

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

Unemployment and Migration in Ukraine

Kiselnikov Denys

© 2019 CULS Prague

BACHELOR THESIS ASSIGNMENT

Denys Kiselnikov

Business Administration

Thesis title

Unemployment and Migration in Ukraine

Objectives of thesis

The first chapter of the bachelor thesis consists of a theoretical part, which includes the labour market, acquaintance with the basic notions of unemployment, description of the form of unemployment, measurement of unemployment and description of employment policy in Ukraine. The main purpose of this work was to assess development of unemployment in Ukraine and its relation to international migration from Ukraine. It was necessary to analyse the current economic situation, understand the dynamics and make a forecast regarding the future of the country selected indicators. Monitoring unemployment is accompanied by their causes, age structure and regional distribution. Attention is paid to the problems of migration and remittances, which are directly related to the development of the labour market.

Methodology

The methodology of the thesis is based on the theoretical description of the labour market and the problems of unemployment. In addition, in the analytical part of the work, based on statistical data, the development of the labour market in Ukraine is analysed in connection with the development of other macroeconomic and social indicators in a historical context.

Methods used include: data collection and statistical methods of time series analyses.

The proposed extent of the thesis

40-50 pages

Keywords

Ukraine, Unemployment, Labor market, Migration

Recommended information sources

Blanshard O., Macroeconomics, ISBN 978-5-7598-0556-4

Case K., Fair R., Oster S., Principles of Macroeconomics, ISBN-13: 978-0131388987

Hall R., Lieberman M., Macroeconomics Principles & Applications, 6 ed. ISBN-13: 978-1-111-82235-4

Kalinichenko O., MACROECONOMICS Practicum. ISBN 978-611-01-0011-3

Klimenko E.N., MACROECONOMICS Tutorial for independent study of discipline. ISBN 978-966-676-530-0

Mankiw N. G., Seventh Edition Macroeconomics. ISBN-13: 978-1-4292-1887-0

Expected date of thesis defence

2019/20 WS – FEM (February 2020)

The Bachelor Thesis Supervisor

Ing. Pavel Kotyza, Ph.D.

Supervising department

Department of Economics

Electronic approval: 22. 11. 2019

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 25. 11. 2019

Ing. Martin Pelikán, Ph.D.

Dean

Prague on 25. 11. 2019

Declaration

I declare that I have worked on my bachelor thesis titled "Unemployment and Migration in Ukraine" 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 27.11.2019

Acknowledgement

I would like to thank Ing. Pavel Kotyza, Ph.D. for his great willingness, help and valuable advice in writing this bachelor thesis, especially for helpful communication.

I am extremely grateful to my parents and grandparents for their love, caring and sacrifices for educating and preparing me for my future.

Unemployment and Migration in Ukraine

Abstract

The main purpose of this work was to assess development of unemployment in Ukraine and its relation to international migration from Ukraine to European Union countries. The theoretical part includes the labour market, acquaintance with the basic notions of unemployment, description of the form of unemployment, measurement of unemployment and description of employment policy in Ukraine. The analytical part of the work, based on statistical data, the development of the labour market in Ukraine is controlled in connection with the development of other macroeconomic indicators and historical contexts. The economically active part of the Ukrainian population is declining gradually over the specified period. Provided comparison with the European Union countries, to obtain an objective assessment of the economic potential of Ukraine on the background of the highly developed countries. The problems of migration and remittances, which are directly related to the development of the labour market.

Keywords: Ukraine, Migration, Unemployment, Labour market, European Union, Remittances, GDP, Wages, Phillips Curve, Okun's law.

Nezaměstnanost a migrace na Ukrajině

Abstrakt

Hlavním cílem této práce bylo zhodnotit vývoj nezaměstnanosti na Ukrajině a její vztah k mezinárodní migraci z Ukrajiny do zemí Evropské unie. Teoretická část zahrnuje trh práce, seznámení se základními pojmy nezaměstnanosti, popis formy nezaměstnanosti, měření nezaměstnanosti a popis politiky zaměstnanosti na Ukrajině. Analytická část práce, na základě statistických údajů, je vývoj trhu práce na Ukrajině kontrolována v souvislosti s vývojem dalších makroekonomických ukazatelů a historických souvislostí. Ekonomicky aktivní část ukrajinské populace v průběhu určeného období postupně klesá. Provedeno srovnání se zeměmi Evropské unie, získat objektivní hodnocení ekonomického potenciálu Ukrajiny na pozadí vysoce rozvinutých zemí. Problémy migrace a remitencí, které přímo souvisejí s rozvojem trhu práce.

Klíčová slova: Ukrajina, migrace, nezaměstnanost, trh práce, Evropská unie, remitence, HDP, mzdy, Phillipsova křivka, Okunův zákon.

Table of content

1	Introduction	11
2	Objectives and Methodology	12
2.1	Objectives.....	12
2.2	Methodology	12
3	Literature Review	14
3.1	Labour market	14
3.2	Theory of Unemployment	15
3.2.1	Unemployment rate.....	16
3.2.2	Types of unemployment.....	18
3.2.3	Costs of unemployment.....	22
3.2.4	Phillips curve	23
3.2.5	Okun`s law.....	24
3.3	National employment policy	26
3.3.1	Active and passive regulation.....	26
3.3.2	Social protection in different countries	27
3.3.3	Retraining	28
3.3.4	National Policy in Ukraine	28
4	Practical Part	31
4.1	Administrative division of Ukraine	31
4.2	Demographic factor on the labour market	32
4.3	Unemployment in Ukraine.....	32
4.3.1	Period from 1995 - 2005	32
4.3.2	Period from 2005 - 2019	34
4.4	Unemployment in EU countries	42
4.5	Migration from Ukraine	43
4.5.1	International migration stock.....	44
4.5.2	Labour migration	45
4.5.3	Educational migration	48
4.5.4	Remittances and GDP	49
5	Conclusion.....	53
6	References	55

List of figures

Figure 1 Categories of population.....	16
Figure 2 Employment status	18
Figure 3 Phillips curve	23
Figure 4 Economically active population aged 15-70 years, (million people).....	33
Figure 5 Unemployment rate and labour force participation rate in 1995-2005	33
Figure 6 Unemployment rate in Ukraine by ILO Methodology 2006-2018 (%).....	34
Figure 7 Unemployed population in 2019 and 2018, by age group,.....	36
Figure 8 ILO Unemployment rate of population in 2019 and 2018, by region (%)..	38
Figure 9 Causes of unemployment in Ukraine in 2018 (%)	39
Figure 10 Time series of average monthly wages 1995-2018,.....	40
Figure 11 Time series of average monthly wages (2009-2018) (US Dollars).....	41
Figure 12 Unemployment rate in Ukraine and EU countries (%)	42
Figure 13 Unemployment rate in EU countries and Ukraine Q2 in June 2019 (%)..	43
Figure 14 International migration stock, Ukrainians (person).....	45
Figure 15 Number of first residence permits issued by EU to Ukrainian citizens (thous.).....	46
Figure 16 First residence permits issued by EU to Ukrainian citizens,	47
Figure 17 Ukrainian citizens found to be illegally present in EU by year 2010-2018 (person).....	48
Figure 18 Student migration from Ukraine by destination (Top-5), 2017	49
Figure 19 Received remittances in Ukraine by year (\$ billions)	50
Figure 20 Remittances in Ukraine over GDP (% of GDP in current prices).....	51

List of tables

Table 1 Formula of labour force	18
Table 2 Possible labour market conditions	25
Table 3 Unemployed population in 2019, by age group, sex and place of residence	35
Table 4 Unemployed population by region in Ukraine in 2010-2017	37
Table 5 Rate of growth/decrease nominal and real wage 2010-2018	41
Table 6 Remittances in Ukraine by countries	52

List of abbreviations

ILO - International Labour Organization

Eurostat – European Statistical System

Ukrstat – Ukrainian Statistical Office

GDP – Gross Domestic Product

EU – European Union

UN – United Nations

1 Introduction

The choice fell on the topic “Unemployment and migration in Ukraine” because the problem of unemployment in Ukraine is of immediate concern to me, and to learn more about the situation with unemployment in Ukraine was important. The focus of the study was on out the true reasons that hinder economic growth and the emergence of new workplaces. Understanding what steps, the government should take to remedy the situation.

The labour market is the most complex and most dynamic element of a market economy system. The state of unemployment depends on the general economic situation, business development and many other macroeconomic indicators. The labour market is not only the relationship between workers and employers, but also all social, economic, political, demographic and other processes in society. Unemployment has a significant economic and social impact on society. Therefore, the study of the labour market, its structure, the main directions of development will always be important, and its constant monitoring and analysis will be required.

Most people work and are afraid of losing their jobs. According to Maslow's pyramid in the modern capitalist world, money is responsible for two basic sets of needs - physiology and safety. If there is at least a minimal risk of losing income, a person's subconscious mind seeks to preserve what is in order to provide at least minimal needs. Thus, losing a job can lead to an uncertain future and lifestyle changes. The unemployment rate is one of the indicators of an economy that is controlled in individual countries, and especially during periods when it has been growing for a long time, is a very controversial issue. There is a search for causes and efforts to solve this problem with the help of economic policy. The main cause of unemployment in our country is a decline in growth and, as a result, a decline in the economy. The need to solve this problem is connected with the influence of unemployment on society, be it economic or social.

All countries affected by this problem struggle with this phenomenon in different ways. The development of unemployment is often influenced by inadequate communication between the school system and the labour market, low labour mobility and low job creation.

2 Objectives and Methodology

2.1 Objectives

The first chapter of the bachelor thesis consists of a theoretical part, which includes the labour market, acquaintance with the basic notions of unemployment, description of the form of unemployment, measurement of unemployment and description of employment policy in Ukraine. The research question and main purpose of this work was to assess development of unemployment in Ukraine and its relation to international migration from Ukraine to EU countries.

The thesis seeks answers to the following basic questions: How significant are the changes in active employed population in Ukraine and unemployment rate by region? How has the crisis in Ukraine affected the growth dynamics of labour migration to EU countries? How much migrant remittances have an impact on Ukraine's GDP?

It was necessary to analyse the current economic situation, understand the dynamics and make a forecast regarding the future of the country selected indicators.

2.2 Methodology

The methodology of the thesis is based on the theoretical description of the labour market and the problems of unemployment. In addition, in the analytical part of the work, based on statistical data, the development of the labour market in Ukraine is controlled in connection with the development of other macroeconomic indicators and historical contexts. Monitoring unemployment is accompanied by their causes, age structure and regional distribution from 1995 to 2019. Attention is paid to the problems of migration and remittances, which are directly related to the development of the labour market.

In practical part of the thesis provided own elaborations on economically active population, unemployed population from 1995 to 2018, unemployment rate in EU and Ukraine from 2008 to 2018, causes of unemployment in 2019, time series of average monthly wages, rate of growth/decrease nominal and real wage in Ukraine, international migration stock, number of first residence permits issued by EU to Ukrainian citizens from 2013 to 2018, Ukrainian citizens found to be illegally present in EU from 2010 to 2018, remittances in Ukraine from 2008 to 2018 and remittances in Ukraine over GDP (in %)

based on data from official sources such as Eurostat, WorldBank, Ukrstat, ILO, UN, Unesco, National Bank of Ukraine, economic literature.

During the research, the following formulas were used:

1. For finding a remittance share of Ukrainian GDP in current prices: $\text{received remittances (\$ Billions)} / \text{annual GDP (\$ Billions)} * 100 (\%) = \% \text{ of GDP current prices}$
2. for calculating exchange rates UAH/USD: $\text{Starting Amount (Original Currency)} / \text{Ending Amount (New Currency)} = \text{Exchange Rate}$
3. for calculating average monthly wages for 2019 and 2020: $1 - (\text{First Sum of Errors} / \text{Second Sum of Errors}) = \text{R-squared}$

3 Literature Review

3.1 Labour market

The labour market in Ukraine is a complex dynamically changing system, an important multifaceted sphere of the economic and socio-political life of society. On its basis, labour resources are organized, jobs are created in all sectors of the economy, relations between employees and employers are formed in determining prices and working conditions. An efficiently working labour market leads to an increase in the social product, satisfaction of material needs and the well-being of society. The labour market is a system of socio-economic relations between employers and hired labour regarding the purchase and sale of labour services at prices that are influenced by the ratio of supply and demand. (Klimenko, 2015)

In modern market conditions, changes are constantly taking place, both in the political and in the economic life of society, which positively or negatively affect the state and development of the labour market. In this regard, it becomes necessary to study not only the labour market itself, but also the levers of its management, the ways of its development. The role of the state is to create conditions conducive to reducing social tension and security of society, while at the same time enhancing the competitiveness of Ukraine. In this regard, the study of the labour market and the identification of its main problems is relevant. (Zveryakov, 2015)

In macroeconomics, the national and global labour markets are distinguished. The national labour market operates in the economy of the country as a whole. The world labour market operates on a global scale and exists in the form of labour migration. (Klimenko, 2015)

Any country, including Ukraine, seeks to occupy its niche in the world economy, overcome competition, and raise the level of the economy. In order to realize its economic interests, first of all, the state needs to ensure control over the quality of products, goods and services. However, achieving this goal is impossible without professional human capital, the development of which should be facilitated by an efficiently functioning labour market that maintains an appropriate level of employment. (Chukreev, Korytova, 2010)

The labour market performs a specific function of distribution and redistribution of manpower by spheres, industries, regions, professions, specialties, qualifications in

accordance with the law supply and demand. The labour market is, by many principles, the mechanism of its operation, a special market that has several significant differences from other markets. Regulators of the labour market are factors not only macro and microeconomics, but also socio-economic, socio-psychological, not always relevant to salary. Labour market dynamics are characterized by certain factors features, the main of which are the following. (Kalinichenko, 2010)

1. Unlike other factors of production, productivity the employment of employees can vary greatly depending on from how optimally organized the work process is as well from the level of personal interest of employees in the work.
2. The work is usually performed by collectives of employees who perform work of varying complexity.
3. The owner of the means of production and the owner of the workforce, who are not the ones who make the purchase the owner of the workforce, and the specific type of work, conditions and duration employee use.
4. A characteristic feature of the labour market is the constant excess supply of labour over the demand for it.
5. In the labour market there is a competitive struggle between employees for vacancies. In this fight he wins who can provide the owner of the capital with more work profit.

3.2 Theory of Unemployment

From the point of view of classical theory, unemployment is a specific economic phenomenon that occurs as a result of higher wages. In conditions when wages reach a sufficiently high level, that is, they are above the level for which all those who are looking for work find it, there is an excess of supply on the labour market.

Unemployment is the macroeconomic problem that affects people most directly and severely. For most people, the loss of a job means a reduced living standard and psychological distress. It is no surprise that unemployment is a frequent topic of political debate and that politicians often claim that their proposed policies would help create jobs. (Mankiw, 2009)

Classical analysis proves that unemployment arises as a result of the constant aspirations of the most wage workers to increase their wages. Equilibrium in this case is achieved only with the help of the market mechanism. Unemployment can lower wages,

which in turn increases employment. The classical theory considers unemployment to be a temporary voluntary phenomenon, when workers disagree with the reduction in wages and, as a result, give priority to unemployment. (Zveryakov, 2015)

Thus, the classical model justifies the need to reduce wages. But practice shows that and wages (nominal), as a rule, do not decrease during a decline in production, because trade unions oppose this, and employers are not interested in lowering wages, because they may be left without skilled labour.

Keynes's General Theory (1936) provides the foundation for much of our current understanding of economic fluctuations. According to *Keynesian theory* denied wage cuts could increase employment. He was sceptical of attempts to use this tool as the best medicine against unemployment. He recommended another solution: the state should fight unemployment with the help of an expansive financial policy. By increasing government spending or reducing taxes, you can increase aggregate demand in general. This will lead to an increase in demand for labour, which, in turn, will reduce unemployment.

3.2.1 Unemployment rate

The basic definitions and notions about the economic activity of the population developed according to standards and recommendations of ILO that take into account the national specifics of legislative and normative basis.

According to results of the population (households) sample survey on issues of economic activity (see Figure 1), all population of the country aged 15-70 is distributed as three mutually exclusive and exhaustive categories: the employed, unemployed and economically inactive (persons outside the labour force):

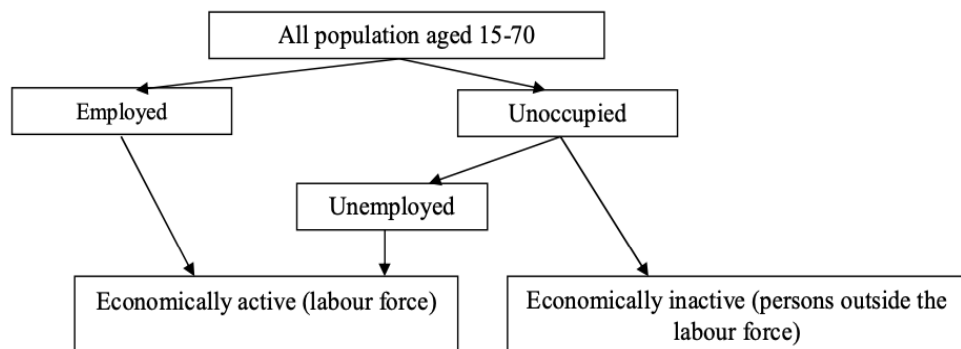


Figure 1 Categories of population

(Source: Senyk, 2018)

Employed are persons aged 15-70 who worked during the surveyed week at least 1 hour were employed to receive cash or in-kind payment, worked individually (self-employed), were employed by other individuals or worked at their own (family) enterprise; worked for free at enterprise or own business that belongs to any member of household or were employed at private subsidiary agriculture in order to sell products produced as a result of their activity; were temporary absent from work, i.e. were formally attached to a workplace, had their own enterprise (business) but did not work during the reference period for some reasons. (Senyk, 2018)

Unemployed (by ILO methodology) are persons aged 15-70 who meet the following four basic requirements:

- were without work (gainful employment)
- were actively seeking a job or were trying to establish their own business during the last 4 weeks before questioning
- were making specific steps during the mentioned period in order to find a gainful employment or work on own enterprise
- were available to work during the two coming weeks, i.e. started working as an employed person or work on own enterprise in order to get payment or income.

The category of the unemployed includes also persons who will start working during the next two weeks; have found a job or await a reply. (Senyk, 2018)

Not in the labour force: This category includes those who fit neither of the first two categories, such as a full-time student, homemaker, or retiree. (Mankiw, 2009)

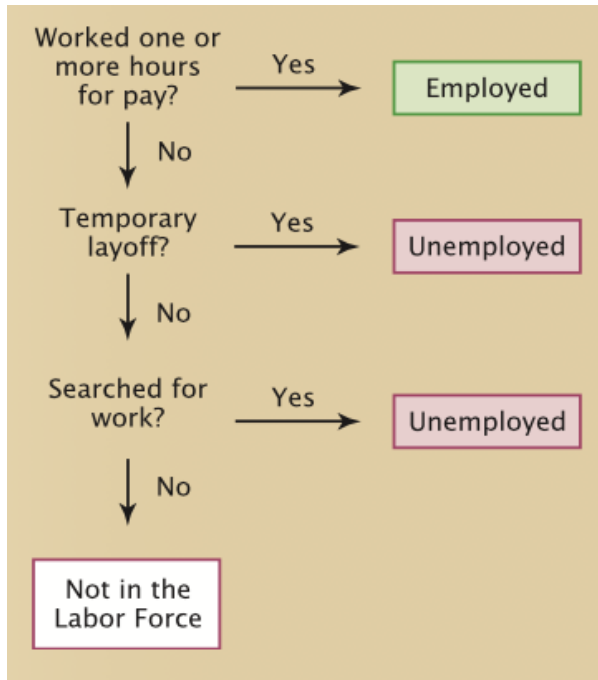


Figure 2 Employment status

(Source: Hall, Lieberman, 2013)

The labour force is defined as the sum of the employed and unemployed, and the unemployment rate is defined as the percentage of the labour force that is unemployed.

$\text{Labour Force} = \text{Number of Employed} + \text{Number of Unemployed}$	$\text{Unemployment Rate} = \frac{\text{Number of Unemployed}}{\text{Labour Force}} \times 100.$
---	--

Table 1 Formula of labour force

(Source: Mankiw, 2009)

According to **Statistical office** in Ukraine the unemployment rate, taking into account the potential labour force, is calculated as the ratio of the number of unemployed people, including the potential labour force to the number of economically active population (labour force), which includes the number of potential labour force. (Senyk, 2018)

3.2.2 Types of unemployment

Short-term joblessness experienced by people who are between jobs or who are entering the labour market for the first time or after an absence is called **frictional**

unemployment. In the real world, it takes time to find a job—time to prepare your résumé, to decide where to send it, to wait for responses, and then to investigate job offers so you can make a wise choice. It also takes time for different employers to consider your skills and qualifications and to decide whether you are right for them firms. If you are not working during that time, you will be unemployed: searching for work but not working. (Hall, Lieberman, 2013)

Because frictional unemployment is, by definition, short term, it causes little hardship to those affected by it. In most cases, people have enough savings to support themselves through a short spell of joblessness, or else they can borrow on their credit cards or from friends or family to tide them over. Moreover, this kind of unemployment has important benefits: By spending time searching rather than jumping at the first opening that comes their way, people find jobs for which they are better suited and in which they will ultimately be more productive. As a result, workers earn higher incomes, firms have more productive employees, and society has more goods and services. (Hall, Lieberman, 2013)

Structural unemployment is linked to technological shifts in production that are changing the structure of labour demand. Occurs if the supply and demand for labour do not match, and the correspondence between these indicators for different types of labour and different regions and sectors of the economy are not the same. Over a period of time, there are some changes in the structure of consumer demand and in manufacturing technology that lead to changes in the structure of demand for labour. Unemployment occurs because the structure of the workforce does not correspond to the structure of jobs. On the one hand, there are new jobs, and on the other - an excess of workers in outdated occupations. (Zveryakov, 2015)

The peculiarity of structural unemployment is that, firstly, such unemployed must necessarily be retrained and retrained, and secondly, the unemployment itself is predominantly forced and long-term. (Klimenko, 2015)

Structural unemployment, resulting from a mismatch, a "mismatch" of the supply and demand structures, is undoubtedly just as inevitable, but more durable and complex than frictional ones. In this situation, the market cannot do without serious assistance from the state. It is necessary to organize a flexible system of retraining of employees, to carry out certain activities within the framework of the structural policy of the state (regional

location of new productions, creation of conditions for interregional migration of labour, etc.). (Kalinichenko, 2010)

The economy may not be operating at its natural level of employment, so unemployment may be above or below its natural level. **Cyclical unemployment** is unemployment in excess of the unemployment that exists at the natural level of employment. During recessions, the part of unemployment that is cyclical unemployment grows. The analysis of fluctuations in the unemployment rate, and the government's responses to them, will be discussed in later parts, where will be explored what happens when the economy generates employment greater or less than the natural level. Consequences of cyclical unemployment for the level of production can be demonstrated using the Okun's law. (Klimenko, 2015)

Seasonal unemployment is caused by seasonal fluctuations in the output of certain industries. Workers are laid off during the off season. These include agriculture, construction, fisheries, services (camps, resorts, etc.). It occurs at certain times of the year. However, seasonal unemployment complicates the interpretation of unemployment data. Seasonal factors push the unemployment rate up in certain months of the year and pull it down in others, even when over all conditions in the economy remain unchanged. For example, each June, unemployment rises as millions of high school and college students who do not want to work during the school year begin looking for summer jobs. If the government reported the actual rise in unemployment in June, it would seem as if labour market conditions were deteriorating. In fact, the rise is just a predictable and temporary seasonal change. (Hall, Lieberman, 2013)

Youth unemployment (according to statistics, citizens are aged between 16 and 31-35). It is usually very difficult for young people to get a job after graduation.

Underemployment is a broad classification covering a range of labour related incongruities. Among the underemployed are those who are earning below market wages for their skill set, those who are highly skilled but working in low-skill jobs, and part-time workers who would prefer full-time work but are unable to find it. As with unemployment, any assessment of underemployment tries to capture those who are economically excluded from the work opportunities for which they trained and prepared

themselves during their schooling. As new entrants to the labour force, young people are more susceptible to underemployment than are their more established adult counterparts. However, youth need to recognize that part-time work in their field or entry-level jobs for which they may feel overqualified can be important steps on the pathway towards long-term career development and, as such, can arguably be considered decent work. Internships and apprenticeships, in particular, may only offer low-wage or part-time employment but can provide youth with valuable job experience as new entrants, as well as on-the-job training and skills development that will serve them well as they build their skill sets and careers. (Youth unemployment report, 2018)

Youth unemployment is quite economically dangerous because the ranks of criminals are replenished from the youth environment and, as a consequence, the criminal situation is aggravated.

Technological unemployment arises as a result of the transition to new generations of technology, technology, when the share of manual work becomes smaller and new technologies require a higher level of skills and retraining of employees. **Economic unemployment** is caused by market conditions, insufficient demand for goods and services, and leads to the curtailment of production and the dismissal of workers. This type of unemployment disappears as production increases. **Marginal unemployment** is the unemployment of the poorly protected population. This includes young people, women with young children. (Zveryakov, 2015)

Economists sometimes use the term **natural rate of unemployment** to refer to the unemployment rate that occurs in a normal functioning economy. This concept is also vague because it is hard to know what a “normal functioning economy” means. It is probably best to think of the natural rate of unemployment as the sum of the frictional rate and the structural rate. Estimates of the natural rate vary from 4 percent to 6 percent. (Case, Fair, Oster, 2012)

Depending on the size of the time **interval unemployment** can be **long** (4-8 months), **long-term** (8-18 months) and **stagnant** (more than 18 months). In the case of stagnant unemployment, there are irreversible changes in the attitude to work: the desire to find a job independently decreases, there is a disqualification, loss of work skills,

habits to a low standard of living. The social stability of the state depends on such social groups. (Zveryakov, 2015)

Voluntary unemployment occurs due to motives that are explicit to an individual, whereas **involuntary unemployment** is foundation by a huge quantity of socio-economic factors, for example level and composition of aggregate demand, structure of the market, government intervention, and so on. (Kalinichenko, 2010)

Scientists have found that the most dangerous phase of unemployment begins after six months of job search. The phase is characterized by signs of destructive changes in personality, and later - helplessness and reconciliation with the situation. A person begins to get used to inactivity, loses professionalism and skills.

3.2.3 Costs of unemployment

Unemployment brings big problems both to the person who is left without work and seeking to get it, and to society, the economy as a whole. The cost of unemployment is what it costs, what is the price paid for it. The fee may be economic, psychological, social, etc. The socio-economic consequences of unemployment include the following. The chief economic cost of unemployment is the opportunity cost of lost output: the goods and services the jobless would produce if they were working but do not produce because they cannot find work. This cost is borne by our society in general, although the burden may fall more on one group than another. If, for example, the unemployed were simply left to fend for themselves, then they would bear most of the cost. In fact, many who are unemployed are given government assistance at least temporarily so that the costs are spread somewhat among citizens in general. (Hall, Lieberman, 2013)

Individual unemployment costs. What are the costs of unemployment for people who find themselves in the role of unemployed? First, the level of their cash income decreases or even becomes zero. Secondly, problems with cash receipts give rise to problems with the volume and quality of consumption. Unemployment adversely affects the level of economic well-being of a person, family. Thirdly, unemployment often leads to loss of skills. (Shpatlakov, 1999)

Unemployment especially when it lasts for many months or years can have serious psychological and physical effects. Some studies have found that increases in

unemployment cause noticeable rises in the number of suicides and admissions to state prisons and psychiatric hospitals. And, tragically, most of those who lose their job and remain unemployed for long periods also lose their health insurance. (Hall, Lieberman, 2013)

3.2.4 Phillips curve

There is an inverse relationship between inflation and unemployment levels, which is determined by the Phillips curve. The essence of the Phillips curve is the mapping of the inverse relationship between the rate of price growth and the rate of increase in unemployment. The decline in unemployment is accompanied by rising prices and wages. The steeper the Phillips curve, the greater the coefficient of reciprocity. (Shpatlakov, 1999)

From the recognition of this inverse relationship between inflation and unemployment, the conclusion comes to economic policy: by stimulating economic growth and increasing employment, the government simultaneously stimulates increased inflation in the economy. On the other hand, the implementation of anti-inflationary policies can lead to economic downturn and rising unemployment. (Shpatlakov, 1999)

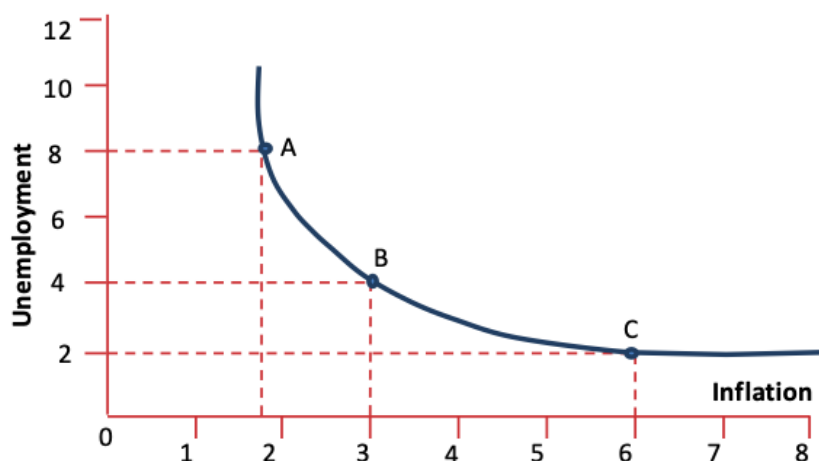


Figure 3 Phillips curve

(Source: Vdovina, 2019)

In the Figure 3 the vertical axis represents the unemployment rate, and the horizontal axis represents the rate of inflation. You can also see that the lower the rate of inflation, the

higher the unemployment rate, and vice versa. For example, according to the information contained in the graph, with inflation running at a low 1.75% annual rate, unemployment would be 8%. With inflation at 3%, unemployment would be reduced to 4%. Double the inflation rate again (to 6%), and unemployment would be reduced to 2%. (Vdovina, 2019)

Practice has shown that the Phillips curve is most acceptable for short periods of time. In the long term (5-10 years), it becomes vertical, because even a low level of employment does not save from the growth of inflation, which is generated by trade unions and monopolistic firms through a steady increase in wages and commodity prices. Such an economic phenomenon arose when there was a simultaneous increase in prices and unemployment, i.e. stagflation, which did not correspond to the negative slope of the Phillips curve. (Shpaltakov, 1999)

Clearly, it is desirable to reduce unemployment and inflation. Unemployment represents a lost opportunity for workers to engage in productive effort and to earn income. Inflation erodes the value of money people hold, and more importantly, the threat of inflation adds to uncertainty and makes people less willing to save and firms less willing to invest. If there were a trade-off between the two, we could reduce the rate of inflation or the rate of unemployment, but not both. (Vdovina, 2019)

3.2.5 Okun`s law

In economics, **Okun`s law** (named after Arthur Melvin Okun, who proposed the relationship in 1962) is an empirically observable correlation in unemployment and losses in a country`s production. The negative relationship between unemployment and real GDP, according to which a decrease in unemployment of 1% point is associated with additional growth in real GDP of approximately 2%. (Mankiw, 2009)

As with the Phillips Curve, Okun's Law has not turned out to be a "law." The economy is far too complex for there to be such a simple and stable relationship between two macroeconomic variables. (Mankiw, 2009)

Mathematical statement: The gap version of Okun's law can be written as:

$\bar{Y} - Y / \bar{Y} = \beta (u - \bar{u})$, where Y is actual output, \bar{Y} is potential GDP, u is actual unemployment rate, \bar{u} is the natural rate of unemployment and β is the factor relating changes in unemployment to changes in output. For example, according to the Okun`s law, a 2% excess of the actual unemployment rate over the natural level means that the lag of the actual GDP and the potential level is $3 \times 2 = 6\%$. (Vdovina, 2019)

Labour market conditions	Unemployment	Number of employees	GDP	Production potential
Excess employment	below the natural level	exceeds average	grows to the maximum possible	increases due to net investment
Normal employment	equal to the natural level	average value	Full time	increases due to net investment
Under employment	above natural level	below the average	increases due to increased capital-labour ratio	decreases due to wear
Recession	above natural level	below the average	continues to decline	underutilization of production opportunities
Growth	above natural level	below the average	growing	underutilization of production opportunities

Table 2 Possible labour market conditions

(Source: Kurakov, 2017)

3.3 National employment policy

The negative effects of unemployment force the governments of market economy countries to actively interfere in the course of economic development, to take measures aimed at maintaining artificially low unemployment and counteracting the fall in real GDP, to implement a policy of social protection of the population.

3.3.1 Active and passive regulation

State policy of regulation of employment of the population can be divided into two main types: **active** and **passive**. An active policy is a set of methods aimed at creating conditions for a faster return of the unemployed to active work. It includes activities to create additional employment areas; training, retraining and advanced training of personnel; increase of labour mobility; rendering assistance in employment, etc. With a passive policy, the state assumes responsibility for the state of workers and employers in the labour market. It includes the payment of funds to compensate the unemployed for their loss of income - registration of the unemployed on the labour exchanges or employment services; determining the amount of unemployment benefits; organization of unemployment benefits system, etc. (Klimenko, 2015)

The task of the government to implement the first direction is to turn real unemployment into natural in terms of level and duration. When unemployment falls below the natural level, the state is not required to regulate it. The government should regulate only involuntary unemployment, seeking its transformation into natural unemployment. Such regulation is achieved: by the establishment of work of labour exchanges; monitoring the state of the labour market; the organization of vocational training and retraining of workers; unemployment insurance system; preferential taxation of small businesses; the development of targeted and regional employment programs. With regard to the social protection of the unemployed, the state uses a set of measures of tax, monetary and legislative policy. Trade unions have a great influence on the employment of the unemployed, the objects of regulation of which are wages, the duration of the work week and holidays, the procedure for hiring and dismissal, and various types of social security. (Kurakov, 2017)

3.3.2 Social protection in different countries

Social protection is defined as the activity of the state and local self-government bodies, public organizations, enterprises, aimed at creating a supportive environment for the environment, maternity and childhood protection, family assistance, public health, training of citizens, employment of the population, labour protection, regulation of wages and incomes of the population, provision of citizens with housing, regulation of state property rights, material services and provision disabled, other citizens in need of social support. Social protection is a practical activity for the implementation of the main directions of social policy. (Zveryakov, 2015)

Another element of the economic security system is unemployment insurance funds, which provide financial assistance to people who have lost their jobs. Legislative scrutiny of the magnitude of the material assistance and the timing of its provision raises serious problems. One is to determine the level of this assistance. The second is the timing of its payments. In different countries, it is decided differently, depending on many specific circumstances. Thus, in the 90s of XX century. the amount of financial assistance for unemployment and the duration of its payment were:

- in the USA - 36% of earnings within 14 weeks;
- in Japan - 60-80% of earnings for 3-12 months depending on the age of the unemployed and other conditions;
- in France - 40 francs a day in addition to 42% of earnings for 1-2.5 years;
- in the UK - £ 28.5 over 52 weeks. (Blanshard, 2010)

It must be emphasized that combating inflation and forced unemployment are mandatory functions of the state in a market economy. If unemployment in a country or an individual region is threatened by a social crisis (explosion), it is considered to have reached a critical level. (Zveryakov, 2015)

The highest known unemployment rate ever experienced by a country with no apparent social strain is 28% of unemployment in Spain in the late 1980s. You can usually expect a more acute situation: the unemployment rate of 18-20% is potentially dangerous. All this forces the state to pursue an active policy of social protection of the population. (Blanshard, 2010)

3.3.3 Retraining

Government employment agencies disseminate information about job vacancies to match jobs and workers more efficiently. Publicly funded retraining programs are designed to ease the transition of workers from declining to growing industries. If these programs succeed at increasing the rate of job finding, they decrease the natural rate of unemployment. (Mankiw, 2009)

It can be carried out by professions, specialties for specific jobs provided by employers. The right to take vocational training in the priority order, advanced training and retraining are:

- unemployed persons with disabilities;
- unemployed citizens after a six-month period of unemployment;
- citizens discharged from military service;
- wives (husbands) of military personnel and citizens dismissed from military service;
- graduates of educational institutions;
- citizens who are looking for work for the first time (previously not working) without a profession (specialty). (Chukreev, Korytova, 2010)

3.3.4 National Policy in Ukraine

Labour Law and Employment in Ukraine defines the state policy in the field of employment, citizens' rights in the field of employment, as well as regulation, organization of employment and the creation of a public employment service.

In 1954, the country joined the **International Labour Organization (ILO)**. The legislation defines the conditions for administrative, constitutional and socio-economic compliance of human rights to work in a market economy, property equality. It creates conditions to ensure employment of the population, taking into account the norms of the Constitution of Ukraine and international law. The ILO is implementing the World Employment Program, according to which it provides practical assistance to countries around the world in choosing policies designed to create more jobs in industry, agriculture, public works and other sectors, as well as in the selection of technologies and training programs that will fully utilize labour resources for economic and social progress.

The **state policy** of Ukraine's employment is based on the following principles:

- ensuring equal opportunities for all citizens, regardless of origin, social and property status, racial and national origin, gender, age, political opinion, religion, to exercise the right to freely choose their type of activity in accordance with their abilities and professional training, taking into account personal interests and social needs; promoting effective employment, preventing unemployment, creating new jobs and conditions for the development of entrepreneurship;
- coordination of activities in the field of employment with other areas of economic and social policy based on state and regional employment programs;
- cooperation of trade unions, associations (unions) of entrepreneurs, owners of enterprises, institutions, organizations or bodies authorized by them in cooperation with government bodies in the development, implementation and monitoring of measures to ensure employment of the population;
- international cooperation in solving the problems of employment, including the labour of citizens of Ukraine abroad and foreign citizens in Ukraine. (Employment Law of Ukraine)

Social protection of the population against unemployment is currently carried out on the basis of the provisions of the Constitution of Ukraine, Fundamentals of the legislation of Ukraine on compulsory state social insurance. Laws of Ukraine “On Compulsory State Social Insurance against Unemployment”, “On Employment of the Population”, other normative legal acts regulating relations in the field of unemployment insurance, norms of international treaties of Ukraine, the consent of which has been provided by the Supreme the Council of Ukraine.

In accordance with these approaches, not only the unemployed but also the economically active population are subject to social protection in the labour market. Social protection of economically active population is carried out in the following main areas:

- state measures related to qualification preparation for employment;
- measures enabling everyone to realize their abilities in the process of work and production activity and the process of such activity itself;
- activities aimed at job creation and support
- employees who lost their jobs.

The Law of Ukraine “On Employment of the Population” guarantees the right of citizens to social protection in the sphere of employment and the right to receive

unemployment assistance for persons recognized as unemployed in due course. Pursuant to Article 7 of this Law, by the decision of local state administrations, executive bodies of the relevant councils may establish transport accessibility and other criteria of appropriate work that enhance social protection of the population.

In addition, under Article 5 of the law, the State provides additional employment guarantees for able-bodied citizens of working age who are in need of social protection and are not able to compete on an equal footing in the labour market, including:

- women with children under the age of six years;
- single mothers who have children under the age of fourteen or disabled children;
- young people who have graduated or stopped studying at secondary schools, vocational or higher educational establishments, have been dismissed from full-time military or alternative (non-military) service and who are provided with the first job, children (orphans) who are left without parental care, as well as persons who are fifteen years of age and who, with the consent of one parent or their substitute person, may, exceptionally, be employed;
- persons of pre-retirement age;
- persons released after serving their sentence or compulsory treatment.

(Employment Law of Ukraine)

4 Practical Part

4.1 Administrative division of Ukraine

A division of the country a system of units of different levels, under which formed by local authorities and government. Today administrative-territorial division of Ukraine into three equal pieces. Each administrative unit has its regulatory bodies arrangement of certain powers. Ukraine is divided into 27 regions: 24 regions, one autonomous republic and two cities with “special status”. The administrative division in Ukraine is directly inherited from the local republican government in the Soviet Union, namely, the Ukrainian Soviet Socialist Republic, and has practically not changed since the mid-20th century. This division is quite complicated, because in addition to several levels of territorial division, it involves its own classification of various settlements. The administrative division includes the following units: autonomous republic, region, district, city, city district, urban-type settlement, village council, village. There are three main criteria according to which the administrative division mentioned above occurs. (Data from Ministry of Foreign Affairs of Ukraine [online])

By geographical characteristics, units are divided into regions (such as the autonomous republic, regions, districts, cities with special status) and settlements (cities, urban-type settlements and villages).

1. According to their status, units can be administrative-territorial units (regions and districts), self-governing territorial units (cities, urban-type settlements and villages). In addition, the Autonomous Republic has the unique status of territorial autonomy, while the districts in the city possess both the characteristics of administrative territorial and self-governing territorial units.

2. According to their position in the administrative division system in Ukraine, units are divided into territorial units of the primary level (cities without division into districts, districts in a city, urban settlement, and village), middle level (districts, cities with division into districts), and higher level (autonomous republic, region, city with special status). (Data from Ministry of Foreign Affairs of Ukraine [online])

4.2 Demographic factor on the labour market

After the Second World War and until the early 1990s, the population of Ukraine continued to increase. In 1991, 51,4 million people lived in Ukraine. Since 1991, the population began to decline and today, according to official statistics, in Ukraine there are 42,1 million people. (Data from UkrStat, 2019). At the same time, the statistics do not cover the number of people who have lived abroad for a long time, and illegal migration, so the real number remains unknown.

In Ukraine, unemployment was first recognized in 1991. Work in the USSR was mandatory by law. Until 1991, Ukraine was part of the Soviet Union. Unemployment was not officially recognized, although of course it existed. The reasons for unemployment at that time were mainly changes in the structure of the economy. The period since 1991 (after the collapse of the Soviet Union) is characterized by a transition economy, i.e. the transition from the planned economy systems to today's market economic system. The illusion of full employment, which has characterized the labour markets of many socialist countries for decades, has turned into a real phenomenon - unemployment. For Ukraine, this period began with the adoption of several failed economic reforms and since 1991, the so-called registered unemployment rate has been calculated. Until September 1996, this rate did not exceed 1% and by the end of the millennium it had not exceeded 5%. (Data from UkrStat, 2019)

4.3 Unemployment in Ukraine

4.3.1 Period from 1995 - 2005

The dynamics of the number of economically active population in Ukraine from 1995 to 2005 is illustrated by the following Figure 4. The largest decline in the economically active population of Ukraine occurred in 1999 (by 3.4 mil) as a result of the 1998 financial crisis which caused problems in the banking sector, a sharp drop in metal prices and a huge dependence of the economy on the Russian one.

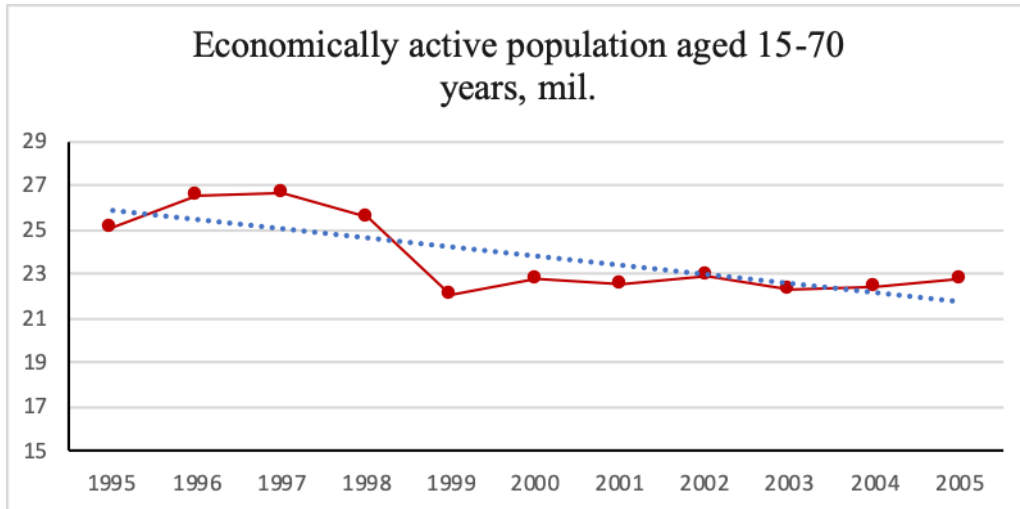


Figure 4 Economically active population aged 15-70 years, (million people)
(Own elaboration, based on data from Ukrstat, 2019)

The state of the labour market of Ukraine can be divided into periods, in accordance with the economic condition of the country. The first refers to the period from 1991 to 1994 - crisis-depressive, another period occurred in 1995–2000 - a period of stagnation, which was expressed by a less intense economic crisis and greater stagnation relative to the previous one. Another period coincided with the beginning of economic growth in 2000 and which continued until 2007. Dynamics of Unemployment rate and labour force participation rate from 1995 to 2006 is illustrated by the following Figure 5.

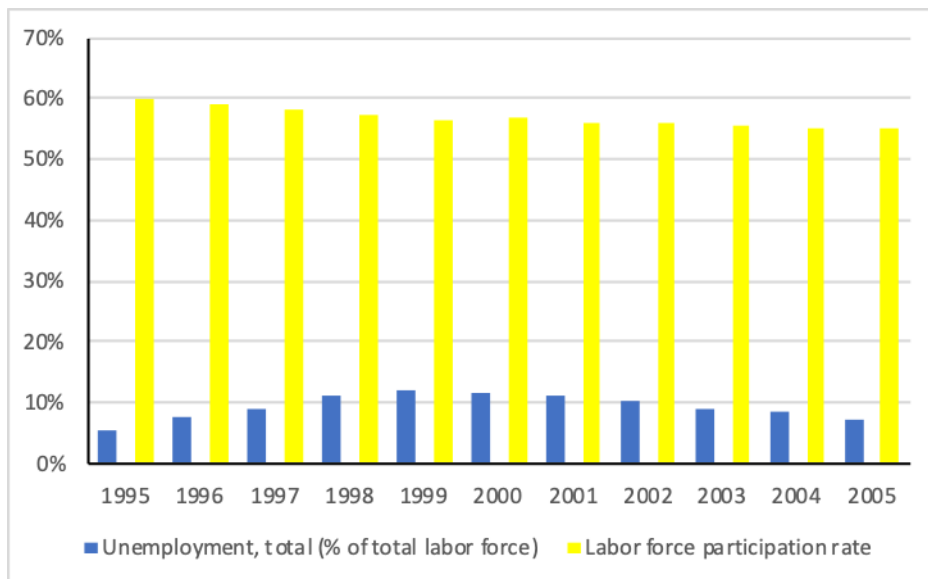


Figure 5 Unemployment rate and labour force participation rate in 1995-2005
(Own elaboration, based on data from Ukrstat, 2019)

4.3.2 Period from 2005 - 2019

For the period of 4 years until 2008 the number of unemployed gradually decreased. But as a result of the world financial crisis in 2008 caused considerable damage to the economy of Ukraine, so the number of unemployment rate increased (by 2.4%). In 2013, another crisis occurred in Ukraine caused by war in Donbass. Ukraine has lost part of its territory, since 2014 the State Statistical Office of Ukraine does not receive data for Crimea and Sevastopol, from 2015 - also excluding a part of temporarily occupied territories in the Donetsk and Luhansk regions. The deepest decline in unemployment rate in Ukraine can be observed since 2014. Compared to 2013, the unemployment rate increased from 7.17 % to 9.27%.

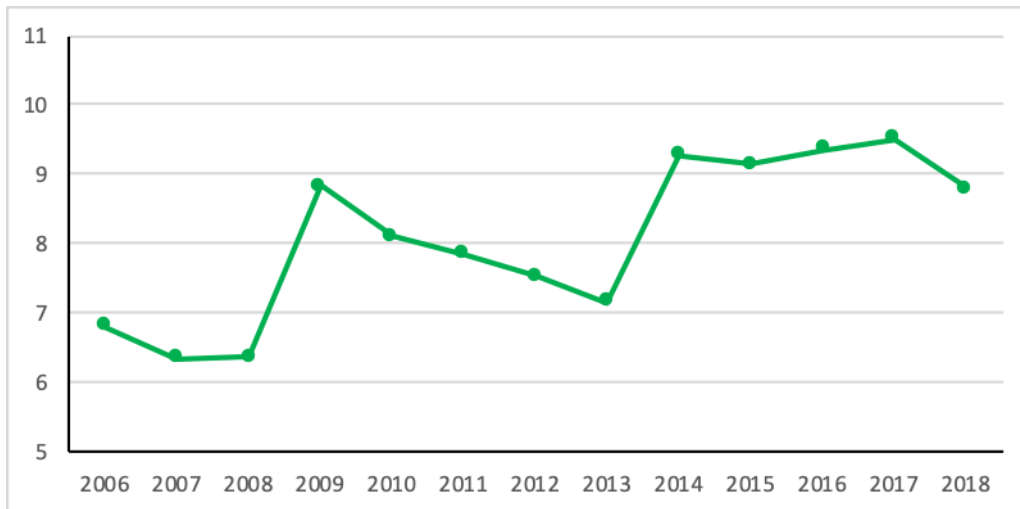


Figure 6 Unemployment rate in Ukraine by ILO Methodology 2006-2018 (%)
(Own elaboration, based on data from WorldBank, 2019)

The Ukrainian economy is starting to recover from the sharp downturn of 2014-2015. But the country is not yet back to the pre-crisis level of 2012. Achieving sustainable and inclusive growth requires solving the long-standing issues of low productivity, poor working conditions, weak labour relations, and lack of socio-economic recovery for conflict-affected or displaced population. (ILO [online])

According to data from International Labour Office the total unemployment rate in Ukraine in 2018 was 8.8% and 9.5% in 2017 (decreased by 0.7%).

Economic activity by age, population, sex

According to the Statistical Office of Ukraine, in 2019 the unemployed population is 1.5 million people, in particular in urban areas - 1 million people and 0.6 million people in rural areas; There were slightly more men in this status than women – 0.85 million and 0.67 million people, respectively. Overall, the unemployment rate was 8.4% of the economically active population aged 15-70 years (information is based on the results of Labour Force Survey). Among urban residents, the unemployment rate was 8.1% (1 mil people), among rural residents - 9.2% (500 thousand persons). The table 3 presents detailed stats of unemployed population by age group, sex and place of residence.

	Total aged 15 years and over		Females		Males		Urban area		Rural area	
	thousands person	percent of labour force in respective age group	thousands person	percent of labour force in respective age group	thousands person	percent of labour force in respective age group	thousands person	percent of labour force in respective age group	thousands person	percent of labour force in respective age group
Total	1528,4	8,4	670,0	7,7	858,4	9,1	1009,4	8,1	519,0	9,2
15-70 years	1528,4	8,5	670,0	7,8	858,4	9,1	1009,4	8,1	519,0	9,2
20-64 years	1486,7	8,4	654,7	7,8	832,0	9,0	988,2	8,1	498,5	9,1
working age	1527,5	8,8	669,6	8,1	857,9	9,4	1008,5	8,5	519,0	9,6
15-24	213,0	15,6	89,7	15,6	123,3	15,6	122,4	15,0	90,6	16,6
25-29	188,2	8,8	63,2	7,2	125,0	10,0	121,1	8,6	67,1	9,2
30-34	201,3	7,6	69,0	5,9	132,3	8,8	133,4	7,1	67,9	8,8
35-39	203,4	7,8	90,1	7,3	113,3	8,2	140,1	7,2	63,3	9,4
40-49	399,3	8,6	201,4	8,6	197,9	8,6	278,5	8,6	120,8	8,6
50-59	322,3	8,3	156,2	7,7	166,1	9,0	213,0	8,1	109,3	8,7
60-70	0,9	0,1	0,4	0,1	0,5	0,2	0,9	0,2	-	-
71 year and over	-	-	-	-	-	-	-	-	-	-

Table 3 Unemployed population in 2019, by age group, sex and place of residence

(Source: UkrStat, 2019)

Comparing the data for the last two years, you can see (Figure 7) in 2018 the unemployment rate was higher by 1.3% than after; female's unemployment rate decreased by 1.4% in 2019; For males decreased by 1%. There are also positive trends in the rate of unemployment in rural areas (the level decreased by 1.7% compared to the previous year) and urban areas (in 2018 was 9.1%; in 2019 became 8.1%). This is possibly due to the stabilization of the country's political situation and economic reforms by government.

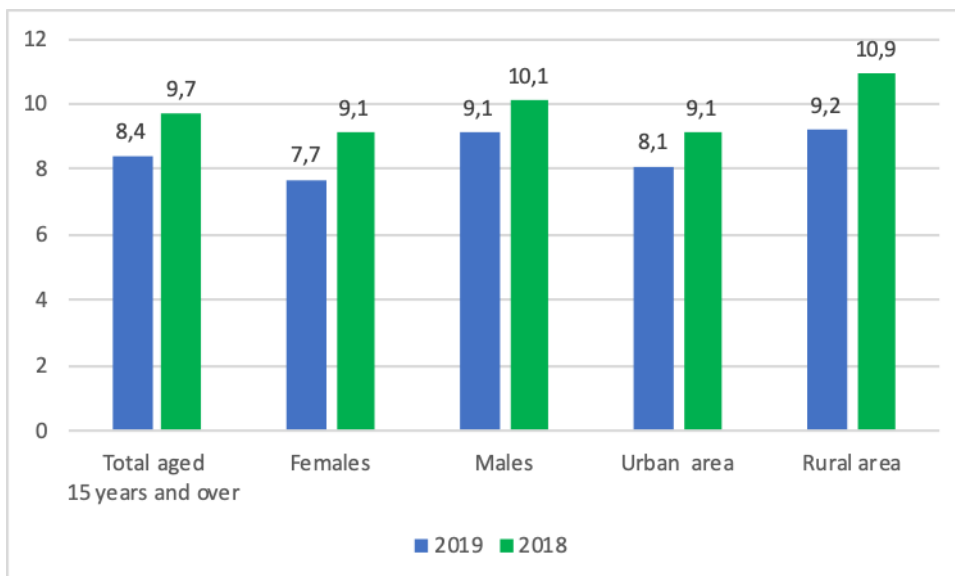


Figure 7 Unemployed population in 2019 and 2018, by age group, sex and place of residence (%)
(Own elaboration, based on data from Ukrstat)

Unemployment by region

The Table 4 shows dynamics of unemployed population and unemployment rate in regions over 2010-2017 year. Pre-crisis period (2010 year) characterized the lower amount of unemployed people almost in every region, the lowest rate of unemployment was in Kyiv (5.8%), Odesa (6.1%), Dnipropetrovsk (7.1%). The largest changing of unemployment rate between 2010 and 2014 happened in Luhansk (increased by 4.2%) and Donetsk (increasing by 2.6%) due to military situation. In some regions in 2014 there was slightly decreasing of unemployment: Ivano-Frankovsk (by 0.1%), Rivne (by 0.8%), Sumy (by 1.1%). In the period from 2014 to 2017, there was a negative dynamic in increasing unemployment rate especially for problem regions (Donetsk and Luhansk). This was due to the fact that people left their homes and moved abroad or to other Ukrainian regions, where the political situation is more stable.

	Unemployed population aged 15-70, thsd. prs.					Unemployment rate, percent				
	2010	2014	2015	2016	2017	2010	2014	2015	2016	2017
Total										
Ukraine	1,713.9	1,847.6	1,654.7	1,678.2	1,698.0	8.2	9.3	9.1	9.3	9.5
Vinnitsia	76.9	77.6	66.3	71.0	76.5	10.0	10.5	8.9	9.7	10.7
Volyn	40.5	44.9	43.1	49.7	52.1	8.5	9.9	9.8	11.5	12.5
Dnipropetrovsk	117.7	128.9	115.3	121.7	129.2	7.1	8.0	7.2	7.9	8.5
Donetsk	182.9	216.4	121.4	122.9	125.3	8.4	11.0	13.8	14.1	14.6
Zhytomyr	60.8	66.6	64.6	63.7	62.0	9.8	11.5	11.3	11.2	10.8
Zakarpattia	50.4	53.1	52.5	56.3	58.2	8.7	9.2	9.2	10.0	10.5
Zaporizhia	66.9	71.3	80.4	81.4	86.2	7.5	8.4	9.7	10.0	10.7
Ivano-Frankivsk	47.5	48.1	51.2	53.5	51.9	8.2	8.1	8.4	8.8	8.5
Kyiv	59.7	62.6	50.7	53.5	51.9	7.3	8.0	6.4	6.8	6.5
Kirovohrad	42.3	49.2	49.8	53.1	52.6	8.9	11.2	11.4	12.4	12.2
Luhansk	78.7	112.7	56.4	57.0	58.3	7.2	11.4	15.6	16.0	16.6
Lviv	93.3	97.2	92.7	87.9	85.8	7.8	8.6	8.2	7.7	7.5
Mykolaiv	49.4	50.1	49.5	53.3	56.3	8.4	9.1	8.9	9.7	10.3
Odesa	68.0	72.5	70.1	72.5	77.2	6.1	6.7	6.5	6.8	7.3
Poltava	69.2	78.3	80.7	82.6	78.3	9.7	11.5	12.1	12.6	12.0
Rivne	60.8	56.7	53.7	56.3	60.1	11.4	10.6	9.9	10.6	11.6
Sumy	59.2	50.6	52.8	48.8	48.0	10.6	9.5	10.1	9.3	9.1
Ternopil	50.8	53.1	54.1	52.8	53.9	10.5	11.3	11.8	11.5	11.9
Kharkiv	97.9	103.5	93.4	84.6	80.4	7.2	7.8	7.1	6.4	6.1
Kherson	46.1	49.6	50.8	55.9	55.0	8.6	9.9	10.2	11.2	11.1
Khmelnysk	54.9	54.0	56.6	53.0	50.2	8.6	9.4	10.2	9.4	8.9
Cherkasy	62.4	59.8	56.7	59.8	59.2	9.9	10.2	9.8	10.4	10.2
Chernivtsi	35.6	36.8	37.7	35.7	34.8	8.5	9.0	9.3	8.7	8.4
Chernihiv	56.1	55.3	51.6	53.9	53.5	10.5	11.2	10.7	11.3	11.2
Kyiv city	85.9	98.7	102.6	97.3	101.1	5.8	6.7	7.0	6.7	6.9

Table 4 Unemployed population by region in Ukraine in 2010-2017

(Source: Senyk, 2017)

For a more specified analysis of the current situation of labour market in Ukraine, will be analysed the unemployment rate by its regions for last two years (Figure 8).

Thus, the highest level of unemployment in 2019 is inherent in the Donetsk – 13.6% (14% in previous year) and Luhansk - 14% (15.1% in 2018) regions, which is explained by the complex socio-economic conditions of life and work during the state's military operation. The almost every region in 2019 compared to 2018 showed a positive trend in reducing unemployment except Volyn (increasing by 0.3%), Khmelnytsky (increasing by 0.1%) and Mykolayiv (increasing by 0.1%). The unemployment rate in Kherson has not changed (10.3%). The lowest rates are characteristic in Kharkiv - 5% (5.3% in the previous year), Odessa 6.1% (6.4% in 2018) and Kyiv 5.9% (6.3% in 2018) regions, which is due to the presence of a powerful industrial complex in them. The reasons that Kharkiv recorded the lowest unemployment rate can be distinguished several: geographically it is close to problem regions (Donetsk and Luhansk) and is the most accessible place for emigration, people come and start working, which in turn lowers the unemployment rate in the region. Another reason was highlighted by the director of the Department of Social Protection of the Population of Kharkiv Yuri Shparaga: “In the Kharkiv region - almost the only one in Ukraine - a mechanism is being applied to support manufacturing enterprises by providing assistance with partial unemployment. 9 enterprises received more than 2 million UAH to

preserve their work teams. Nearly one and a half thousand entrepreneurs who created new jobs last year received compensation for a single social contribution. And this is the best result in Ukraine.” (057.ua, [online]). Thus, the right political and economic reforms help the city to be the best in Ukraine in terms of unemployment.

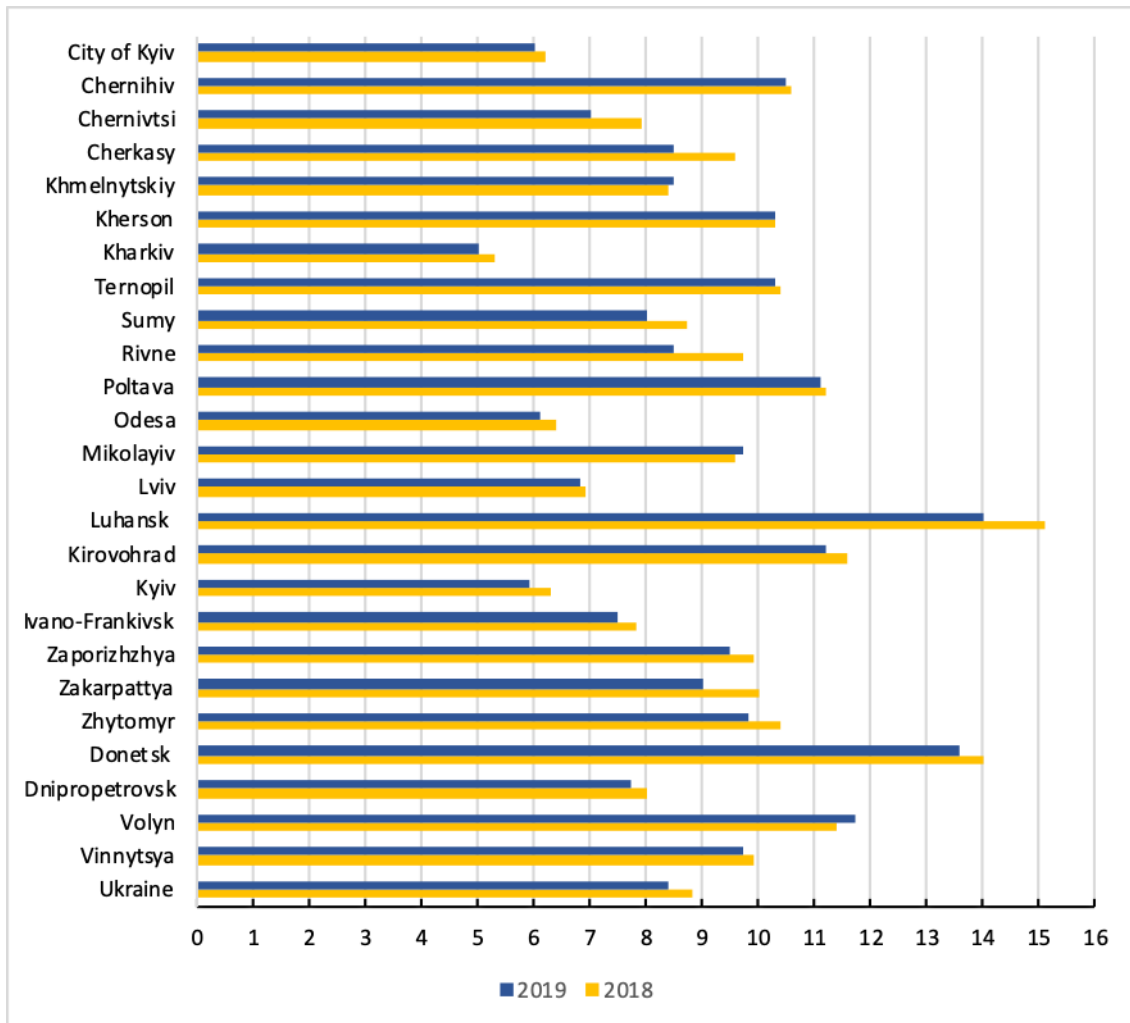


Figure 8 ILO Unemployment rate of population in 2019 and 2018, by region (%)
(Own elaboration, Data from UkrStat, 2019)

Causes of unemployment

Analysing the structure of the unemployed population according to Fig. 9, it should be noted that in 2018 in Ukraine, the largest share among the causes of unemployment was occupied “dismissed at own will” (38%) and laid off for economic reasons (20.7%) of the total number of unemployed. The next reasons for unemployment are the inability to get a

job after graduation from general education and higher education and layoffs to the end of contracts (9.8% and 9.5% respectively). Demobilized after term military service accounted for the lowest share of unemployment causes (0.7% of the unemployed).

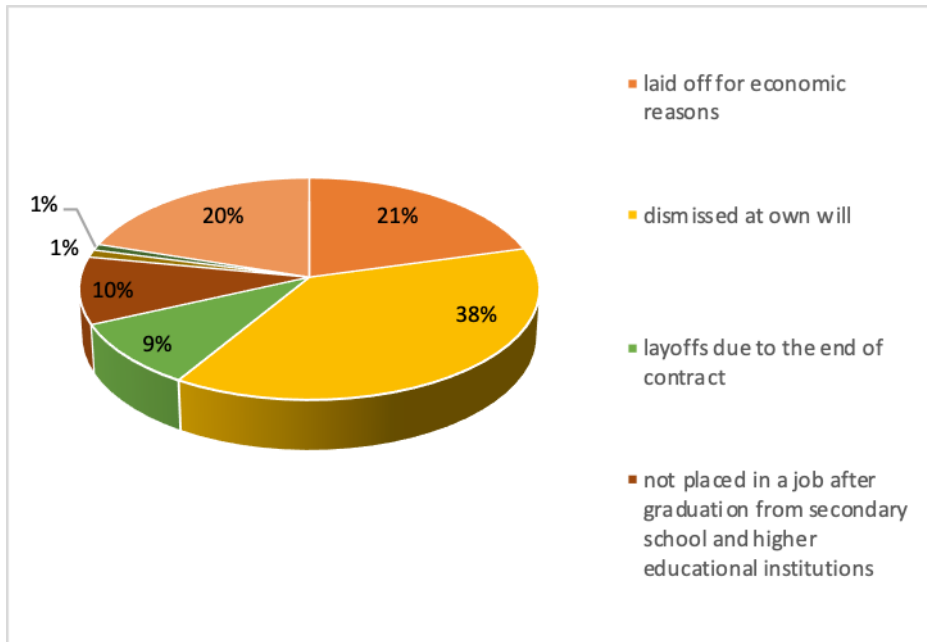


Figure 9 Causes of unemployment in Ukraine in 2018 (%)
(Own elaboration, data from Ukrstat, 2019)

Wages

Analysing the data in Figure 10, we can see that the average monthly wage in nominal terms tends to increase over the period. The lowest value was in 1995 – 75 UAH, and the largest was in 2018 – 8,824 UAH. The largest increase occurred in 2017 compared to the previous year - UAH 1,921, but due to the fact that inflation increased in parallel, the population did not experience any improvement in living standards. The nominal wage measurement does not reflect its real size. For calculation via Excel of average monthly wages for 2019 and 2020 was used linear regression formula which is provided in methodology.

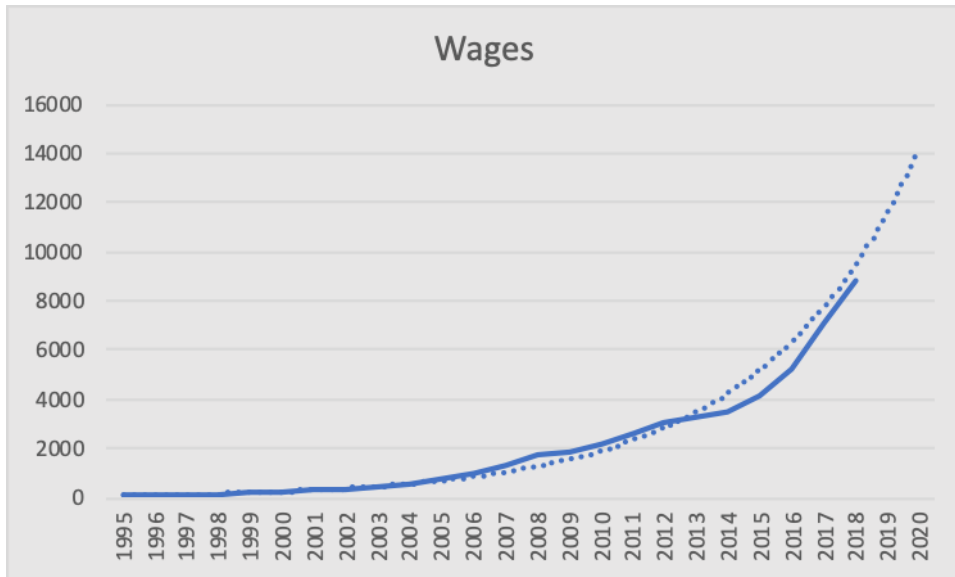


Figure 10 Time series of average monthly wages 1995-2018, with own prediction for 2019 and 2020 (UAH)
(Own elaboration, based on data from Ukrstat, 2019)

The figure 11 presents time series of average monthly wages in Ukraine from 2009 to 2018 in US Dollars. Exchange rate is the price of one currency in terms of another currency.

Exchange rates can be either fixed or floating. Fixed exchange rates are decided by central banks of a country whereas floating exchange rates are decided by the mechanism of market demand and supply. (EconomicTimes [online]) The highest average monthly salary was in 2013 – 410\$; the lowest was in 2015 – 193\$. The average monthly salary in dollars is needed to understand the high level of hryvnia devaluation. The National Bank of Ukraine changed the hryvnia into a fluctuating/floating currency in 2014 in an attempt to try to enforce a stable price for the currency in the Forex market. Over the period 2014-2015 the hryvnia lost about 70% of its value against the U.S. dollar. (Data from National Bank of Ukraine)

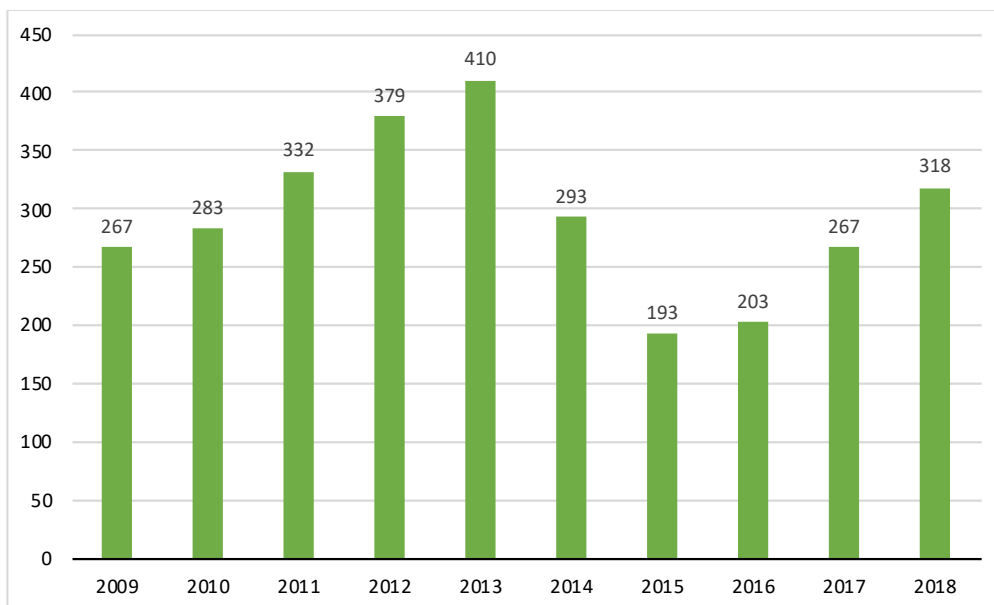


Figure 11 Time series of average monthly wages (2009-2018) (US Dollars)
(Own elaboration, based on data from UkrStat)

Thus, in 2014 compared with the previous year, real wages decreased by 4.4%, and in 2015 compared to 2014 - by 20.3%, which is related to hostilities in the country and unstable political and economic situation in Ukraine, and as a consequence, a decrease in the standard of living of the population as a whole and a decrease in the purchasing power of citizens.

	Nominal wage %		Real wage %	
	to the previous year	December to December of the previous year	to the previous year	December to December of the previous year
2010	117,6	117,9	110,2	110,5
2011	117,7	116,2	108,7	111,0
2012	114,8	110,5	114,4	111,1
2013	107,9	107,2	108,2	106,7
2014	106,0	110,4	93,5	86,4
2015	120,5	130,4	79,8	90,1
2016	123,6	123,8	109	111,6
2017	137,1	135,5	119,1	118,9
2018	124,8	120,5	112,5	109,7

Table 5 Rate of growth/decrease nominal and real wage 2010-2018
(Source: Ukrstat, 2019)

4.4 Unemployment in EU countries

The unemployment rate should be compared with the EU countries, to obtain an objective assessment of the economic potential of Ukraine on the background of the highly developed countries. The Government of Ukraine pursues an active state policy in accordance with the plan for integration into the European Union. In 2019, the historical minimum of Unemployment rate was reached in the countries of the European Union. (6.8%) The previous record high was recorded in 2008 (7.1%). The main reason for the growth of unemployment by 1.6% in 2009 was the global financial crisis. Between 2005 and 2008, the level was declining at a good pace; after the world financial crisis, from 2008 to 2013 it grew inconsistently and reached a maximum in 2013 (11.4%). Starting from 2014, it has been steadily declining to our time. It is noteworthy that in the period from 2010 to 2015, the unemployment rate in Ukraine was lower than the EU average. All dynamic showed in the Figure 12 below.

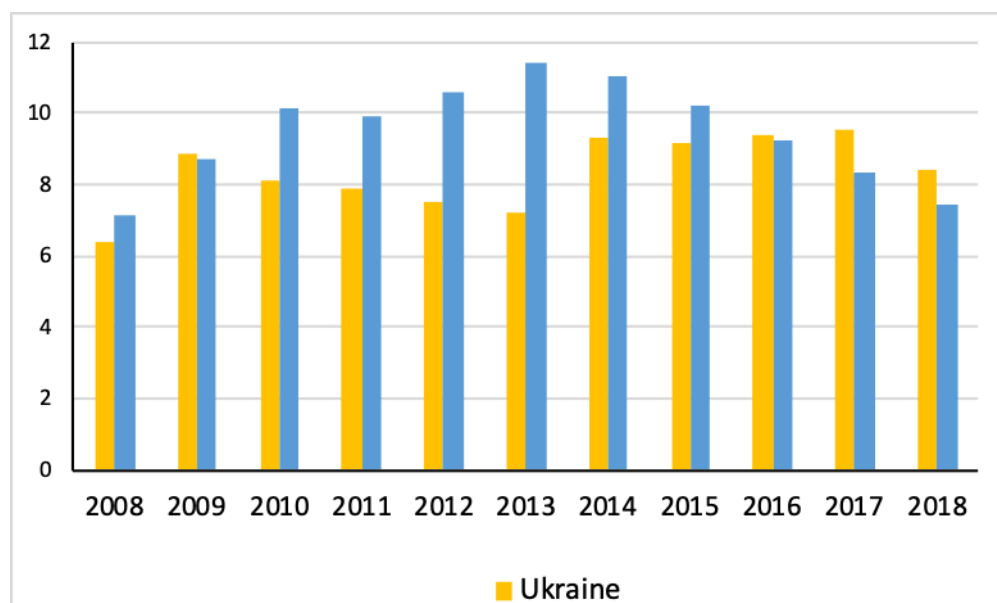


Figure 12 Unemployment rate in Ukraine and EU countries (%)

(Own elaboration, based on Data from Eurostat and ILO, 2019)

Among the Member States of EU28, the lowest unemployment rates in September 2019 were recorded in Czechia (1.9%) and Germany (3.1%). The higher unemployment than in Ukraine recorded only in Spain (14%), Greece (16.9%) and Italy (9.8%). Very low

unemployment in the Czech Republic (1,9%), Germany (3,1%) and Poland (3,2%) is one of the main reasons for labour migration from Ukraine to those countries.

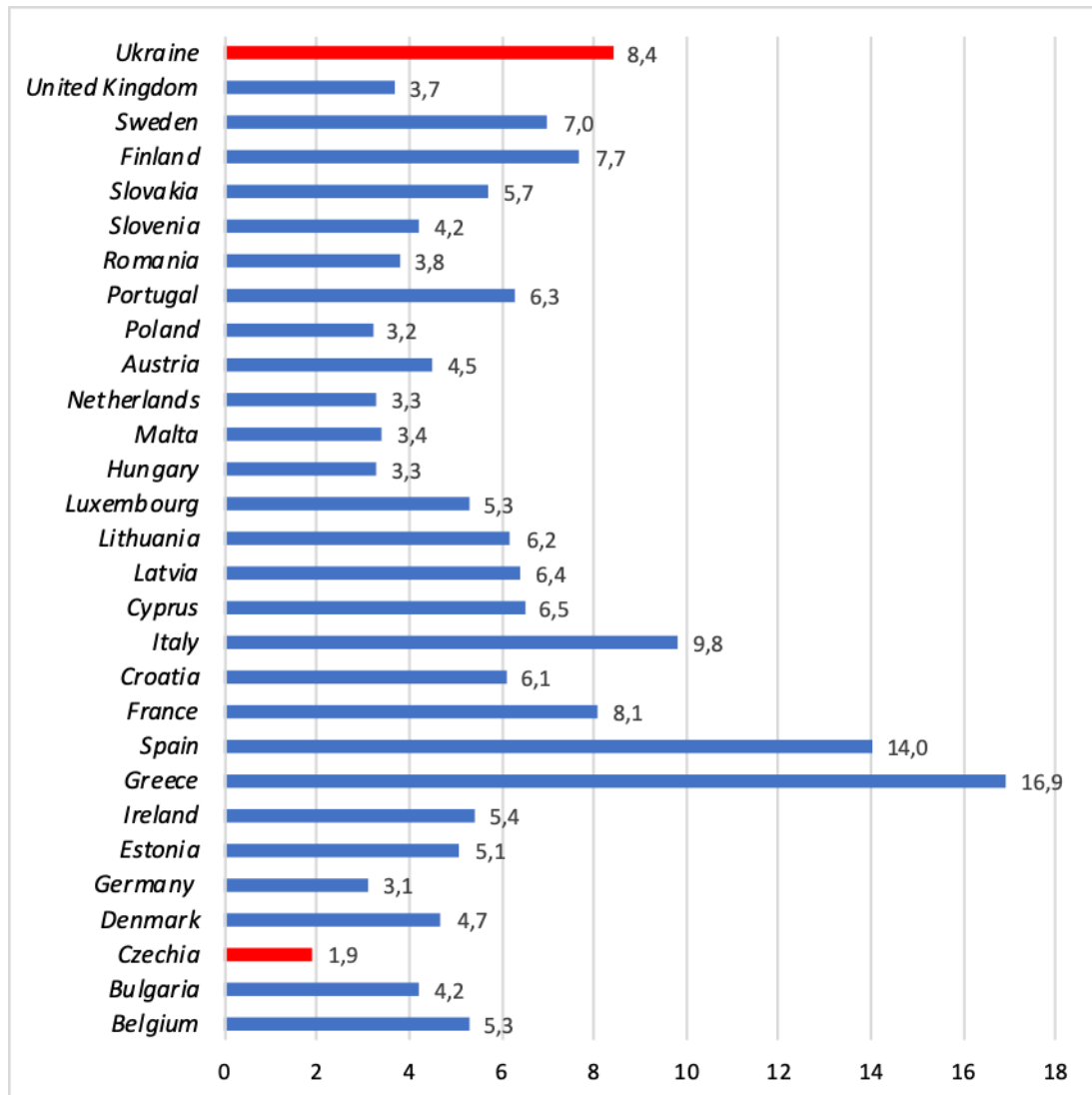


Figure 13 Unemployment rate in EU countries and Ukraine Q2 in June 2019 (%)
(Own Elaboration, Data from Worldbank)

4.5 Migration from Ukraine

Migration as a phenomenon arose and developed simultaneously with humanity. The number of international migrants globally reached an estimated 272 million in 2019, an increase of 51 million since 2010. Currently, international migrants comprise 3.5% of the global population, compared to 2.8% in the year 2000, according to new estimates released

by the United Nations today. (United Nations [online]) There is no country in the world that is, at different stages of its development, one way or another involved in global migration processes, whether as a donor country as a labour supplier or as a recipient country.

According to United Nations the broadest definition of who a **migrant** is – it includes both people who move permanently and those who move for study or work as well as refugees and people seeking asylum.

ILO definition is “a person who migrates from one country to another with a view to being employed otherwise than on his or her own account”. When calculating the total number of migrant workers we should differentiate between the number of people working abroad at a certain time period and those who had the experience of labour migration at any given period in the past 2-3 years (as the State Statistics Service survey establishes) or during the whole life.

4.5.1 International migration stock

The migration situation in Ukraine is characterized by a stable annual, since 1994, numerical advantage of emigration over immigration. However, despite this situation, there is still no migration legislation in Ukraine with EU standards and generally accepted principles and norms of international law, there is no proper migration statistics, and there is a lack of comprehensive research on migration processes to determine their trends and consequences for all spheres of public life.

International migrant stocks are estimates of "the total number of international migrants present in a given country at a particular point in time". (United Nations [online]) At the beginning of the 1990s, after the fall of the USSR, citizens of Ukraine got the opportunity for free movement, and not only within the socialistic camp. According to United Nations data the number of Ukrainians migrants in 1990 was about 6.8 mil., people. Until 2010, this amount gradually decreased and amounted to 4.8 mil., people. The following Figure 14 presents positive dynamics after 2010; in 2017 that number was 4.9 million people.

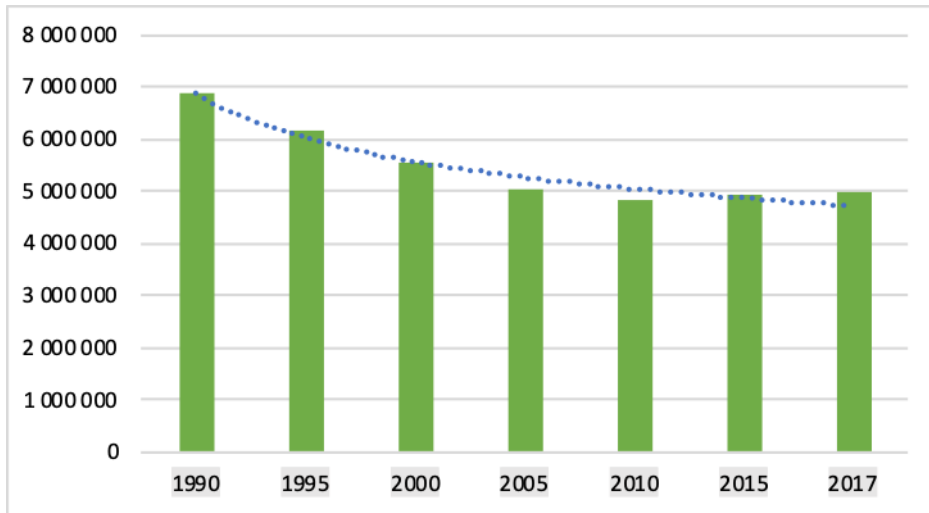


Figure 14 International migration stock, Ukrainians (person)
(Own elaboration, Based on data from UN)

4.5.2 Labour migration

The causes of labour migration are almost exclusively economic in nature. Today, the most common ways to make money are from crossing the state border. However, while in the early 1990s, traveling abroad was driven by business shutdowns, many months of delayed payroll wages, rising unemployment, in most cases their goal is to raise well-being, address housing, finance, and more. The most characteristic indicator of the presence of a labour migration crisis in Ukraine was official statistics from Eurostat in 2018. Ukraine is the leader in external labour migration to EU countries over the past five years. Since 2013, Ukrainian citizens have received more than any other country first permits in EU. In 2013 the number was 236,474 people, (151,65 people of them for remunerated activities); in 2017 this number reached its maximum 662,863 people (580,495 people for employment-related reasons).

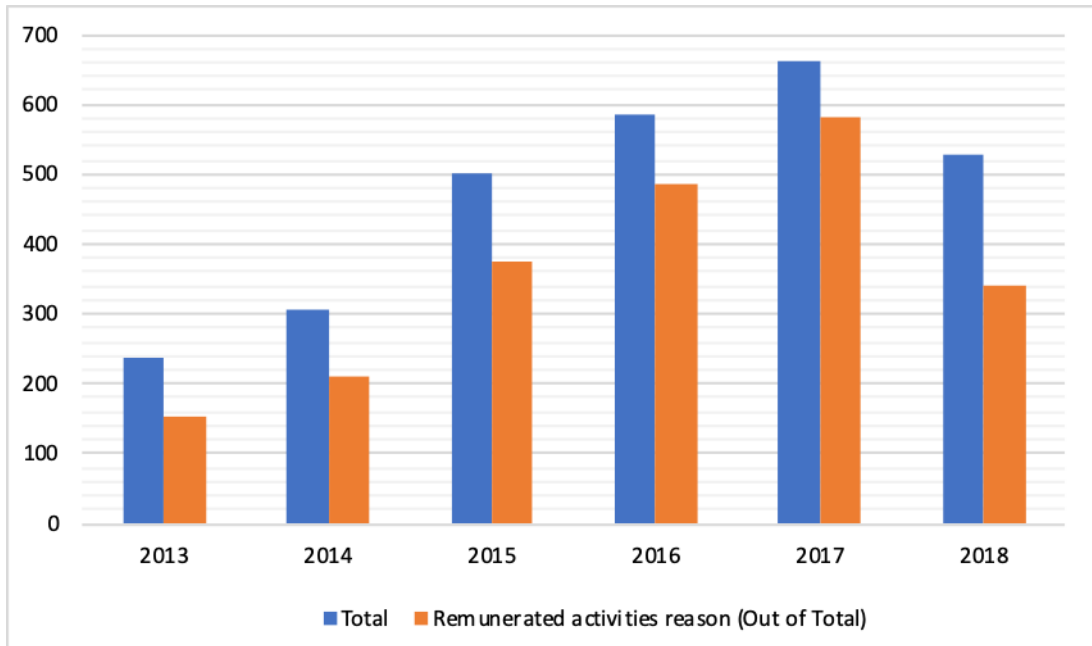


Figure 15 Number of first residence permits issued by EU to Ukrainian citizens (thous.)
(Own elaboration, data from Eurostat, 2018)

The drop in the number of Ukrainians who received first residence permits in 2018 (by 135,100 people) the gradual improvement of the economic situation in Ukraine. According to data from Eurostat, at the same time, another factor likely to reduce the number of asylum seekers from Ukraine to the EU is the proportion of refusals to grant them. The Figure 16 shows the Ukrainians in 2018 benefited from residence permits mainly for employment reasons 65% which means 340,936 people; for family reasons 6% (34,851 people). In 2018 there was an increase in the number of people who received EU permits for family (34,851 people) and educational reasons (62,732 people).

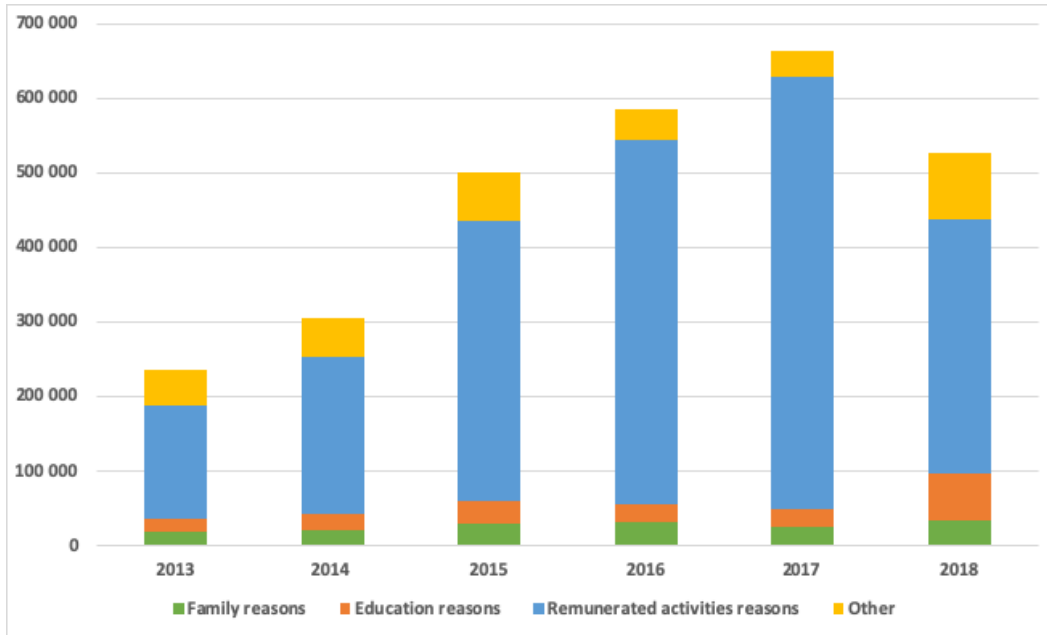


Figure 16 First residence permits issued by EU to Ukrainian citizens, by reason in 2018 (person)
(Own Elaboration, Data from Eurostat, 2019)

An increase in the number of labour migrants entailed an increase in illegal migration. The number of caught Ukrainian illegal migrants is growing rapidly. In 2010, this number was 11,205 people, then in 2018 there were 38,150 people. The Figure 17 illustrated dynamic of Ukrainians who were caught illegally staying in EU countries. The underlying reason migrants illegally stay in the EU is the desire to work and receive European salaries, but some cannot get official work permits, also an important reason is commonplace ignorance of the visa-free regime by the Ukrainians.

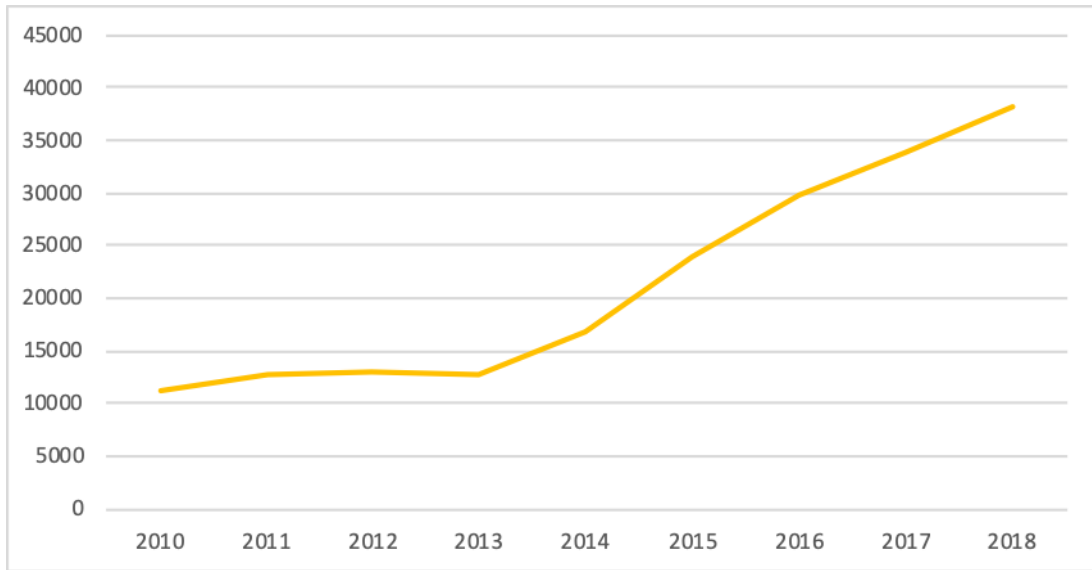


Figure 17 Ukrainian citizens found to be illegally present in EU by year 2010-2018 (person)
(Own elaboration, data from Eurostat)

The massive departure of Ukrainians from the country in search of a better life abroad has already caused an acute shortage of labour in all areas of activity in Ukraine. The negative effects of increasing the outflow of national labour abroad can be attributed: first, the loss of highly skilled labour, which not only reduces the size of the working population in the country and reduces the number of taxpayers, but also ensures the loss of human capital accumulated in the country, but not opportunity to develop fully; secondly, a reduction in the return on investment in human capital, especially among those who have been educated at the expense of the state and subsequently left abroad; third, the lack of deductions from migrants' wages into social and pension funds.

4.5.3 Educational migration

The main reason for the increase in youth migration is the rapid increase in the number of citizens traveling abroad for study purposes. The increase in educational migration is linked to the fact that it may be a step towards further employment and residence abroad.

Total number of students from Ukraine studying abroad in 2017 was 77,219 persons. Top five destinations for Ukrainian youth were Poland (33,370 people), Russia (11,440 people), Germany (9,638 people), Canada (3,425 people), Czechia (2,471 people). The current influx of short-term migrants has been possible due to the specific confluence of

‘pull’ factors (a very liberal system for the employment of foreigners in Poland geared to one geographical direction – the Eastern Partnership countries) with ‘push’ factors: the situation of shock in Ukraine after the outbreak of war and economic collapse in 2014-15. Other important factors attracting Ukrainian citizens to Poland are the low travel costs, the ability to maintain family ties in Ukraine, extensive migration networks, and similarities of language and cultural closeness. This conglomerate of factors has resulted in a noticeable worldwide boom in the short-term migration sector. (Jaroszewicz, 2018)

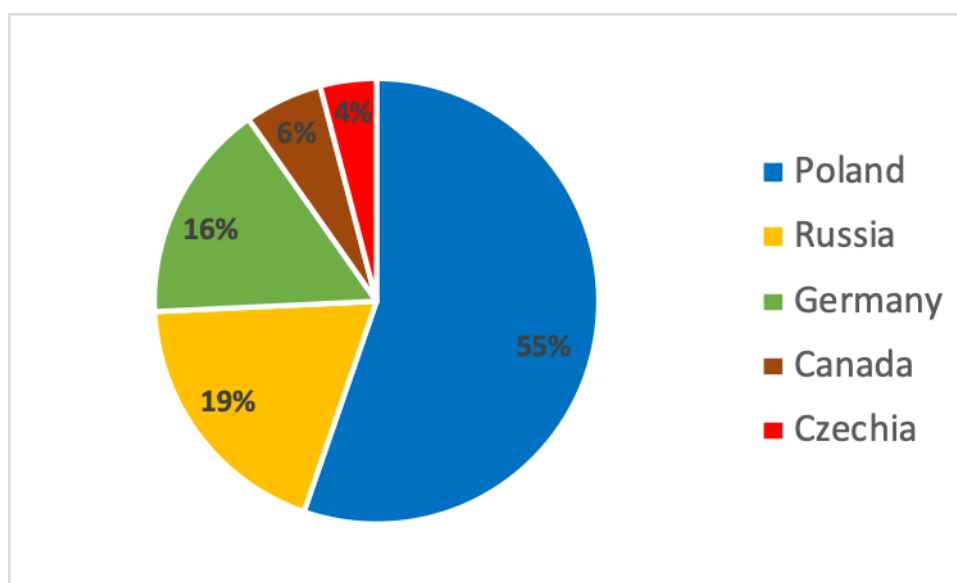


Figure 18 Student migration from Ukraine by destination (Top-5), 2017
(Own Elaboration, Data from UNESCO)

4.5.4 Remittances and GDP

According to National Bank of Ukraine, the region’s largest remittance recipient, received a new record of more than \$11 billion in 2018, up about 19% over 2017. After the fall in the number of remittances in 2014 (\$6.5 billion), starting in 2015, there has been a dynamic growth up. This surge in Ukraine also reflects a revised methodology for estimating incoming remittances, as well as growth in neighbouring countries’ demand for migrant workers.

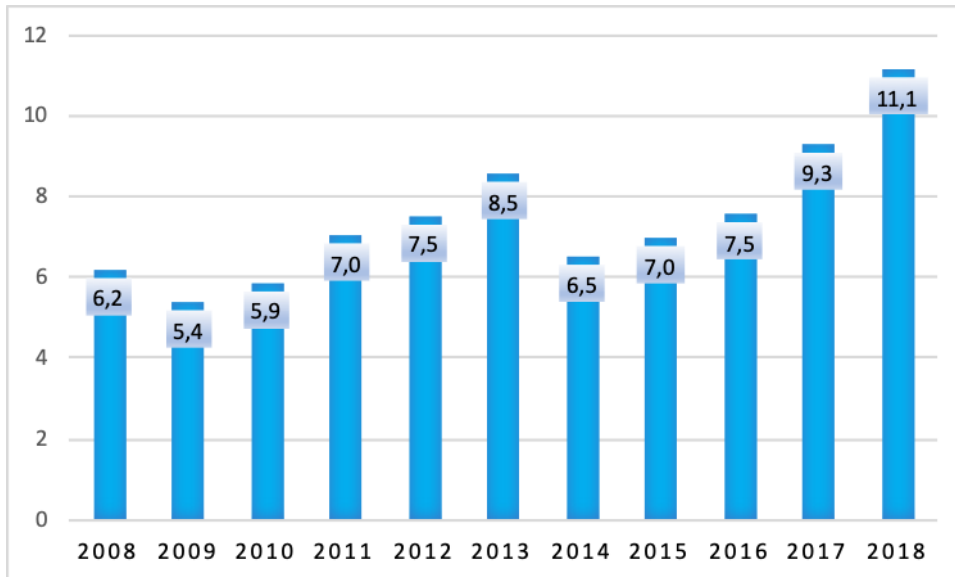


Figure 19 Received remittances in Ukraine by year (\$ billions)
(Own elaboration, Data from National Bank of Ukraine)

Remittances from Ukrainian migrants working in high-income countries to Ukraine are a rising source of extra income for the families of workers. They are also a potential source of funding for the social and economic development of Ukraine as a whole, given the increasing size of aggregate remittance inflows. Such a sharp increase (Figure 20) in the share of remittances in the national GDP in 2015 (by 3.8%) should be associated primarily with a catastrophic decrease in this GDP due to the aggravated military situation in Ukraine. These remittances are increasingly playing the role of the country's economic condition.

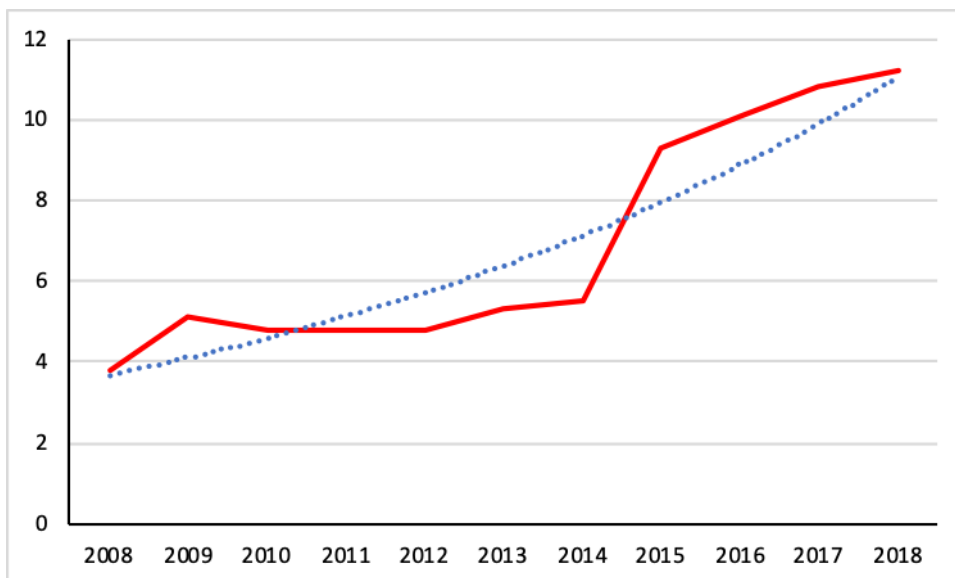


Figure 20 Remittances in Ukraine over GDP (% of GDP in current prices)
(Own elaboration, Data from National Bank of Ukraine)

The Table 6 indicates dynamic of changing incoming remittances in Ukraine. In 2016 The National Bank of Ukraine ranked Poland first of the top countries from where remittance to Ukraine is usually made (26.4% of total); Russia was named the second one (18.5%). Until 2018, the trend continues, and Poland's share was 32.8% (\$3.6 billion); the share of Russia is decreasing – 9.8% (\$1 billion).

Countries	2015		2016		2017		2018	
	USD millions	% of total	USD millions	% of total	USD millions	% of total	USD millions	% of total
Receipts	6959	100.0	7535	100.0	9264	100.0	11111	100.0
<i>including:</i>								
Poland	1329	19.1	1991	26.4	3116	33.6	3649	32.8
Russian Federation	1835	26.4	1396	18.5	1292	13.9	1091	9.8
United States	516	7.4	576	7.6	679	7.3	870	7.8
Czech Republic	314	4.5	377	5.0	435	4.7	846	7.6
Italy	350	5.0	412	5.5	447	4.8	492	4.4
Germany	270	3.9	291	3.9	318	3.4	426	3.8
United Kingdom	245	3.5	259	3.4	311	3.4	394	3.5
Cyprus	245	3.5	249	3.3	285	3.1	341	3.1
Israel	108	1.6	171	2.3	280	3.0	337	3.0
Greece	191	2.7	179	2.4	178	1.9	191	1.7
Virgin Islands,British	35	0.5	38	0.5	55	0.6	157	1.4
United Arab Emirates	82	1.2	93	1.2	120	1.3	153	1.4
Singapore	75	1.1	73	1.0	104	1.1	129	1.2
Netherlands	67	1.0	71	0.9	98	1.1	123	1.1
Turkey	44	0.6	57	0.8	85	0.9	106	1.0
Canada	97	1.4	73	1.0	78	0.8	97	0.9
Switzerland	62	0.9	63	0.8	76	0.8	89	0.8
Spain	61	0.9	66	0.9	76	0.8	88	0.8
Portugal	43	0.6	48	0.6	52	0.6	57	0.5
Norway	38	0.5	42	0.6	52	0.6	55	0.5
Other countries	952	13.7	1010	13.4	1127	12.2	1420	12.8
<i>Reference:</i>								
EU countries	3397	48.8	4254	56.5	5697	61.5	7150	64.4
CIS countries	1992	28.6	1553	20.6	1448	15.6	1250	11.3

Table 6 Remittances in Ukraine by countries

(Source: National Bank of Ukraine)

5 Conclusion

The problem of unemployment is a key issue today, especially in the market economy of the country. And if it is not resolved, it is impossible to adjust the effective functioning of the economy and the unemployment rate will increase.

The economically active part of the population is gradually decreasing; one of the main causes is high mortality. It is noteworthy that in the period from 2010 to 2015, the unemployment rate in Ukraine was lower than the EU average. As a result of the research, the regions of Ukraine with the lowest unemployment rate were identified: Kiev (5.9%), Odessa (6.1%), Kharkov (5%), which is due to the presence of a powerful industrial complex in them. Also, a huge problem for the national economy and the high surge in migration as a whole was the armed conflict that began in 2014, the consequences of which are still felt by citizens. The GDP indicator is affected by the consequences of armed conflict: the destruction of production capacities, infrastructure, transport, the loss of the ability to use land as a result of shelling, mining, and pollution. In addition, the departure of labour from the territory of the country, civilian casualties have a side effect on this indicator. The devaluation of the national currency is one of the permanent consequences of armed conflict, regardless of whether there is an effect for all other macroeconomic indicators.

The migration situation in Ukraine is characterized by a stable annual, since 1994, numerical advantage of emigration over immigration. Migration effects can have both positives and negatives for working people and human development in general. The main internal, both national and regional factors are discrepancy between the level of remuneration and the actual cost of living in Ukraine; long-term unemployment and reduced demand for certain specialties in some regions of the country; reducing the level of welfare of the population in rural areas; low level of remuneration of skilled workers in Ukraine compared to the countries of possible employment. Ukraine is the leader in external labour migration to EU countries over the past five years. Since 2013, Ukrainians have received more than any other country first permits in EU. In 2013 the number was 236,474 people, (151,65 people of them for remunerated activities); in 2017 this number reached its maximum 662,863 people (580,495 people for employment-related reasons). The drop in the number of Ukrainians who received first residence permits in 2018 (by 135,100 people) the gradual improvement of the economic situation in Ukraine. According

to data from Eurostat, at the same time, another factor likely to reduce the number of asylum seekers from Ukraine to the EU is the proportion of refusals to grant them. Total number of students from Ukraine studying abroad in 2017 was 77,219 persons. Top five destinations for Ukrainian youth were Poland (33,370 people), Russia (11,440 people), Germany (9,638 people). For Ukrainians, the main reason for choosing Poland is its geographical proximity and the low language barrier.

Increasing in the share of remittances in the national GDP in 2015 (by 3.8%) should be associated primarily with a catastrophic decrease in this GDP due to the aggravated military situation in Ukraine. In 2016 The National Bank of Ukraine ranked Poland first of the top countries from where remittance to Ukraine is usually made (26.4% of total). Total of remittances increased more than twice in 2018 (11.1 billion USD) in compare to 2009 (5.4 billion USD).

If after the stabilization of the political situation in Ukraine, the economy of the country will develop in such a way that the Ukrainian migrants will be able to get decent wages in order to ensure a normal living conditions for his family, social guarantees, favourable conditions for doing business, he will not need to seek low skilled work. So far, there is no reason to speak of any improvement in terms of labour outflow from Ukraine.

6 References

- Blanshard O., *Macroeconomics*, ISBN 978-5-7598-0556-4
- Case K., Fair R., Oster S., *Principles of Macroeconomics*, ISBN-13: 978-0131388987
- Chukreev P., Korytova E., *POPULATION EMPLOYMENT AND ITS REGULATION*, 2010
- Hall R., Lieberman M., *Macroeconomics Principles & Applications*, 6 ed. ISBN-13: 978-1-111-82235-4
- Keynes J. *The General Theory of Employment, Interest and Money*, 1936 ISBN 8892641530
- Klimenko E.N., *MACROECONOMICS Tutorial for independent study of discipline*. ISBN 978-966-676-530-0
- Kalinichenko O., *MACROECONOMICS Practicum*. ISBN 978-611-01-0011-3
- Kurakov L., *MACROECONOMICS textbook for high schools*, ISBN978-5-905934-36-0
- Mankiw N. G., *Seventh Edition Macroeconomics*. ISBN-13: 978-1-4292-1887-0
- Senyk I. *Economic Activity of Population in Ukraine*, 2017
- Shpatlakov W., *MACROECONOMICITY I Tutorial*, 1999
- Vdovina E., *MACROECONOMICS*, 2019
- Jaroszewicz M., *Migration from Ukraine to Poland the trend stabilises* ISBN 978-83-65827-29-6
- Zveryakov M., *MACROECONOMICS Tutorial*
- World Youth Report: Youth and the 2030 Agenda for Sustainable Development* ISBN: 978-92-1-130349-0

ONLINE SOURCES

About ILO in Ukraine. [online] available from:

https://www.ilo.org/budapest/countries-covered/ukraine/WCMS_470662/lang--en/index.htm (18. 11. 2019)

UIS Statistics [online] available from: <http://data.uis.unesco.org>

ILO Free and open access to labour statistics [online] available from: <https://ilostat.ilo.org/data/> (16. 11. 2019)

World Bank Open Data [online] available from:

<https://data.worldbank.org> (18. 11. 2019)

Eurostat data [online] available from:

<https://ec.europa.eu/eurostat/data/database> (18. 11. 2019)

UkrStat data [online] available from: <http://www.ukrstat.gov.ua> (17. 11. 2019)

057.ua [online] available from: <https://www.057.ua/news/1546439/v-harkovskoj-oblasti-samyj-nizkij-v-strane-uroven-bezroboticy-naselenia> (17. 11. 2019)

MFA.GOV.UA [online] available from: <https://mfa.gov.ua/en/about-ukraine/info/regions> (18. 10. 2019)

UnitedNation.org [online] available from:

<https://www.un.org/development/desa/en/news/population/international-migrant-stock-2019.html> (12. 11. 2019)

Economic Times [online] available from:

<https://economictimes.indiatimes.com/definition/exchange-rate> (12. 11. 2019)