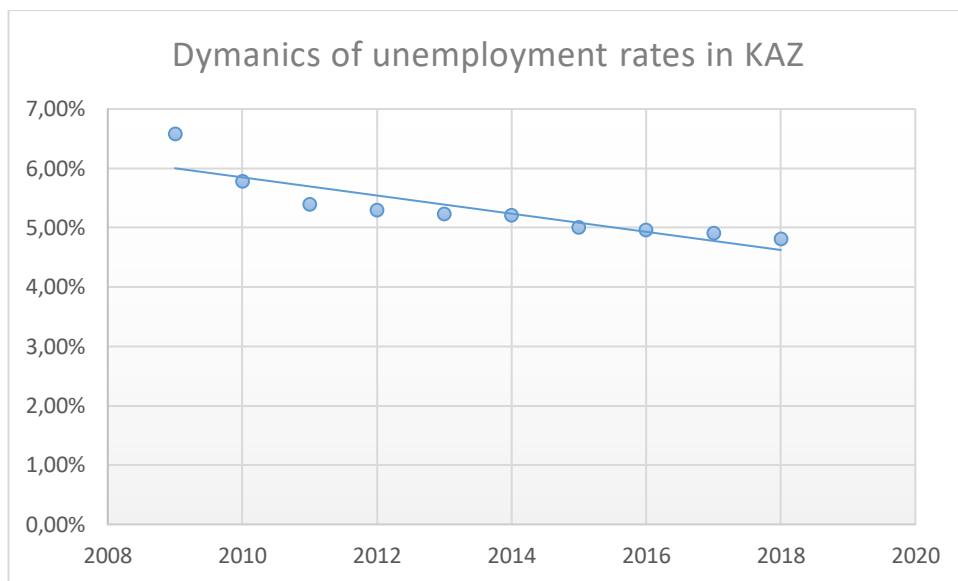
The thesis includes a forecasting attempt of unemployment rates in Kazakhstan for the years 2019, 2020, 2021 using a combination of linear regression function and pseudo-forecasting. The forecasting attempt will be analyzed in time series, and it will be taking into consideration that all other factors will remain constant (*ceteris paribus*). Time series analysis includes methods for analyzing time series data in order to extract meaningful statistics and other data characteristics. Time series forecasting is the use of a model  $Y=T+P+\varepsilon$  to predict future values based on previously observed values. Also, the forecasting will be made by using a software SAS Enterprise Guide, which is meant for advanced analytics, multivariate analyses, business intelligence, data management, and predictive analytics.

**Table №. 2: Unemployment Rate for the period 2009-2018**

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 June
6,58	5,783%	5.39%	5.292%	5.225%	5.2%	5%	4.96%	4.9%	4.8%

Source: <https://tradingeconomics.com/kazakhstan/unemployment-rate>

**Figure №. 8: Dynamics of unemployment rate (according to the table above)**



The Scatter chart above shows that there is a downward trend with no periodicity in the model  $Y = T + \frac{P}{t} + \varepsilon$ , what gives us a non-periodic time series  $y = a + b * t$ .

After running the linear regression, we can see that coefficient of determination (goodness of fit)  $R^2$  is 76,98%, which is relatively good. In statistics, the coefficient of determination is the strength of the relationship or the portion of common variation in two time-series or variables. This is a statistical measure of how well the regression line approximates the real values. 76,89% is close to 100%, therefore we have a strong relationship between variables “Rate” and “time”. Now, our model looks like this  $y' = 6.154 - 0.15291 * t$ .

**Figure №. 9: First linear regression results**

Linear Regression Results					
The REG Procedure					
Model: Linear_Regression_Model					
Dependent Variable: Rate					
Number of Observations Read					10
Number of Observations Used					10
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.92895	1.92895	26.75	0.0009
Error	8	0.57686	0.07211		
Corrected Total	9	2.50581			
Root MSE		0.26853	R-Square	0.7698	
Dependent Mean		5.31300	Adj R-Sq	0.7410	
Coeff Var		5.05418			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	1	6.15400	0.18344	33.55	<.0001
t	1	-0.15291	0.02956	-5.17	0.0009

Anyway, it is not enough to predict, since we need to refer to pseudo-forecasting or ex ante to exclude the last value (4,8%) in order to make a new linear regression what will help forecast. So, our sample size “n” is now 10-1=9. And we run our model once more. The result is  $y' = 6.2075 - 0.1675 * t$ .  $R^2$  is 76,05%, which is still good.

**Figure №. 10: New linear regression results**

Linear Regression Results					
The REG Procedure					
Model: Linear_Regression_Model					
Dependent Variable: Rate					
Number of Observations Read					10
Number of Observations Used					9
Number of Observations with Missing Values					1
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.68337	1.68337	22.23	0.0022
Error	7	0.53003	0.07572		
Corrected Total	8	2.21340			
Root MSE		0.27517	R-Square	0.7605	
Dependent Mean		5.37000	Adj R-Sq	0.7263	
Coeff Var		5.12419			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	1	6.20750	0.19991	31.05	<.0001
t	1	-0.16750	0.03552	-4.72	0.0022

Now, to this new model  $y' = 6.2075 - 0.1675 * t$ , we insert the excluded variable's order number, i.e.  $t = 10$ :  $Y' = 6.2075 - 0.1675 * 10 = 6.2075 - 1.675 = 4.5325$ , and to check whether this result is good or not, we use a Relative Error Forecast  $R\%$ , i.e. forecast quality:

$$REF = \left| \frac{P-A}{A} \right| * 100\%;$$

\*P – the value we have received from the new model

\*A – the value of the excluded variable

$$REF = \left| \frac{4.5325 - 4.8}{4.8} \right| * 100\% = 5.57\%$$

**Note:** REF up to 10% means a good quality, more than 10% low quality.

Since, REF is  $5.57\% < 10\%$  we can proceed to predictions. To make a forecast we use our first model  $y' = 6.154 - 0.15291 * t$ . Here, instead of “t” we use order number of subsequent years, e.g. 2019 –  $t_{11}$ , 2020 –  $t_{12}$ , 2021 –  $t_{13}$ .

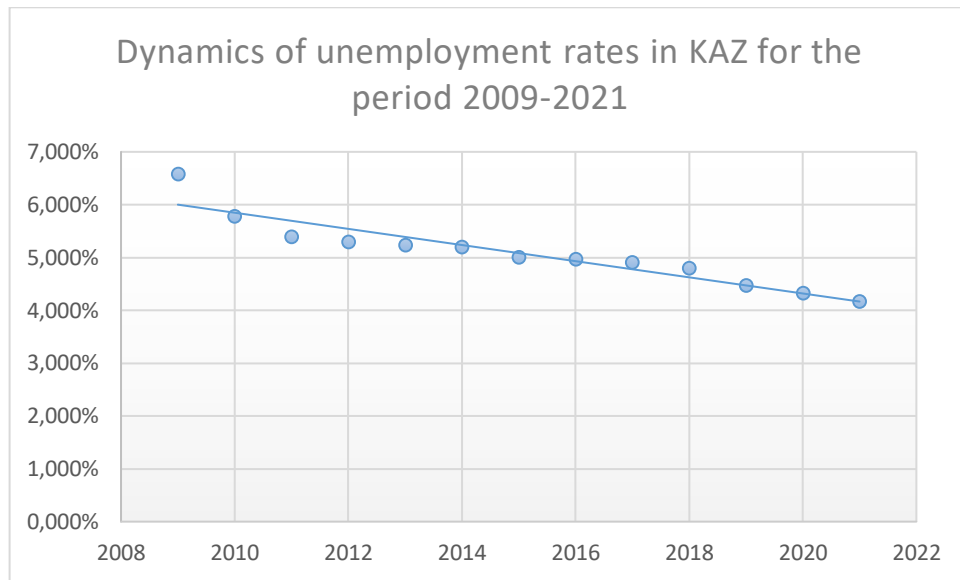
$$2019: y' = 6.154 - 0.15291 * 11 = \mathbf{4,47199}$$

$$2020: y' = 6.154 - 0.15291 * 12 = \mathbf{4,31908}$$

$$2021: y' = 6.154 - 0.15291 * 13 = \mathbf{4.16617}$$

Hence, according to this way of forecasting, unemployment in Kazakhstan in following years will perhaps be declining, but a little. Comparing unemployment rates of 2010 and 2021 we can see a very low difference:  $5.78 - 4.17 = 1.614$ . Even if our assumption that in 2019 the unemployment rate will probably be 4.5%, in 2020 4.3% was confirmed, differences between years as we said are not that big. But, at least some amount of population has received works. This might mean that it requires new measures and ways to combat unemployment every different year. Adhering to the same programs may cause a cessation, consequently the situation may return to its initial point. As we see in a chart below, trend is decreasing, but now it is hard to say when the unemployment will cease declining, if government stops to develop its measures.

**Figure №. 11: Unemployment rate including forecasts**



If you introduce measures proposed in this thesis, for example, to include them in one of the programs to reduce unemployment in the Republic of Kazakhstan, then perhaps they will help to reduce the economy even lower. And then in 2022 the unemployment rate will hopefully be 4%. And the further development of these measures will help to continue reducing unemployment significantly.

In combating the youth unemployment, supporting youth in creation of private enterprises through loans should definitely help. The opening of private kindergartens will help reduce the unemployment rate not only among women, but also new vacancies will be open. Of course, an important role will be played by the stimulation of large and small businesses and the development of community works. All these measures together will help reduce unemployment by at least one percent. As well as these measures will help reduce the number of unemployed who are not listed in the official data but are looking for work themselves.

It can be concluded that unemployment in Kazakhstan will continue to be reduced through ongoing and new measures. And in the future, Kazakhstan will manage to reduce unemployment to a minimum, but this requires new combating methods every new year.

## 6 Conclusion

Thus, we can conclude that unemployment is the excess of the labor supply over the demand for labor. Only the part of the economically active population that is waiting or looking for a job, can work and is ready to start working, but cannot find it, is considered unemployed.

The main forms of unemployment are frictional, structural and cyclical. The main causes of unemployment are forced, less voluntary. Frictional unemployment is voluntary, and structural and cyclical unemployment are forced. Also, unemployment is divided by socio-demographic, occupational group, class, by level of education, by nationality, and by one of the most important indicators — income.

To calculate the unemployment rate, you need to have data on number of unemployed and number of active workers. There is always a natural rate of unemployment, which is formed by frictional and structural unemployment.

The unemployment rate in Kazakhstan is low compared with not only the developing countries, but also the developed countries of the world. But we must always consider the fact that in Kazakhstan the population is much smaller than in other countries. And do not forget that, in fact, the unemployment rate is much higher than official data.

The main voluntary causes of unemployment in the Republic of Kazakhstan are the delay in finding a job due to receiving benefits, an inadequate attitude in a team or with the boss, relocation, constant stress because of work, low wages. Structural changes in the economy, lack of work experience, decline in production, age, lack of need in some professions can be attributed to the main forced reasons. All these reasons entail consequences, which are reflected in the country's economy and social life.

The consequences of unemployment largely leave a negative imprint on the economy and on life in society. And if the job search is delayed for a long time, it can become a significant problem in people's lives and be accompanied by serious material and psychological difficulties, and also have a negative effect on the economy. The standards of living of people decreases, production decreases, the level of wages decreases, tax

burdens increase. Therefore, to avoid these consequences, the state is applying a series of measures to reduce unemployment.

According to the statistics, the applied measures bring results, albeit small ones. Unemployment is declining every year. As additional measures to reduce unemployment, we can offer incentives for large and small businesses, the creation of highly developed schools for young people and training directly for job positions, encouraging the opening of private kindergartens, the development of community works, the creation of new jobs, and the creation of convenient working conditions. If these measures are implemented, unemployment in Kazakhstan will continue to decline.

## 7 References

Literature sources:

- NAZARBAYEV, N.A. (1996). Kazakhstan-2030. Almaty, Republic of Kazakhstan. – 144 pages. ISBN 978-601-7242-06-0.
- JEFFREY, D. S., & FELIPE, L. B. (1993). Macroeconomics in the global economy. London, England: Prentice Hall in Englewood Cliffs, N.J. – 489-512 pages. ISBN-10: 0131022520.
- HEYNE, P. (1997). The Economic Way of Thinking. Seattle, the USA: Catallaxy. 304-330 pages. ISBN: 0132991292.
- AGAPOVA, T.A., & SEREGINA, S.F. (2013). Macroeconomics. Moscow, Russia. – 560 pages. ISBN:978-5-4257-0128-2.
- DMITRIEVA, N.G. (2011). Macroeconomic situation in the Republic of Kazakhstan. Moscow, Russia: Economist.
- MAITAH, M. (2015). Macroeconomics. Praha, Czech Republic: Reprografické studio PEF CZU. ISBN 978-80-213-2748-1.
- DOBRYNIN, A.I., TARASEVICH, L.S. (2001). The economic theory. St. Petersburg, Russia: Peter's Publishing House. Page 544. ISBN 978-5-388-00457-4.
- BULATOV, A.S. (2002). "Economics", textbook. Moscow, Russia. Page 896. ISBN 5981180315.
- GENKIN, B.M. (2002). Economics and Sociology of Labor. Moscow, Russia. Page 416. ISBN 978-5-468-00061-8.
- BELOKRYLOVA O.S., MIKHALKINA, Y.V. (2002). Labor Economics. Rostov-on-Don. Page 242. ISBN: 978-5-222-02692-2.
- The magazine "Kazakhstan. Economy and Life ". No. 4, 1995.
- The Economist books – The shape of the world today. London, England, 1990
- National Statistical Agency "Statistical Press Bulletin", Volume 1-2, Almaty, Kazakhstan, 1997.
- Newspapers "Karavan", "The Globe", "Panorama", "Ark", "New Generation". Almaty, Kazakhstan: Satpayev Street 13.
- The Constitution of the Republic of Kazakhstan, article 24, paragraph 2 (March 10, 1999). Kazakhstan, 2017.



- The Labor Codex of the Republic of Kazakhstan, 2018. Law of the Republic of Kazakhstan dated 10.01.18, No. 134-VI.

Electronical sources:

*Unemployment in Kazakhstan and its dynamics* [online]. Available at:  
<https://articlekz.com/en/article/15262>

*Youth unemployment* [online]. Available at:  
<https://www.zakon.kz/4934802-v-rk-bezrobotitsa-sredi-molodezhi.html>

*Combatting unemployment in Kazakhstan* [online]. Available at:  
[www.konspekt.biz/index.php?text=3901](http://www.konspekt.biz/index.php?text=3901)

*President's message* [online]. Available at:  
[http://www.akorda.kz/ru/addresses/addresses\\_of\\_president/poslanie-prezidenta-respubliki-kazahstan-nnazarbaeva-narodu-kazahstana-5-oktyabrya-2018-g](http://www.akorda.kz/ru/addresses/addresses_of_president/poslanie-prezidenta-respubliki-kazahstan-nnazarbaeva-narodu-kazahstana-5-oktyabrya-2018-g)

*Unemployment in Kazakhstan and ways to combat it.* [online]. Available at:  
<https://yvision.kz/post/451979>

*News in Kazakhstan* [online]. Available at:  
<http://www.zakon.kz>

*News (2018)* [online]. Available at:  
<http://vesti.kz/economy>

*Republic of Kazakhstan: Selected issues* [online]. Available at:  
<http://www.imf.org>

*Youth unemployment in Kazakhstan* [online]. Available at:  
<https://www.zakon.kz/4934802-v-rk-bezrobotitsa-sredi-molodezhi.html>

*The most demanded professions in Kazakhstan* [online]. Available at:  
<https://www.nur.kz/1655658-samyie-vostrebovannye-professii-v-kaz.html>

*The most demanded professions in Kazakhstan* [online]. Available at:  
[https://tengrinews.kz/kazakhstan\\_news/nazvani-samyie-vostrebovannye-professii-v-kazahstane-353800/](https://tengrinews.kz/kazakhstan_news/nazvani-samyie-vostrebovannye-professii-v-kazahstane-353800/)

*Unemployment rate in Kazakhstan* [online]. Available at:  
<http://www.zakon.kz/4928206-uroven-bezrobotitsy-v-kazahstane.html>

*Unemployment in Kazakhstan* [online]. Available at:  
<https://articlekz.com/article/12310>

*Unemployment in Kazakhstan and ways to combat it* [online]. Available at:  
<https://yvision.kz/post/451979>

*Kazakhstan unemployment rate* [online]. Available at:  
<https://tradingeconomics.com/kazakhstan/unemployment-rate?embed>

Unemployment rate – Kazakhstan [online]. Available at:  
[https://www.theglobaleconomy.com/Kazakhstan/Unemployment\\_rate/](https://www.theglobaleconomy.com/Kazakhstan/Unemployment_rate/)

Kazakhstan – Unemployment [online]. Available at:  
<https://www.focus-economics.com/country-indicator/kazakhstan/unemployment>

*Unemployment of youth* [online]. Available at:  
<https://www.coursehero.com/file/22124341/Essay-1/>

*Youth unemployment in Kazakhstan* [online]. Available at:  
<https://www.studymode.com/essays/Youth-Unemployment-In-Kazakhstan-1630200.html>

*Kazakhstan resolving problem of unemployment* [online]. Available at:  
[https://www.inform.kz/en/government-kazakhstan-resolving-problem-of-unemployment\\_a2793439](https://www.inform.kz/en/government-kazakhstan-resolving-problem-of-unemployment_a2793439)

*Kazakhstan Average Monthly Wages* [online]. Available at:  
<https://tradingeconomics.com/kazakhstan/wages>

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