

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

**The analysis of unemployment in Czech Republic –
Case study of the Liberecký Region**

Dominik Pechr

©2016 CULS Prague

BACHELOR THESIS ASSIGNMENT

Dominik Pechr

Economics and Management

Thesis title

The analysis of unemployment in Czech Republic – Case study of the Liberecký Region

Objectives of thesis

The aim of this work is to describe the issue of unemployment and its development in the Liberecký Region. The objective is to assess development of the unemployment rate in years 2010 – 2014. Another objective is to compare data of unemployment of the Czech Republic and the Liberecký Region.

Methodology

Comparative and descriptive methods will be used in the thesis. To develop theoretical part there will be used professional publications, textbooks, books and websites dealing with unemployment. The theoretical part will deal with the explanation of terms that are important to clarify the issue of unemployment. Theoretical part describes how to measure unemployment, its types, and relationship to inflation, natural rate of unemployment, high-risk groups, causes and other topics concerning unemployment. The practical part will focus on tables and graphs, which will be made using MS Excel with data from the Czech Statistical Office and Ministry of Labour and Social Affairs.

The proposed extent of the thesis

40 – 60 pages

Keywords

unemployment, unemployment rates, labor market, inflation

Recommended information sources

FROYEN, R T. Macroeconomics : theories and policies. New York: Pearson/Prntice Hall, 2004.
ISBN 0-13-143582-5.

MAITAH, M. Macroeconomics. Praha: Česká zemědělská univerzita v Praze, Provozně ekonomická fakulta, 2009. ISBN 978-80-213-1904-2.

MANKIW, N G. Zásady ekonomie. Praha: Grada, 1999. ISBN 80-7169-891-1.

NORDHAUS, W D. – SAMUELSON, P A. Ekonomie : 19. vydání. Praha: NS Svoboda, 2013.
ISBN 978-80-205-0629-0.

Expected date of thesis defence

2015/16 SS – FEM

The Bachelor Thesis Supervisor

doc. Ing. Mansoor Maitah, Ph.D. et Ph.D.

Supervising department

Department of Economics

Electronic approval: 25. 2. 2016

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 26. 2. 2016

Ing. Martin Pelikán, Ph.D.

Dean

Prague on 08. 03. 2016

Declaration

I declare that I have worked on my bachelor thesis titled "The analysis of unemployment of Czech Republic – Case study of the Liberecký Region" 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 third person.

In Prague on date of submission

Dominik Pechr

Acknowledgement

I would like to thank Assoc. Prof. Mansoor Maitah, Ph.D. et Ph.D. for his support and his useful comments.

Analýza nezaměstnanosti v České Republice – Případová studie Libereckého kraje

Souhrn

Tématem mé bakalářské práce je analýza nezaměstnanosti v České Republice a případová studie Libereckého kraje. Nezaměstnanost je jedním z základních faktorů ovlivňující výkon ekonomik po celém světě a stává se tím jedním z nejdůležitějších ekonomických problémů, které dnes musí řešit všechny státy bez ohledu na vyspělost jejich ekonomik. Nezaměstnanost je však přirozeným a v určitých mezích zdravým jevem všech tržních ekonomik, kde vyrovnává nabídku práce s poptávkou po práci. Nezaměstnanost může mít negativní vliv na ekonomiku státu, politiku státu a neposlední řadě i na společnost a jedince samotné. Vysoká míra nezaměstnanosti má neblahé následky především pro státní rozpočet, kdy se zároveň snižují příjmy do státního rozpočtu a zvyšují výdaje na podporu nezaměstnaných. Nezaměstnanost je jedním ze základních ukazatelů státní ekonomiky.

Teoretická část je zaměřena především na základní terminologii nezaměstnanosti. Praktická část se zabývá vývojem nezaměstnanosti v Evropské unii, České Republice a především vývoje nezaměstnanosti v Libereckém kraji a to v letech 2010-2014. Cílem teoretické části bylo porovnat nezaměstnanost v Libereckém kraji s nezaměstnaností v České Republice.

Klíčová slova: nezaměstnanost, míra nezaměstnanosti, trh práce, inflace

Summary

The topic of my thesis is the analysis of unemployment in the Czech Republic and a case study of the Liberecký Region. Unemployment is one of the fundamental factors for influencing the performance of economies worldwide, and is thus one of the most important economic problems that must be dealt with in all countries regardless of the sophistication of their economies. Unemployment, however, is a natural and healthy phenomenon, if within certain limits, for market economies, and balances labour supply and for labour. Unemployment can have a negative impact on the economy of the country, its political environment, and last but not least, the society and the individuals themselves. High unemployment has particularly dire consequences for the state budget, in which revenues will decline and at the same time there will be increased spendings on unemployment benefits and subsidies. Unemployment is one of the key indicators of country's economy.

The theoretical part is focused on basic terminology of unemployment. The practical part deals with the development of unemployment in the European Union, the Czech Republic and especially the development of unemployment in the Liberecký Region in between years 2010-2014. The theoretical part is to compare the unemployment in the Liberecký Region with the unemployment in the Czech Republic.

Keywords: unemployment, unemployment rates, labour market, inflation

Table of Contents

1	Introduction	5
2	Objetives and methodology.....	6
2.1	Objetives.....	6
2.2	Methodology	6
3	Labour Market.....	7
3.1	Definition of labour market.....	7
3.2	Supply and demand on labour market.....	7
3.2.1	Supply of Labour	7
3.2.2	Demand for labour	9
3.3	Segmentation of labour market	10
3.3.1	Primary and secondary labour market.....	10
3.3.2	Formal and informal labour market	11
3.3.3	Internal and external labour market	11
4	Unemployment.....	13
4.1	Definition of unemployment	13
4.2	Causes of unemployment	13
4.3	Measurement of unemployment.....	13
4.4	Type of unemployment	14
4.4.1	Frictional unemployment	14
4.4.2	Structural unemployment.....	15
4.4.3	Cyclical unemployment	15
4.4.4	Voluntary and involuntary unemployment	16
4.4.5	Hidden unemployment.....	17
4.4.6	Fake unemployment.....	17
4.5	High-risk groups	17
4.5.1	Graduates and youth.....	18
4.5.2	Unskilled people.....	18
4.5.3	Socially maladjusted people.....	19
4.5.4	People with disabilities	19
4.5.5	Older people	20
4.5.6	Women with small children or infants	20
5	Natural rate of unemployment	21
6	Phillips curve.....	22
7	Consequences of unemployment.....	23
7.1	Economic impact.....	23
7.2	Social impact.....	23
8	The development of unemployment in the EU	25
9	The development of unemployment in Czech Republic	28
10	The Liberecký Region.....	34
10.1	Economy of the Liberecký Region	35
10.2	Main employers in the Liberecký Region.....	36
10.3	Development of unemployment in the Liberecký Region	38
11	Conclusion	43

12	References	45
12.1	List of tables, graphs and figures	45
12.1.1	Graphs:	45
12.1.2	Tables:	45
12.1.3	Schemes:	45
13	References:	46
13.1	Literature sources:	46
13.2	Internet sources	46

1 Introduction

The unemployment affects all countries, irrespective of the degree of maturity of their economies. In fact, a certain level of unemployment is even a necessity for the proper development of the economy. This level is called the natural rate of unemployment and represents a certain point where the supply of labour meets the demand for labour. This measure has no set limit and is therefore individual for each economy. Unemployment has many kinds of negative impacts, especially on economy of a country, politics and society. The higher the unemployment rate, the greater difficulties for country's budget. Revenues of this budget are falling because of less deductions from income and also from other indirect taxes. And while revenues fall, the cost of financial supporting of people without jobs rises. Here then come into play also some side-effects such as lowering of GDP. These phenomena usually come hand in hand since they are two main economic indicators.

The Liberecký Region is the most forested region in the Czech Republic and with its population one of the least populated regions in the Czech Republic. Most of economic subjects registered in the Liberec Region are from automobile industry, automobile wholesale and retail. Industry in general is typical for the Liberec Region. Among the tertiary sector and secondary sector is only a difference of few percentage points to the benefit of the tertiary sector, which is not usual for other regions.

“An unemployed person is defined by Eurostat, according to the guidelines of the International Labour Organization, as someone aged 15 to 74 without work during the reference week who is available to start work within the next two weeks and who has actively sought employment at some time during the last four weeks. The unemployment rate is the number of people unemployed as a percentage of the labour force.”¹

¹ http://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment_statistics

2 Objectives and methodology

2.1 Objectives

The aim of the thesis is to describe the issue of unemployment and its development in the Liberecký Region. The objective is to assess development of the unemployment rate sorted by several criteria in years 2010 - 2014. Another objective was intended to compare data of unemployment of the Czech Republic and the Liberecký Region.

2.2 Methodology

Comparative and descriptive methods are used in the thesis. To develop theoretical part I used professional publications, books and internet sources concerning unemployment. The theoretical part deals with the explanation of terms that are important to clarify the issue of unemployment. Theoretical part describes how to measure unemployment, unemployment types, its relationship to inflation, natural rate of unemployment, high-risk groups, causes and other topics concerning unemployment. The practical part focuses on tables and graphs, which were made by MS Excel and MS Word with data from the Czech Statistical Office and Ministry of Labour and Social Affairs.

3 Labour Market

3.1 Definition of labour market

Labour market in a market economy is a distributive mechanism, which on the one hand provides organization of labour and on the other hand, solves the problem of allocation of labour.

Labour market is a place where supply of labour services (so-called workers, that offer their human capital; job applicants) meets demand for labour, which is represented by firms, households and government that are offering jobs. Through these intersections on labour market employers and potential employees meet and negotiate wage, working hours and other working conditions. Result of such negotiations is trade of labour for wage and workers are then sorted into occupations, firms, branches and regions. Labour varies from other factors of production by its specific features – will and thinking. Thanks to these unique features labour market must be regulated by government.

Labour market is then regulated and supply of labour and demand for labour are there affected by institutions, moral standards, norms, customs, negotiation habits and expectations. (Mareš, 2002)

3.2 Supply and demand on labour market

3.2.1 Supply of Labour

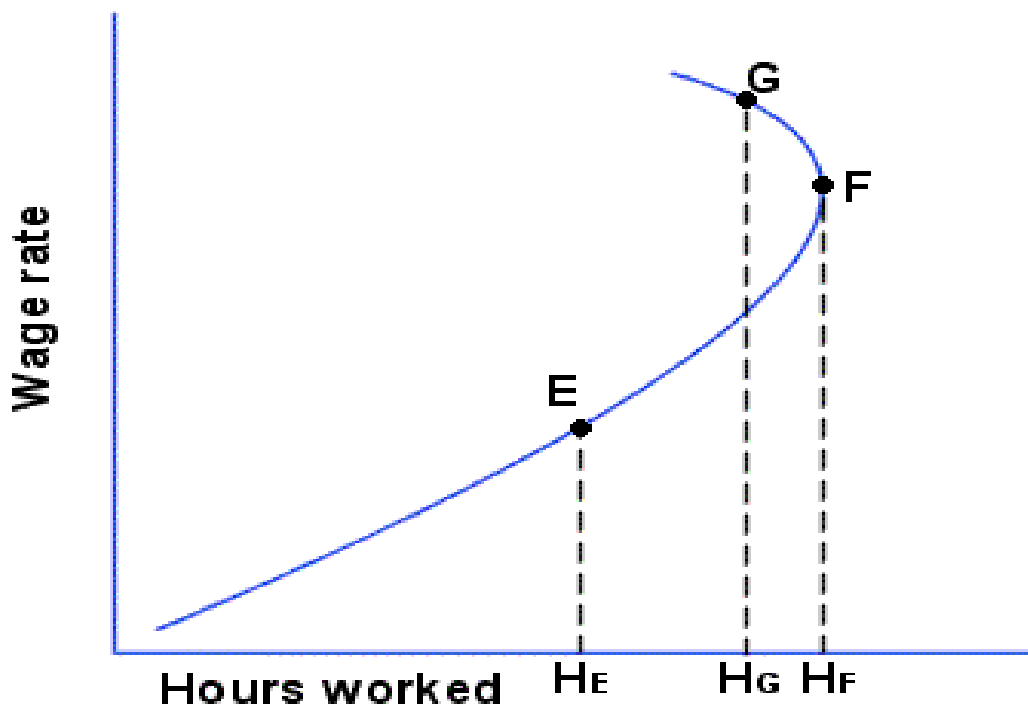
Supply of labour is delivered through people who sell their labour force. Every individual can choose either entering the labour market and to give priority to be unemployed and therefore have higher amount of free time. It is then decision between the benefits of working and benefits of leisure. This decision depend on factors such as cost of labour and cost of leisure. Cost of labour is expressed as a wage while cost of leisure is expressed as the amount of wage that the labourer sacrifices in order to get

leisure. That means that supply of labour is highly connected to demand for leisure and price of both factors is decisive.

Employable population is able to sacrifice more of leisure as the wages raise, obviously in chase of higher earnings. What it means is, as the wages go up, the supply of labour follows and goes up as well. Worker is always limited by time and physical abilities which make imaginary boundary which is impossible to overcome. However, with raising wage there is a raise in income as well. More goods, including leisure, are then affordable with higher incomes. Such actions are described as substitution effect and income effect. These two effects are always fighting each other. (Valčíková, 2009)

As the wage raises the worker is willing to supply more labour (at point E (up to point F)), because every labour hour makes up higher income and higher income usually means higher consumption of goods and services. Substitute for leisure can be therefore expressed as consumed goods. This is called the substitute effect. (Šimek, 2007)

Graph No. 1: Substitute effect



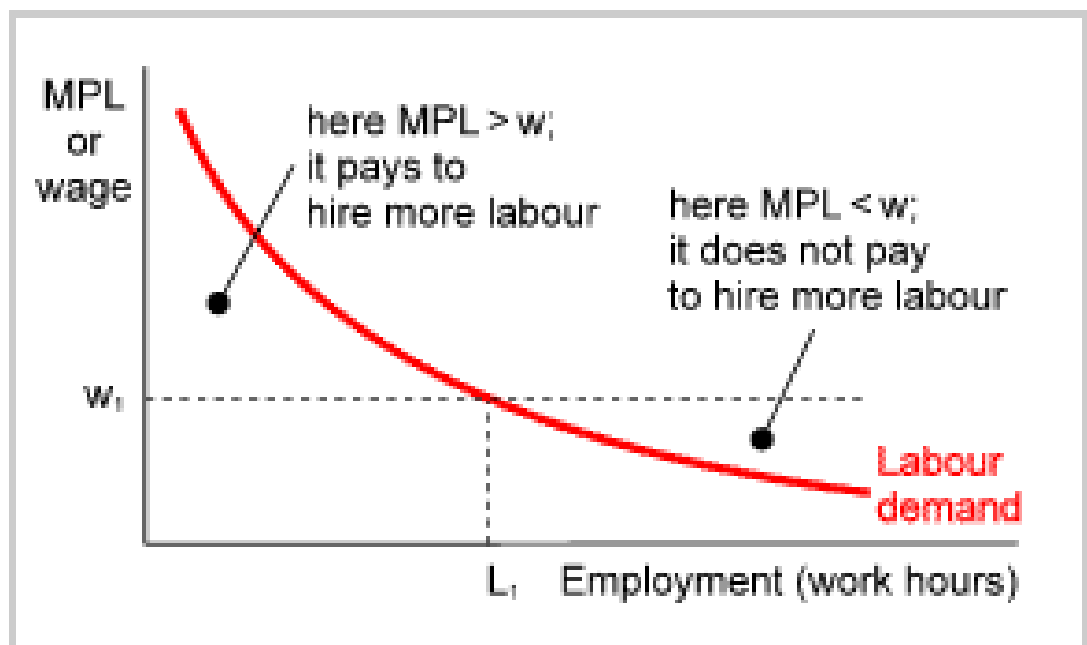
Source: https://en.wikipedia.org/wiki/Labour_economics

When the wage exceeds point F, reduction of labour supply might occur. Higher real income, which is caused by higher wages, allows consumers to give priority to leisure over making more and more income. This is called income effect (point G). The shape of the curve depends on whether substitution effect or income effect prevails. Income effect prevails while wages are high and substitution effect, on the other hand, prevails when wages are at lower levels.

3.2.2 Demand for labour

The demand for labour is determined by the income from marginal product of labour. Demand for labour is then increased until it reaches a point where marginal cost of labour is equal to income of marginal product. The demand for labour is highly dependent on the level of wages.

Graph No. 2: Labour demand



Source: <http://www.eurmacro.eu/tutor/c13.html>

The partial production function is steep when small number of labourers is employed and it flattens as the firms employs more and more labour. That means, that at

low values of L the marginal product of labour is high and at high values of L the marginal product of labour is low. Thus, the marginal product line and demand for labour are represented by the same curve in this graph. If less than L_1 hours are being employed the marginal product of labour is high while assuming that firm exceeds amount of L_1 hours at wage W_1 , we can say that those hours cost more than the revenue they generate for the firm. Therefore, companies demand employment up to L_1 to maximize their profit.

Raising the wage automatically means lowering the demand for labour and vice versa; lowering wage level increases the demand for labour. Labour demand curve moves left as the demand drops and to the right as the demand for labour rises. A prime example is as demand for goods and services rises, the production expands and thus the demand for labour increases; the curve shifts right.

The main factors influencing the demand for labour are wage, demand for goods, work productivity, price level, future income, quality of labour and amount of labour hired. (Vlček, 2009)

3.3 Segmentation of labour market

3.3.1 Primary and secondary labour market

Primary market is mostly consisted of blue-collar and white-collar workers and majority of these workers are motivated by wages, benefits, job security and pension. Best terms and conditions are offered by employers in primary market and therefore primary market is supplied by higher-grade, higher-status, and better-paid jobs.

Secondary market consists of low-skilled, low-paid, easy to learn jobs or jobs that doesn't require any training at all. Because of low level of attractiveness of such jobs, lack of motivation and poor working morale are frequent phenomenon. Wages in secondary market are low with no benefits and working conditions are poor as well. For all these reason there is high rate of turnover and workers prioritize moving on to other jobs or employers. (Mareš, 2002)

3.3.2 Formal and informal labour market

Formal market is market where jobs and labour are offered through official governmental and other institutions that impose regulations, follow laws and regulate this market.

Informal market on the other hand is market where these institutions – tax office, for instance, and has no power and control over the market. Most of activities happening on informal market are ranked as illegal and therefore belong to gray or even black economy. Work performed for friends or family is also understood as a part of informal market – gray economy. This job allows worker to cumulate his or her income but it does not lower the level of unemployment. Both, formal and informal market are connected. One can work on formal market and create job opportunities for informal market and by doing so one takes part on informal market or in gray economy at the same time as working (being employed) on legal market. (Mareš, 2002)

3.3.3 Internal and external labour market

We also distinguish between internal and external labour market. Internal market are labours or administrative units within a company or a business. This labour force is allocated through set of administrative processes and firm's rules. The meaning of competition on internal labour market is that employees that already gained the entry compete for promotions, higher pay or transfers to better positions. Firms on internal market are focused on raising qualification of their workers to avoid termination of contracts and hiring new employees or workers. Internal labour market is protected from the competition on external labour market.

For external market there is great necessity for strategy of supporting and controlling the demand and supply to be in equilibrium on labour market as well as supervision of many institution over these procedures. Efforts to make workers more mobile are also included in above mentioned strategies. This allows companies to move their workers among facilities without the need of hiring more workers.

Firms reach for workers and their qualification and skills into different markets. While in USA firms tend to reach into external market (makes every job very competitive), in Japan for instance firms increase qualification of their workers themselves (more family-like business). (Mareš, 2002)

4 Unemployment

4.1 Definition of unemployment

Unemployment is common social phenomenon and certain level of unemployment has positive effect on labour market. However, if unemployment rate, from the long-term view, is at high levels the society of such an economy can face serious negative consequences. High, long-term unemployment can cause economic losses and induce social, political and psychological problems. (Brožová, 2006)

4.2 Causes of unemployment

Decline or stagnation of GDP can cause unemployment rate to rise as domestic and foreign demand for goods and services will fall. Also labour done by human might be substituted by machines and production lines. Another main cause is immigration which makes labour market more competitive and jaded as well. Similar effect happens as large waves of numerous generations enter the labour market, so-called “Husak’s Children” for instance.

4.3 Measurement of unemployment

The most commonly used indicator showing the development of the labour market is indicator called unemployment rate (u), which is calculated as a proportion of unemployed population (N) to economically active population (EA) and expressed in percentage. EA can be calculated as sum of the employed workers (EW) and unemployed workers (UW). The equation can be expressed as following:

$$u = (UW / EA) * 100 = (UW / UW + EW) * 100$$

Economical active are considered persons aged 15 or older, and which, in reference period, satisfy three conditions: 1) had no paid employment or self-

employment, 2) were actively seeking employment, 3) were prepared for work (i.e. within 2 weeks).

The unemployment rate may exhibit unemployment in a country, county or city. For more in depth analysis unemployment rate can be categorized according to various kinds of criteria such as: education, gender, age etc. (Jurečka, 2010)

Two main indicators of unemployment rate are used in the Czech Republic. Registered unemployment and general unemployment rate. Registered unemployment it includes jobseekers who are registered at the Employment Office. These values are published by the Ministry of Labour and Social Affairs. The general unemployment rate is based data from the Czech Statistical Office and reveals that unemployment is based on the so-called Labour Force Survey. This indicator is used, for example, by Eurostat which publishes international unemployment rates and compares countries within the European Union.²

4.4 Type of unemployment

Unemployment is, according to most economists, divided into three main types; frictional, structural and cyclical.

4.4.1 Frictional unemployment

Frictional unemployment is due to the constant movement of people between work places. Usually arises due to dissatisfaction with the current conditions at current job or jobs that are offered to them. The reasons may vary according to personal demands of each of us. For instance, wages, working conditions, safety, career growth, forms of remuneration, transportation to work or moving for work. Part of frictional unemployment is also formed by graduates until they take up employment. Main cause for frictional unemployment is the lack of information on job vacancies and unsuccessful search for existing unfilled jobs. Frictional unemployment is identified as

² Source: https://www.czso.cz/csu/czso/zmena_vypoctu_ukazatele_registrovane_nezamestnanosti20121107

inevitable and often as voluntary. The period of time spend by individuals in frictional unemployment is relatively short. The frictionally unemployed are voluntarily unemployed due to their choice to find a better paid and more productive job for themselves and the whole efficiency of the economy. (Maitah, 2015)

4.4.2 Structural unemployment

Structural unemployment is due to a mismatch between supply and demand in the labour market. It is caused by structural changes in the economy that is brought by stagnation or disappearance of certain industries and the growth of other sectors of the economy. On the one hand people lose their jobs and on the other hand, they are still offered new jobs vacancies that they cannot occupy because of their qualifications. Moving labour force from sector to sector can be characterized as a decrease of demand for certain segment of goods. The paradox of structural unemployment is that highly skilled workers may also become unemployed because their skills may lose sense in a given location. All of above leads to extinction of certain professions, the compositor in the printing industry can be used as an example. Reducing structural unemployment is realized through the creation of new jobs, governmental support of entrepreneurs and changes in qualification of workers or seekers for jobs. Only in this way we will ensure compliance. The solution to this problem is retraining workers provided by employment office. (Maitah, 2015; Mareš 2002)

4.4.3 Cyclical unemployment

Cyclical unemployment occurs when the economy is in a recession and is declining overall demand for labour. It exists because of an insufficient level of aggregate demand for goods and services. Firms are unable to finance their current expenditures. Firms try to reduce the price of production and volume of production, which leads to decreasing their sales and rising volume of inventories. They are forced to cut wages and lay off some employees who would be willing to work for lower wages but the insufficient consumption of products, unfortunately, does not create

enough jobs. Another type of unemployment is seasonal unemployment, which is invoked due to the changing seasons. It is a natural fluctuation in the demand for labour. A typical example is agriculture and tourism in summer and ski resorts in the winter. (Mareš, 2002)

4.4.4 Voluntary and involuntary unemployment

The voluntary unemployment can be defined as when a part of the workforce does not want to work at certain level of wages (jobs exist, but nobody is interested in working at the current market wage rate), or is not interested in working at all (favoring leisure, living off charity and aid, or having low-cost lifestyle allowing living with only occasional earnings). For advanced economies it is typical, they can operate productively and simultaneously provide substantial scope of this type of unemployment. Voluntary unemployment may as well be economically effective.

Involuntary unemployment arises due to the fact that at higher wage rates attract more job people wanting to work than there are jobs vacancies. Thereupon, there is much higher number of more skilled workers who want to work, than the number of jobs opportunities that await them. Thus, the demand for labour is lower than the total supply. That means that part of the workers, during normal wage rate, is involuntarily unemployed.

The basic reason for the existence of involuntary unemployment is the administrative regulation of wages. Labour markets are not cleared out immediately so we can see emerging surpluses and weaknesses in individual labour markets. However, labour markets will respond with delays to individual markets' conditions and occupations for which there is high demand will coerce wages to rise (compared to occupations for which the demand is low). In the long term, however, wages tend to move as to compensate supply and demand in the labour market and so the main area of unemployment and vacant jobs tend to recede market conditions due to the adaptation of wages and quantity of workforce. In the meantime between long and short periods,

however, periods of unemployment can persist for many years. High involuntary unemployment is unfavorable for the company and a phenomenon in excess a certain extent, it becomes even dangerous - it can lead to social unrest, strikes, demonstrations, chaos and even destruction of the entire economic and social system.

4.4.5 Hidden unemployment

The expression 'hidden labour force' can be explained as unemployed workers who are not registered as unemployed and who would accept job offer when wages were at sufficient level. Then there are the unemployed people who do not seek work. Majority of these people consists of married women and adolescents. These are people who resigned on searching employment either because they escaped or intend to escape to a different status - motherhood, studies, or are seeking jobs through informal networks. One of the possibilities is that the (unofficial) applicant is given a job directly from employer which is not registered in the Labour Office. We speak about hidden unemployment as regards the low-qualified, low-skilled or older age job seekers. These groups of people are put over outside the labour market (including, for example, early retirement). (Mareš, 2002)

4.4.6 Fake unemployment

Fake unemployment regards people who are not really serious about seeking jobs or may possibly even refuse to accept jobs that they are offered and these people rather try to use up the full range of unemployment benefits and subsidies. People who are registered as unemployed and work illegally in the informal and gray economy are also considered falsely unemployed. (Mareš, 2002)

4.5 High-risk groups

The most vulnerable groups are the following high-risk groups of unemployed:

- graduates and young people,
- unskilled people
- socially maladjusted people,
- people with disabilities,
- older people,
- women with small children or infants.

4.5.1 Graduates and youth

The period of transition from school to employment is for a young person one of the most important stages in the life-long development. Adolescents represent the youngest group of candidates. Graduates of secondary schools and universities who are applying for their first job are considered as a disadvantaged group. They have none or almost no practical experience, they have limited or no experience from previous employment. Majority of these people also have lack or no contacts at all that might be able to help them with the transition into the labour market and therefore are taken as a special risk group with specific problems and needs. Unemployment of secondary school and universities graduates might be very well accompanied with significant educational and psychological problems.

4.5.2 Unskilled people

From the current structure of long-term unemployment, the largest group consist of unskilled workers. This part mostly consists of people with only primary education. These people often give priority to social benefits or unemployment subsidies before applying to the labour market. Also people with the socially undesirable behavior (alcoholics/drug addicts, people released from detention facilities, people socially maladjusted, etc.) belong to this group. Low-skilled workers will be gradually pushed out of the labour market. Demand for labour of unskilled people will eventually get close to zero values and they, low-skilled workers, themselves will become potential problem for society.

4.5.3 Socially maladjusted people

Due to the increasing requirements of the employers in the labour market, where higher qualification plays significant role, the socially maladjusted people and certain ethnicities especially face difficulties while trying to obtain employment. For instance, most Romani people in fact completed only a basic education and do not obtain any further qualifications or educational programs. A certain proportion of students in this category of people have not even successfully finished even basic education. Such people might live under the pressure of their own cultural patterns of behavior and values and also increased population pressure, which have not yet fully integrated these groups of people or ethnicities. Their chances of applying, respectively obtaining a job in the labour market are therefore minimal. The increased concentration of socially maladjusted people in demarcated areas creates a site with serious social problems, high crime and high expectation for governmental help, financial as well as material.

4.5.4 People with disabilities

Majority of this group is consisted of elderly people who give up applying for vacancies after quite and relatively short period of time. Some people with disabilities may be regarded as almost unemployable. The performance required at a workplace can be done only under specific conditions which must be provided by the employer. Their period of registration at Labour Offices exceeds several times the period of healthy individuals. Job seekers who have health disability are each given special attention at Labour Office to get the maximum comfort and as many vacancies offered as possible but the interest on employers' site is minimal even though government provides financial support or tax relief for every employee who is officially registered as disabled.

4.5.5 Older people

For people over 50 years of age, if they are terminated from work, it is very difficult to return on labour market. Chances of successfully applying for a job is, for elderly people, dependent on qualifications and ability to adapt to current labour market requirements.

Older workers are perceived stereotypically. Often, this group of job seekers encounter with discrimination from employers because of their age. Most employers and employees perceive women as well as men in their fifties are harder-to-learn new things, adapt slower to changes at workplace and work at a slower pace than younger people. As some of the pros of elderly people are considered their life experience, professional skills and years of acquired insight in conflict situations. Age is one of the factors which determine the position of people in the Labour market.

4.5.6 Women with small children or infants

Women who are at the age when they fulfill the duties of motherhood and care for children. As a result, repeated career breaks or working fewer hours than men, has later on negative impact on their access to the labour market and career development. As the most critical period concerning labour utility on labour market is considered women between 25-49 years of age.³

³ https://vdb.czso.cz/vdbvo2/faces/index.jsf?page=vystup-objekt&verze=1&z=T&f=TABULKA&nahled=N&sp=N&filtr=G~F_M~F_Z~F_R~F_P~_S~_null__null_&katalog=30853&zo=N&pvo=ZAM10&str=v172&c=v3__RP2014&v=v166__null__null__null#w=

5 Natural rate of unemployment

One of the most important indicators describing the labour market is considered to be the natural rate of unemployment. Value represents a level at which the various labour markets in diameter are in balance, in other words, pressures on wages and prices are approximately in balance. The meaning is that the real unemployment rate does not derogate from the natural rate over the long term. That means that the government allocates its resources right and the existing unemployment is formed only by voluntary unemployment, which is the result of market forces. An example would be frictional unemployment. Natural rate of unemployment describes a condition where labour resources are optimally utilized, and in equilibrium with wages, everyone has a job, everyone who settles for a given wage rate.

Nowadays, the natural rate of unemployment is often coupled with the inflation. Then the definition of the natural rate of unemployment, as unemployment at which inflation holds stable. This is known as the NAIRU (non-accelerating inflation rate of unemployment).

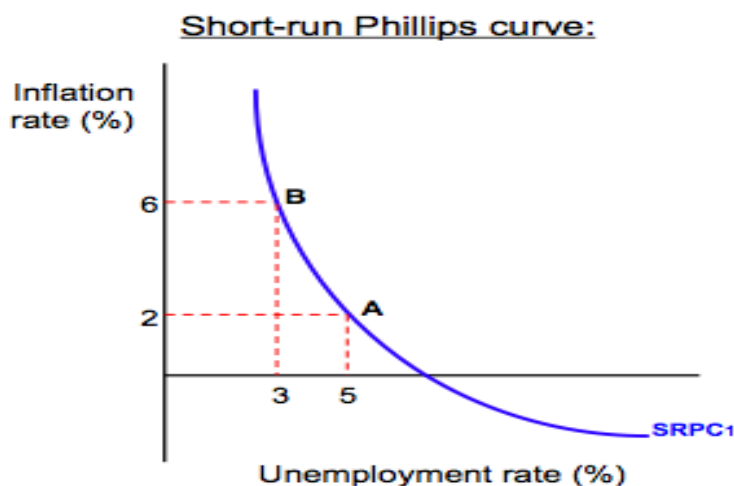
6 Phillips curve

In 1958 economist A. W. Phillips published in the British journal *Economica* an article in which he studied the dependence of unemployment with rate of change in nominal wages. Inversely proportional dependence has been demonstrated in this study. Phillips proved that in years with high unemployment low inflation occurred and vice versa.

Phillips curve gives the government the choice between the possible economic outcomes. „*Changing monetary and fiscal policies that have an impact on aggregate demand, economic policy makers can choose any point on this curve. Point A provides high unemployment and low inflation and point B provides low unemployment and high inflation*“. (Nordhaus, 2013, pg. 706)

The combination of low inflation and low unemployment is in the long term unattainable, as two years later (1960) reported by Samuelson and Solow in their studies. Any efforts to achieve a lower unemployment rate than what is its natural rate, only increases inflation expectations and leads to short term employment growth, in the long term though, only inflation will actually rise, since unemployment returns to its natural rate. (Maitah, 2015; Nordhaus, 2013)

Graph No. 3: Phillips curve



Source: <https://www.boundless.com/economics/textbooks/boundless-economics-textbook/inflation-and-unemployment-23/the-relationship-between-inflation-and-unemployment-105/the-phillips-curve-399-12496/>

7 Consequences of unemployment

High unemployment causes a problem for the economy and society, is reflected in the mood, attitudes and people's everyday lives. Economy loses valuable resources and the society of such economy is dealing with falling revenue and its adherent problems.

7.1 Economic impact

With each increase in unemployment the economy wastes goods and services the unemployed person could produce. Economic losses generated in the period of high unemployment are the highest losses in a modern economy. Such a losses are estimated to much greater than losses from the inefficiency management of monopolies, duties and quotas.

7.2 Social impact

It is very difficult describe the psychological and social hardships associated with the period prolonged of involuntary unemployment. Dismissal could lead to the same trauma as during bereavement of friend or expulsion from the university. In the long term, many economists consider unemployment as greatest economical evil (right after inflation), which brings many consequences, economical as well as social. If higher levels of unemployment occur in economy, the total product lowers in such economy. This means that resources are not fully utilized and country does not meet its potential production capability, the product expires. Lowering of the total product can be defined as follows: increasing the unemployment rate by 1% compared to the natural rate of unemployment, decrease of the real product by 2-3% compared to the potential product follows. Other consequence of unemployment is growing state budget deficit. Reasons may be as follows: the need to pay unemployment benefits, funding Labour Offices, active government policy, etc. Even tax revenues decline over the periods of high unemployment. Government (society of such government) loses taxes from income from individuals who are currently unemployed and that would pay these taxes if they

worked. The government is also cut away from portion of indirect taxes (VAT and excise taxes) since the low disposable income of families with one or more unemployed members restricts these families to buy as many goods as if they were working.

People who are unemployed in long-term lose their experience, skills, and practical and theoretical knowledge to be able to acquire and maintain jobs. That complicates their return to employment. Long-term unemployed person does not served up performances that he or she had served before dismissal from previous employment, and that he is expected from the employer. The loss of jobs is linked to a decline in living standards, growth of crime and the associated higher government spending to provide police services. After repeated failures to find a new job individuals lose interest in working and get used to social support. Such individuals isolate from the society, lose contact with other people, social prestige and authority in the family, they lose confidence. These people are more likely to fall into depression and sadness which might resolve in alcohol and drug abuse. It is a positive correlation between the length of unemployment and deterioration of health, mental and physical condition.

Unemployment, however, has its bright side if not long lasting. It helps to allocate resources in the economy. People seek vacancies according to their needs, according to the pay, qualification and terms of job descriptions.

8 The development of unemployment in the EU

The unemployment situation in the European Union must be viewed from two perspectives – European Union as a whole and unemployment levels of individual member states. Symptoms of the close interdependence of member states' economies could have been witnessed, for example, during the 2008 financial crisis when member states using European Common Currency – the Euro, were hit the most. All this resulted in critical financial problems of some member states and that of course reflected in higher unemployment rates.

One of the main objectives of the “Europe 2020” program is primarily employment growth, the creation of new, high quality, perspective jobs.

As in the Czech Republic jobs are offered by employment authorities (Labour Office), Eures plays similar role in the European Union. European Employment Services were launched in 1993. The entire operation is controlled by the European Commission. Eures primarily provides and facilitates the free movement of workers within the European Economic Community and Switzerland.

According to data from the European Statistical Bureau (Eurostat), the number of unemployed in 2014 in the European Union climbed to 24.8 million people, in the Euro area the number reached 18.5 million of unemployed inhabitants. While unemployed men made up 10.1%, women formed 10.3% portion of unemployed in the entire European Union. In both cases a decrease compared to November 2013 was registered. Women unemployment dropped by 0.6% and male unemployment dropped by 0.7%.

The European Union is not concerned only by large number of unemployed residents, but also by youth unemployment. At the end of 2014 the unemployment rate for young people under 25 years of age was 22.2% (23.7% in 2013) in the European Union and in the Euro area it was 24.4% (23.8 in 2013). The biggest problems are in Greece and Spain and Croatia, where the rate of unemployed young people exceeded 50% at least once in last three years. In 2014 young unemployed people reached 52.4% in Greece, 53.2% in Spain and 45.5% in Croatia. For instance, in the Czech Republic the rate of young people unemployed reached 15.9% in 2014 (18.9 in 2013).

Table 1) shows the development of unemployment over the years of 2010-2014, recorded data capture the evolution of the unemployment rate in the European Union, the Euro area and the individual countries of the European Union. Since 2010, according to the table the average unemployment rate of European Union had increasing trend, in 2013 the unemployment rate climbed to 10.9% and in the Euro area even at full 12%. Rising unemployment rate was typical in all EU countries until 2014, however, there were some countries in which a reduction in the unemployment rate occurred in this period of time. From the data of 2014 calendar year we can deduct slight improvements in unemployment rates of European Union (down by 0.7%) and the Euro area (down by 0.4%) and this trend also continued in 2015. However, as we talk about countries one by one, the data differ significantly. Some countries did better in 2010 than in 2014 and some did not. In the long term, countries with highest unemployment rates are Greece, Spain and Croatia where at the end of 2014 the unemployment rate moved up to 26.5%, 24.5% and 17.3%. Conversely, among the countries whose unemployment rate holds below the average of the European Union are Austria with 5.6%, Germany holds 5%. Very positive numbers of unemployment rate were registered, for example, in countries: Luxembourg (6%), Malta (5.8%) and the Czech Republic (6.1%), United Kingdom (6.1%).

At the end of this subchapter I would also like to compare unemployment rates of the European Union, Japan and the United States (as these countries' figures are generated in almost all Eurostat data sheets, graphs or tables for the purpose of comparison) and simply because I think that these countries are comparable as they have very strong economies just like EU. The average unemployment rate over the observed period 2010 - 2014 in the EU is just around 10%. If we compare Japan's unemployment rate in the same period it is significantly lower. It constantly declines from 2010's 5% to 3.6% in 2014 and is more than twice as low as it is in EU. The United States are doing much worse compared to Japan, on the other hand, it had the same unemployment rate as the European Union in 2010. Since 2010 however, the United State's unemployment rate went down by 3.4% to 2014's 6.2%.⁴

⁴ <http://ec.europa.eu/eurostat/web/lfs/data/database>

Table No. 1: Unemployment by countries (2010-2014)

GEO/TIME	2010	2011	2012	2013	2014
European Union 28	9,6	9,7	10,5	10,9	10,2
Euro area	10,0	10,1	11,3	12,0	11,6
Belgium	8,3	7,2	7,6	8,4	8,5
Bulgaria	10,3	11,3	12,3	13,0	11,4
Czech Republic	7,3	6,7	7,0	7,0	6,1
Denmark	7,5	7,6	7,5	7,0	6,6
Germany	7,0	5,8	5,4	5,2	5,0
Estonia	16,7	12,3	10,0	8,6	7,4
Ireland	13,9	14,7	14,7	13,1	11,3
Greece	12,7	17,9	24,5	27,5	26,5
Spain	19,9	21,4	24,8	26,1	24,5
France	9,3	9,2	9,8	10,3	10,3
Croatia	11,7	13,7	16,0	17,3	17,3
Italy	8,4	8,4	10,7	12,1	12,7
Cyprus	6,3	7,9	11,9	15,9	16,1
Latvia	19,5	16,2	15,0	11,9	10,8
Lithuania	17,8	15,4	13,4	11,8	10,7
Luxembourg	4,6	4,8	5,1	5,9	6,0
Hungary	11,2	11,0	11,0	10,2	7,7
Malta	6,9	6,4	6,3	6,4	5,8
Netherlands	5,0	5,0	5,8	7,3	7,4
Austria	4,8	4,6	4,9	5,4	5,6
Poland	9,7	9,7	10,1	10,3	9,0
Portugal	12,0	12,9	15,8	16,4	14,1
Romania	7,0	7,2	6,8	7,1	6,8
Slovenia	7,3	8,2	8,9	10,1	9,7
Slovakia	14,5	13,7	14,0	14,2	13,2
Finland	8,4	7,8	7,7	8,2	8,7
Sweden	8,6	7,8	8,0	8,0	7,9
United Kingdom	7,8	8,1	7,9	7,6	6,1
Iceland	7,6	7,1	6,0	5,4	5,0
Norway	3,6	3,3	3,2	3,5	3,5
Turkey	11,1	9,1	8,4	9,0	9,9
United States	9,6	8,9	8,1	7,4	6,2
Japan	5,0	4,6	4,3	4,0	3,6

Source: <http://ec.europa.eu/eurostat/web/lfs/data/database>, author's edition

9 The development of unemployment in Czech Republic

To be able to correctly understand the following paragraphs and the data contained therein it is essential to explain and understand the methodology of calculation of Ministry Labour and Social Affairs and Labour Office of Czech Republic. The following quote describes motives and methods which are used by either of the offices and it is essential to distinguish among them as this paperwork continues. For better orientation in the data, one should always track the source stated under the table or graph.

“Registered unemployment rate (published nowadays) will be under the aforementioned timetable replaced by calculations which will indicate the proportion of unemployed persons to the population aged 15-64 years. "This new indicator will be consistent across all levels of territorial hierarchy and will be more easily interpretable, will remove inconsistencies in the underlying figures and will also remove the possibility of confusion with the international monitoring of the general unemployment rate, as published by the Czech Statistical Office," explains Stefan Duháň, director of legal support and methodology of labour market of Ministry of Labour and Social Affairs.

So far, the Czech Republic records two different unemployment rates which compare the number of unemployed, respectively registered job seekers, to the size of the workforce (number of economically active):

1. Methodology used by Czech Statistical Office consists of the unemployment rate calculated by the Labour Force Survey (LFS, based on the recommendations of Eurostat, ILO) and is so-called the general unemployment rate.

2. The Ministry of Labour and Social Affairs publishes the registered unemployment rate based on the number of registered jobseekers in the workplace the Labour Office (LO CR). Unlike the data from the Labour Force Survey, designed especially for international comparisons, the data on registered unemployment are used

to evaluate employment policies under Czech legislation. For international purposes, the use of data from LO CR are only an additional perspective to data from the Labour Force Survey.

Until now commonly used indicator of registered unemployment rate compares the number of reachable, unemployed job applicants according to records of centers LO CR with a work force that includes both the employed and unemployed persons (not economically inactive). Data sources for this denominator (labour force) are different. Reachable job applicants are taken from the records LO CR, employed persons are taken from the Labour Force Survey data.”⁵

After the collapse of the socialist regime the unemployment rate was at that time at a very stable level. However, after 1996 there is recorded only a slight rise in unemployment, the rate ranges between 3% - 4%. This slight increase, however, turns into a fairly large increase in unemployment, which in 1999 is doubled compared to data of unemployment rate before 1996. Unemployment in 1996 reached 9%. In following years the unemployment rate even reached over 10% level. Beyond these figures stands not only Czech Republic's economic growth but also demographic reasons. Another reason was the flood of young people into the labour market, people so-called "Husak's children", when in the 70s of the past century there was a rapid increase of newborns.

Fundamental turning point comes in 2004, when the Czech Republic joins the European Union and also manages to reduce the unemployment rate. This essential step opened up the door to many jobseekers to a world of new job opportunities. It is also great opportunity for Czech companies to enter more foreign markets. Year 2008 brought very unpleasant moments to the world, the Czech Republic included, with the financial crisis taking its place. As the financial crisis shattered the world, companies had to make massive layoffs which many companies could not get around, and that led to another large drop in vacancies. The data from Czech Statistical Office serve as a prove to this statement. From 352,250 people unemployed (registered at Labour Office) in 2008 the number rises to 539,136 in 2009.

⁵ Source: https://www.czso.cz/csu/czso/zmena_vypoctu_ukazatele_registrovane_nezamestnanosti20121107

Table No. 2: Jobseekers registered at Labour Office (2010-2014)

	2010	2011	2012	2013	2014
Jobseekers registered at Labour Office	561 551	508 451	545 311	596 833	541 914
Education:					
Not finished/no education	2 957	3 001	3 009	3 006	3 206
Primary	144 657	136 615	147 030	161 269	147 107
Apprenticeship	232 366	201 212	223 624	240 949	208 646
High school (no maturita exam)	18 979	17 787	12 613	12 901	18 495
Apprenticeship (with Maturita exam)	27 777	24 676	19 574	20 872	24 568
High school (maturita exam)	102 299	92 888	103 763	115 866	101 048
Higher education	3 816	3 746	4 293	5 034	4 477
College	28 700	28 526	31 405	36 936	34 367
Age groups:					
less and 19 yo	23 868	23 070	24 221	22 074	17 370
20 - 24 yo	71 006	68 872	74 508	77 958	62 561
25 - 29 yo	61 820	56 452	59 944	66 937	58 714
30 - 34 yo	67 478	58 221	60 155	65 369	57 477
35 - 39 yo	66 636	62 908	67 864	75 907	69 104
40 - 44 yo	56 188	51 792	55 959	64 501	62 018
45 - 49 yo	58 931	54 811	58 021	61 957	56 583
50 - 54 yo	67 544	59 946	59 863	63 758	60 982
55 - 59 yo	72 695	62 435	69 315	76 416	72 104
60 - 64 yo	15 145	9 606	15 038	21 368	24 242
65 and more yo	240	338	423	588	759
Length of unemployment:					
less than 3 moths	190 189	152 103	154 773	149 499	136 168
3 - 6 months	98 270	91 835	100 270	101 137	82 984
6 - 9 months	52 059	46 740	53 183	56 612	47 150
9 - 12 months	42 552	33 643	44 851	52 604	38 447
12 - 24 months	99 160	82 347	82 070	106 175	90 688
24 months and more	79 321	101 783	110 164	130 806	146 477

Source: https://vdb.czso.cz/vdbvo2/faces/index.jsf?page=vystup-objekt-parametry&str=&evo=&verze=1&nahled=N&sp=A&nuid=&zs=&skupId=&pvokc=&filtr=G~F_M~F_Z~F_R~F_P~_S~_null_null_&katalog=30853&z=N&uIdent=&pvo=ZAM09&pvoch=&vyhltext=&z=T, author's edition

541,914 people were registered at Czech Labour Office by 31.12.2014. That means decline in total jobseekers by slightly over 50,000 compared to the same date of previous year, year 2013.

In the chart 4) it is a possible to see the unemployment rate in the Czech Republic according to individual regions. At the end of 2014, unemployment in the

Czech Republic was at the 7.46% according to Ministry of Labour and Social Affairs. The Liberecký region, in which Liberec is located, has an unemployment rate at 7.72%, which is just above the average of the country's unemployment rate. The lowest unemployment rate is assigned to Prague with only 5.03% which is very good level (lower levels of unemployment are usually typical for capital cities). Among other regions with a relatively low unemployment rate belong: the Jihočeský Region with 6.20% and the Plzeňský Region 5.7%. Another five regions still hold under the level of 7.5%, those are: the Středočeský Region, the Královohradecký Region, the Pardubický Region, the Vysočina Region and the Zlínský Region. On the other, the worst situation is in the Ústecký Region with the level of 10.67% followed by the Moravskoslezský Region and the Olomoucký Region with 9.8% and 8.82%. Then there are regions within 1% range above the average of Czech Republic and those are the Jihomoravský Region and the Karlovarský Region.

Table No. 3: Unemployment in Czech Republic by MLSA

	M	W	AV	M	W	AV	M	W	AV	M	W	AV	M	W	AV
	2010	2010	2010	2011	2011	2011	2012	2012	2012	2013	2013	2013	2014	2014	2014
Czech Republic	7,7	7,1	7,4	6,8	6,7	6,77	7,4	7,3	7,37	8,3	8,0	8,17	7,4	7,5	7,46
Region															
Prague	3,6	3,6	3,61	3,6	3,6	3,59	4,2	4,1	4,16	5,2	5,1	5,14	4,9	5,1	5,03
Středočeský	6,1	6,1	6,09	5,5	5,8	5,62	6,0	6,2	6,13	6,8	7,0	6,90	6,1	6,6	6,36
Jihočeský	6,6	6,2	6,39	5,8	5,8	5,81	6,4	6,3	6,38	7,2	7,0	7,10	6,2	6,2	6,20
Plzeňský	6,8	6,5	6,64	5,6	5,8	5,75	5,8	6,1	5,94	6,3	6,6	6,45	5,5	5,9	5,70
Karlovarský	9,5	8,4	8,94	8,2	7,8	7,98	9,0	8,0	8,51	9,9	8,8	9,33	8,4	8,0	8,21
Ústecký	10,3	10,1	10,23	9,7	9,9	9,79	10,3	10,6	10,47	11,4	11,5	11,47	10,5	10,8	10,67
Liberecký	8,0	8,1	8,06	7,1	7,6	7,34	7,5	8,0	7,75	8,2	8,7	8,46	7,3	8,1	7,72
Královohradecký	6,6	5,9	6,28	5,8	5,5	5,68	6,8	6,3	6,55	7,6	7,1	7,31	6,5	6,2	6,36
Pardubický	8,2	6,7	7,45	6,7	6,3	6,50	7,2	6,9	7,03	7,6	7,3	7,45	6,2	6,2	6,22
Vysočina	8,5	7,7	8,10	7,2	7,1	7,16	7,6	7,7	7,63	8,1	8,0	8,05	7,3	7,5	7,35
Jihomoravský	8,9	8,0	8,45	7,8	7,4	7,61	8,2	8,1	8,15	9,1	8,7	8,94	8,2	8,3	8,25
Olomoucký	9,5	8,6	9,08	8,5	8,2	8,33	9,1	8,7	8,93	10,3	9,3	9,79	9,0	8,6	8,82
Zlínský	8,3	7,5	7,91	7,1	6,9	7,00	8,0	7,6	7,82	8,8	7,9	8,34	7,5	7,2	7,36
Moravskoslezský	9,5	8,6	9,04	8,5	8,1	8,31	9,6	8,8	9,18	11,0	10,0	10,47	10,1	9,5	9,80

Source: https://portal.mpsv.cz/sz/stat/nz/casove_rady, author's edition

Table No. 4: Unemployment in Czech Republic by LO CZ

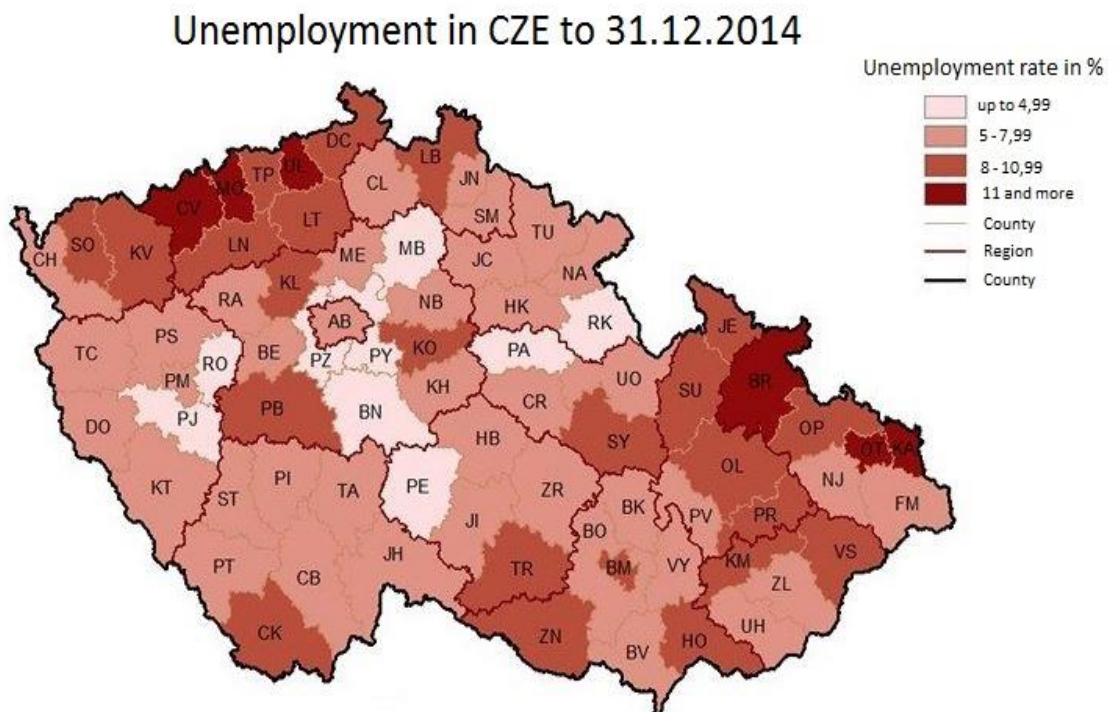
	M	W	AV	M	W	AV	M	W	AV	M	W	AV	M	W	AV
	2010	2010	2010	2011	2011	2011	2012	2012	2012	2013	2013	2013	2014	2014	2014
Czech Republic	6,4	8,5	7,3	5,8	7,9	6,7	6,0	8,2	7,0	5,9	8,3	7,0	5,1	7,4	6,1
Region															
Prague	3,5	4,1	3,8	3,5	3,8	3,6	2,9	3,4	3,1	3,2	3,1	3,1	2,3	2,7	2,5
Středočeský	4,4	6,3	5,2	4,4	6,0	5,1	3,8	5,7	4,6	4,6	6,0	5,2	4,4	6,1	5,1
Jihočeský	5,1	5,5	5,3	5,1	6,0	5,5	4,9	6,8	5,7	4,1	6,6	5,2	4,2	7,9	5,9
Plzeňský	4,4	7,7	5,9	3,9	6,8	5,2	3,5	6,5	4,8	3,8	7,0	5,2	3,7	6,8	5,1
Karlovarský	10,2	11,5	10,8	8,4	8,7	8,5	10,2	10,8	10,5	9,0	11,7	10,2	7,6	10,8	9,0
Ústecký	8,9	14,3	11,2	8,8	11,4	9,9	8,5	13,8	10,8	7,8	11,6	9,4	7,3	10,2	8,5
Liberecký	5,5	8,9	7,0	6,4	8,4	7,2	8,5	10,4	9,3	6,9	10,0	8,3	4,5	9,1	6,5
Královéhradecký	5,8	8,2	6,9	6,2	8,2	7,1	6,6	7,7	7,1	6,8	9,9	8,2	5,3	7,3	6,2
Pardubický	6,0	9,0	7,2	4,4	7,0	5,6	6,2	9,7	7,7	6,6	10,7	8,4	4,9	8,2	6,4
Vysočina	6,2	7,9	6,9	5,3	8,0	6,4	5,2	7,8	6,4	5,1	8,9	6,7	4,1	7,4	5,6
Jihomoravský	7,3	8,2	7,7	6,3	9,1	7,5	7,2	9,3	8,1	6,0	7,8	6,8	5,7	6,6	6,1
Olomoucký	7,5	11,1	9,1	6,5	9,0	7,6	6,8	8,9	7,7	8,9	9,6	9,2	6,5	9,3	7,7
Zlínský	7,2	10,2	8,5	6,5	9,1	7,6	6,0	9,1	7,4	5,9	7,9	6,8	5,0	7,5	6,1
Moravskoslezský	9,6	10,9	10,2	7,8	11,2	9,3	8,5	10,8	9,5	8,0	12,1	9,9	7,4	10,2	8,6

Source: https://vdb.czso.cz/vdbvo2/faces/index.jsf?page=vystup-objekt&verze=1&z=T&f=TABULKA&nahled=N&sp=N&filtr=G~F_M~F_Z~F_R~F_P~_S~_null_null_&katalog=30853&zo=N&pvo=ZAM06&str=v95&c=v3__RP2014, author's edition

If we look at the unemployment rate according to the Ministry of Labour and Social Affairs (not relieved of seasonal effects) from a gender perspective, the more frequent job-seekers are mostly men, mainly on the grounds that their work is often dependent on the development of the seasonal cycle. Employers offer job vacancies in the field of services, commerce, administration, hospitality, and last but not least vacancies of technical nature. However, if we erase fluctuations of seasons, the more appropriate graph is the one of the Czech Statistical Office and female unemployment is actually higher in comparison with the unemployment of the opposite gender. It is mainly due to reasons of maternity, expected motherhood and earlier retirement (the more children the lower the retirement age for women). The numbers of unemployed women exceeds the number of unemployed men in almost all age groups of working age and are significantly higher especially in age groups of over 25 years. The most vulnerable groups are graduates and graduates of schools with no experience in the labour market, women caring for preschool children and women in pre-retirement and retirement age.

From the following figure we can get a little better idea about the Czech unemployment rate. The map is depicted to the various districts of the Czech Republic and the level of unemployment is shown by four colors. The figure also shows that the unemployment rate is not the same throughout the Czech Republic and across regions and districts with its intensity varies considerably. Unemployment rate in individual districts can be influenced by age structure of the population, the natural character of the districts, influential investors. The most affected area is darkest shade of red. Thus, the highest unemployment rate is recorded especially in border areas, such as Chomutov, Most, Ustí nad Labem, Bruntál, Karviná, Ostrava and unemployment rates reaching 11% and more. Conversely, the lowest unemployment rate is around the capital city of Prague, where it is very likely to see the unemployment rate up to a maximum of 5%.

Scheme No. 1: Unemployment by counties 2014

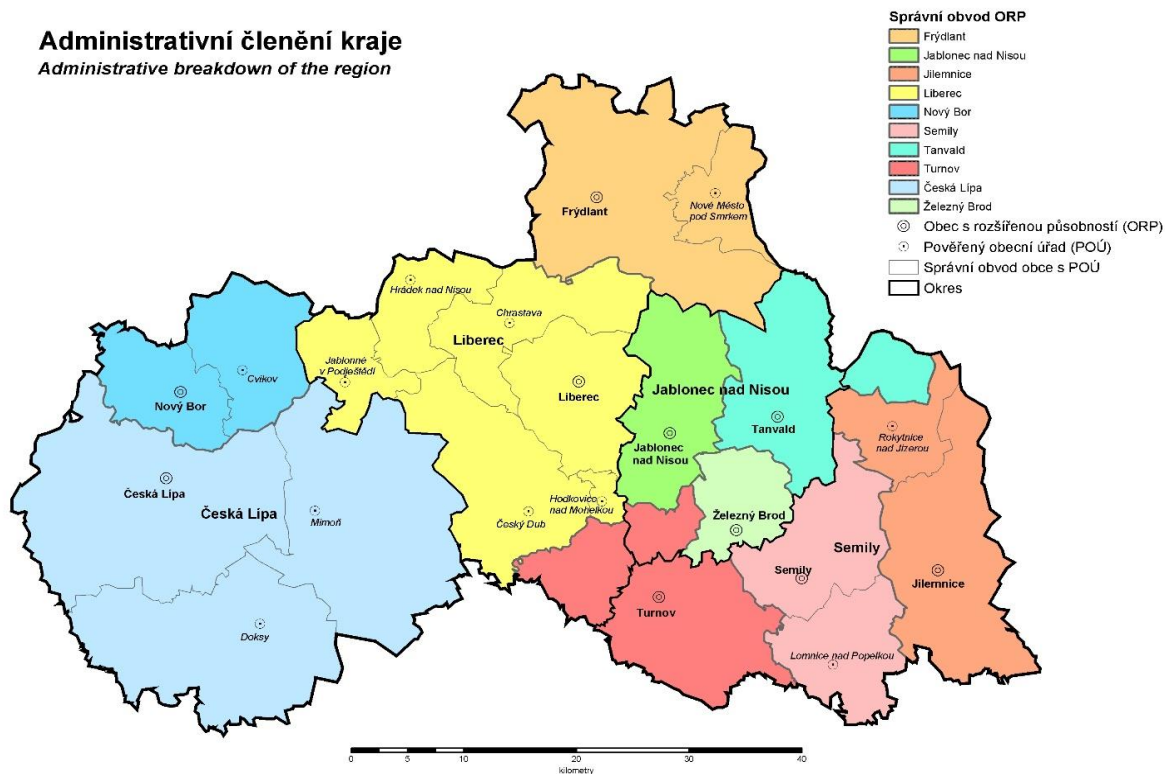


Source: <http://zpravy.aktualne.cz/mapa-nezamestnanosti-cervenec-2014/r~15da89c01ecb11e4bce90025900fea04/r~65a910aa1ecd11e49b2b002590604f2e/>, author's edition

10 The Liberecký Region

The Liberecký Region is with its area of 3,163 km² (4% of Czech Republic total area) right after the region of Prague the smallest. Number of inhabitants (438,594 – 4.2%) takes the Liberecký Region place immediately before the least inhabited region, the Karlovarský Region. Since January 1, 2000 when this law territorial unit was restored, the Liberec region has been the most forested (44.4%). Liberec region shares its borders with regions: the Ústí, Středočeský and Královohradecký, and then to Saxony in Germany and Lower Silesian Voivodship in Poland. The Liberecký Region is divided into four districts (Česká Lípa, Jablonec nad Nisou, Liberec, Semily) and ten administrative districts.

Scheme No. 2: Administrative breakdown of the Liberecký Region



Source: https://www.google.cz/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&ved=0ahUKEwilzKLd6KnLAhVCG5oKHdv0BKoQjxwIAw&url=https%3A%2F%2Fwww.czso.cz%2Fcsu%2Fczso%2F13-5101-08-2008-17&bvm=bv.116274245,d.bGs&psig=AFQjCNHfERDnYzI0EN_A4aaxgLG2w5x-LA&ust=1457276653216684

The Liberec Region is a very important area from ecological point of view and has a great variety of ecosystems, a high concentration of protected areas and botanical and zoological major sites. In the region there are five protected areas (České Středohoří, Jizerské Mountains, Lužické Mountains, Český Ráj, Kokořín), 8 national nature reserves, 8 national natural monuments, 36 natural reserves, 61 natural monuments. The main tourist attractions in the Liberec Region are the Jizerské Hory and the Krkonoše. There is also the oldest national park in the Czech Republic (the Krkonoše) and also the oldest protected natural area, the Český Ráj. The most famous monuments in the Liberec Region are Ještěd Tower and, for example, Bezděz Castle or Castle Sychrov.

10.1 Economy of the Liberecký Region

The Liberec Region is from the most part industrial region. Among highly developed industry types we can include, for example, glass industry, mechanical engineering, plastics processing and manufacturing industry with links to the automotive industry. Traditional for the Liberec Region is also textile industry and jewelry that due to the recession in these industries have lost their dominance. On Frýdlancku and Nový Bor is mined construction sand, on Tlustci and Tachovský Vrch are, on the contrary, mined building blocks. For its polished gemstones and optical instruments is known Trutnov. In Česká Lípa there are extensive railway repair shops. Known brands in glass industry in the world has built mainly Novoborsko and Jablonec nad Nisou, which is also famous for its jewelry and especially mints. In Hradek nad Nisou is also noteworthy rubber industry and in the city of Liberec we can find industry such as the production of car components, glass factories, construction companies, printing industry and beverage industry.

Agriculture in the Liberec region is considered more marginal sectors and comprises mainly of the production of cereals, potatoes, flax, oilseed rape and forage crops, mainly due to cattle breeding. A very essential component of the economy of this region is also tourism.

The table below shows GDP comparisons to the average/total of Czech Republic's GDP and also compares Purchasing Power Standard (PPS) computed by Czech Statistical Office using Eurostat standards.

Table No. 5: GDP comparison

Czech Republic's GDP in %					
	2010	2011	2012	2013	2014
Czech Republic	100	100	100	100	100
Prague	25,5	24,9	24,7	24,9	24,3
Liberecký Region	3,2	3,2	3,3	3,3	3,2
Czech Republic's GDP per capita in CZK					
	2010	2011	2012	2013	2014
Czech Republic	361 268	365 961	365 955	388 771	404 843
Prague	771 773	768 171	762 956	816 350	829 168
Liberecký Region	275 701	279 773	283 671	303 186	315 209
Czech Republic's GDP in PPS					
	2010	2011	2012	2013	2014
EU	100	100	100	100	100
Czech Republic	80	80	79	82	84
Prague	173	171	172	173	173
Liberecký Region	62	62	65	64	66

Source: <http://www.risy.cz/cs/krajske-ris/zlinsky-kraj/kraj/hospodarske-prostredi/makroekonomicke-ukazatele/>, author's edition

10.2 Main employers in the Liberecký Region

Denso Manufacturing Czech, TRUMPF CZ, s.r.o is the largest employer in the industrial zone of Liberec South. In Chrastava is another major employer, a German company called Betnteler, which has another branch in Jablonec nad Nisou and another, the engineering branch of the business, in Liberec. Furthermore, the company Knorr-Bremse and other engineering companies, focusing primarily on the automotive industry are another major employers in the region. As other busy areas belongs, for instance, a commercial and industrial zone Liberec Sever, full of logistic and trading and service companies. Other industrial zones exist in the Česká Lípa and its surroundings, in Jablonec nad Nisou and Turnov.

Here is a list of every year competition of “Employer of the year”⁶ and its finalists in the Liberecký Region.

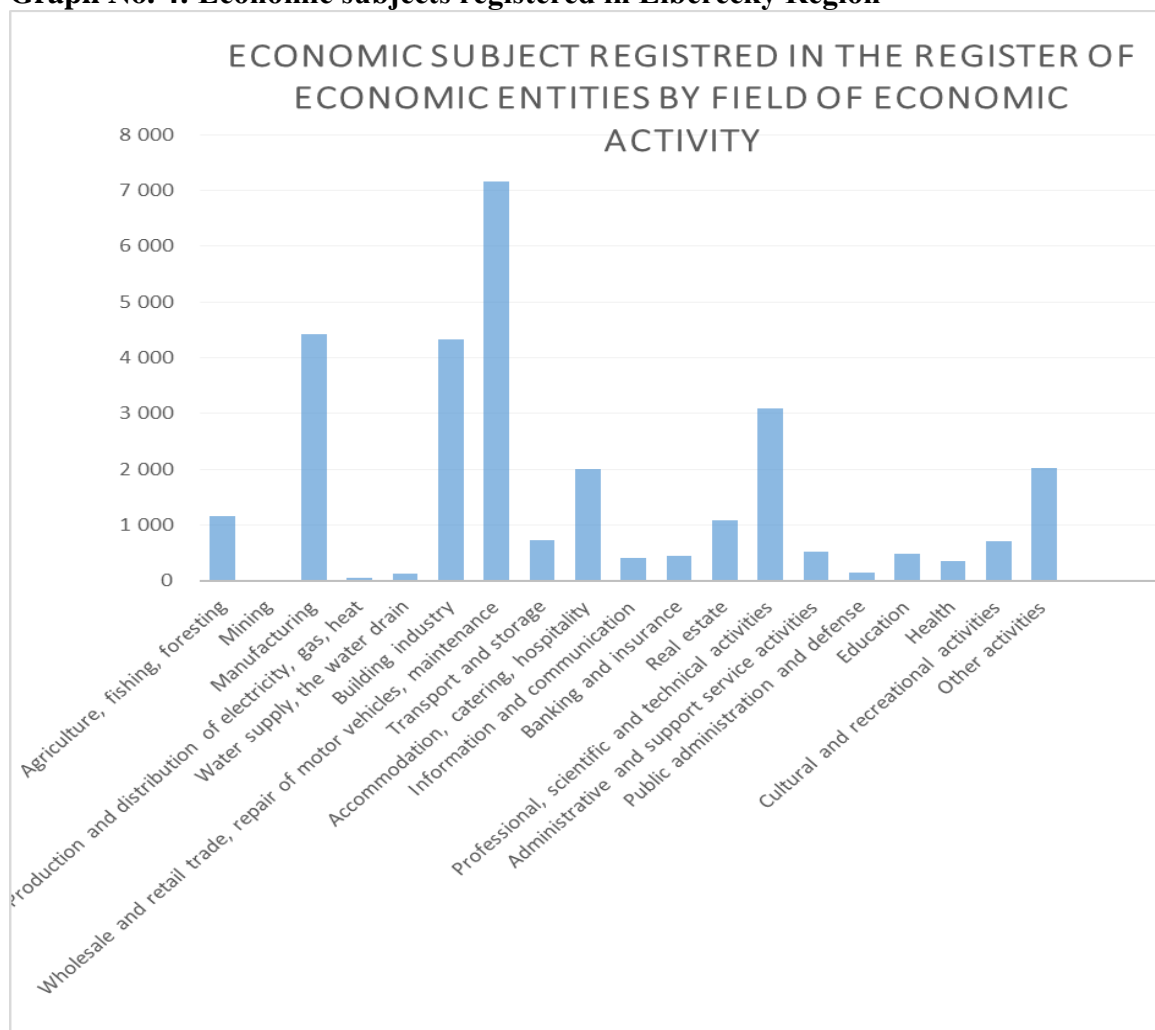
Employer of the Liberecký region (up to 5,000 employees):

- 1) TRW Automotive Czech s.r.o.
- 2) Benteler ČR s.r.o.
- 3) Bombardier Transportation Czech Republic a.s.

Most desired company of the Liberecký Region:

- 1) PRECIOSA, a.s.
- 2)

Graph No. 4: Economic subjects registered in Liberecký Region



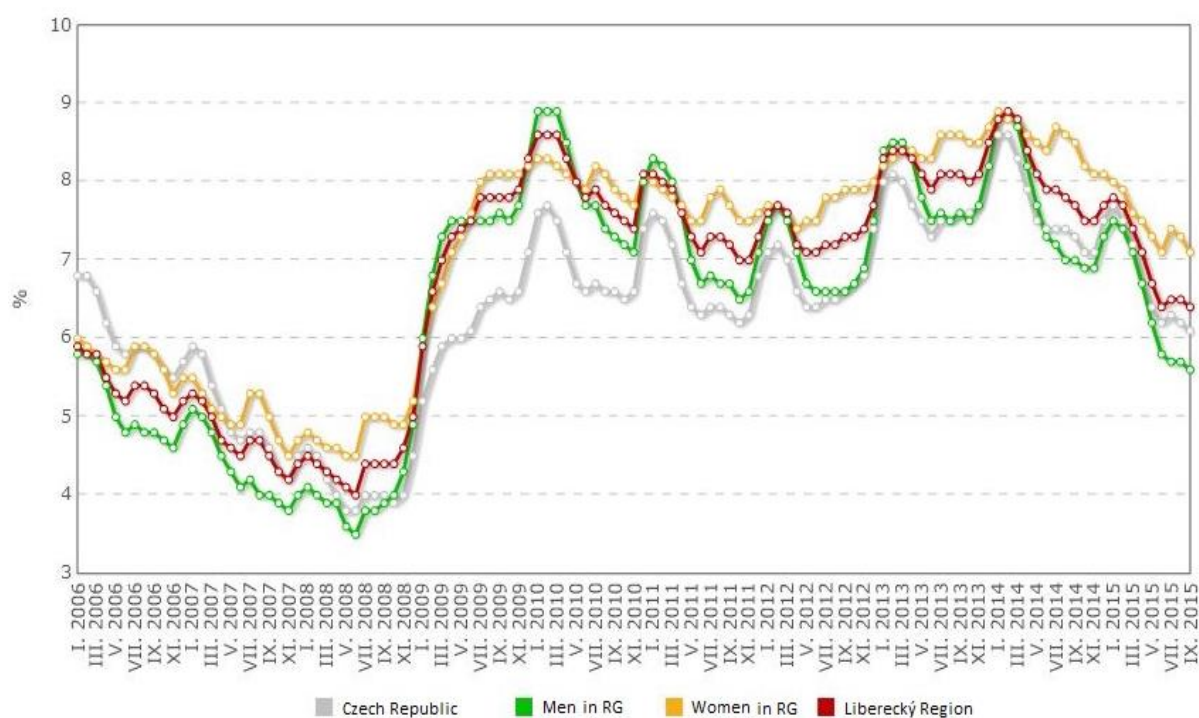
Source: https://www.czso.cz/csu/xl/130131_res, author's edition

⁶ Source: <http://www.klubzamestnavatelů.cz/prvni-kraje-znaji-sve-zamestnavatele-regionu-2014/zprava/>

10.3 Development of unemployment in the Liberecký Region

On graph X is shown the development of average unemployment in Czech Republic compared to the development of men's and women's unemployment in the Liberecký Region and also to the combination of these two unemployments – total unemployment of the Liberecký Region.

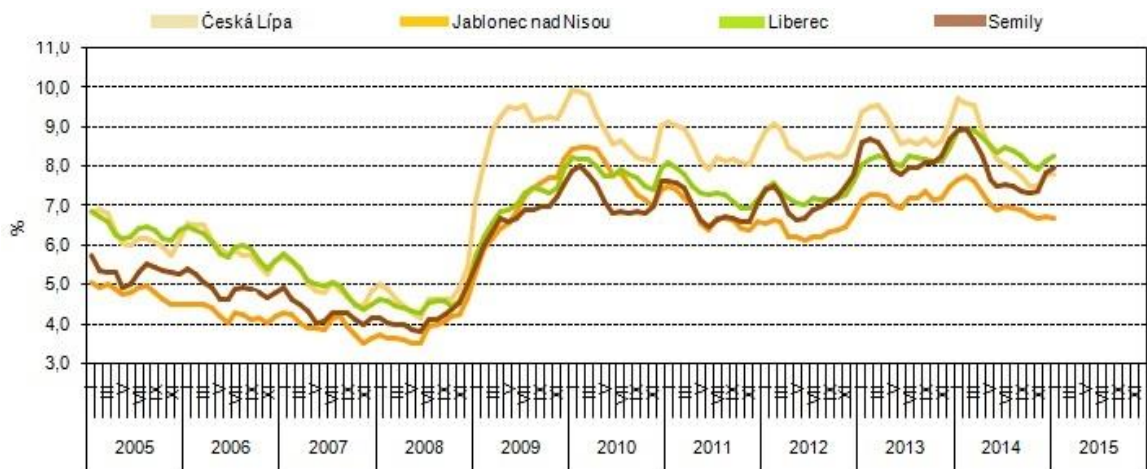
Graph No. 5: Unemployment by gender; Liberecký Region/Czech Republic



Source: https://www.czso.cz/csu/xl100713_ag_nezam%20mpsv

Year 2008 and 2009 was critical for the entire world and its economies, the Liberecký Region not excluded. The Česká Lípa county was hit the most and its unemployment jumped up the most but similar trend was recorded in all four counties in the Liberecký Region and in the Czech Republic as well as in the EU and the rest of world. As in January 2015 the Liberec County has recorded the highest unemployment rate with 8.25% followed by the Semily County (7.95%), the Česká Lípa County (7.79%) and the Jablonec n. Nisou County (6.68%)

Graph No. 6: Unemployment by counties in Liberecký Region



Source: <https://www.czso.cz/documents/11260/25978123/graf5.jpg/f4234137-a251-45cb-a653-fd5eced6aba7?version=1.1&t=1423573877526>

In table 7 we can see the structure of population of people of 15 years of age and older of the Liberecký Region. It clearly shows that the number of inhabitants is in observed period very stable, as well as the number of economically active people in the region. From the table 7 it is also clear that primary and tertiary sector of the region employs just about the same number of people, which is not common to the most of the Czech Republic's regions. Unemployment rate of women is higher than the one for opposite gender – men. Reasons for this phenomenon are explained on page 26.

There were 23,496 applicants registered at Labour Office at 2014 which was very good improvement from the previous year of 2013 where at that time were registered 25,909 applicants. Even though there is a declining trend in numbers of people registered over period of 12 months, the numbers still have not gotten even close to level of 2012 which after this year we witnessed a great climb from 2012's 8,748 people to 2013's 10,459 people.

As the last part of table 7 indicates the most occupied field of work is industry followed, for Liberecký Region traditionally, by car parts manufacturing, reselling, and repairing and so on.

Table No. 6: Labour Force Survey

	2010	2011	2012	2013	2014
Labour Force Survey stats					
Number of inhabitants of 15yo and older in thousnads	373,7	371,4	371,3	370,6	370,2
in that:					
economically active (labour force)	216,6	213,4	213,8	213,7	214,8
from that:					
employed in national economy total	201,5	198,0	193,8	196,0	200,8
from that in sectors:					
primary	4,1	4,2	4,6	2,7	2,8
secondary	96,1	97,6	90,1	93,4	95,6
terciary	101,2	96,2	99,1	99,8	102,4
unemployed	15,1	15,4	20,0	17,7	14,0
economically inactive	157,1	158,0	157,5	156,9	155,4
from that:					
retired and disabled pensioners	91,6	95,5	101,0	103,0	106,0
pupils and students	34,1	35,1	30,0	31,2	28,3
General rate of unemployment (%)	7,0	7,2	9,3	8,3	6,5
in that:					
men	5,5	6,3	8,5	6,9	4,5
women	8,9	8,4	10,4	10,0	9,1
Stats from Labour Office (to 31.12.)					
Not placed applicants	25 653	23 286	24 185	25 909	23 496
from that:					
reachable	24 913	22 323	23 330	25 097	22 620
women	12 867	12 009	12 346	13 286	12 317
disabled	3 138	2 937	2 870	2 927	2 746
graduate and juveline	1 390	1 456	1 788	1 674	1 245
registered for 12 and more months	8 591	8 483	8 748	10 459	10 101
Share of unemployed people to inhabitants in 15 – 64 years of age (%)	8,1	7,3	7,8	8,5	7,7
in that:					
men	8,0	7,1	7,5	8,2	7,3
women	8,1	7,6	8,0	8,7	8,1
Open vacancies	1 417	1 780	1 831	2 549	3 596
Average registered number of employees in national economy devided in economic fields in thousands	143,6	140,4	142,6	141,8	141,8
in that in sectors:					
Agriculture, fishing, foresting	2,7	2,6	2,6	2,6	2,5
Industry	58,3	57,4	58,9	59,5	60,0
Building industry	8,2	7,6	7,3	6,6	6,2
Wholesale and retail, repair shops and dealership of cars	17,6	16,5	15,9	15,5	15,6
Education	11,5	11,5	11,5	11,6	11,6
Health care	10,2	10,3	10,2	10,3	10,5

Source: https://www.czso.cz/csu/xl/20150210_nezam MPSV, author's edition

In January 2015 there were 556,191 job applicants registered at Labour Office in Czech Republic and in that 23,778 come from the Liberecký Region. Reachable number of applicants in the Liberecký Region is 22,767. If this total number would be divided

into counties it would look as follows: Liberec 9,432; Česká Lípa 5,448; Jablonec n. Nisou 3,995; Semily 3,892. These figures are irrelevant unless we know how many vacancies are available in those counties. In the Liberec County it is 1,974 vacancies, in the Česká Lípa County 906, in the Jablonec n. Nisou Caounty 448 and finally for the Semily County it is 543, which makes the Liberec County the easiest county to get a job with only 4.92 (Prague 4.88) applicants to 1 open vacancy and the Jablonec n. Nisou County comes last in the Liberecký Region with 9.74 applicants to 1 vacancy.

Table No. 7: Job applicants by regions

	Job applicants		in that			Share of unemployed to total number of inhabitants (%)			Vacancies pracovní místa		Number of applicants to 1 vacancy
	Total	index (January 2015/ November 2014)*100	Reachable in age of 15–64yo	women	Obtain pension in unemployment	Total	Women	Men	Total	index (January 2015/ November 2014)*100	
Czech Republic	556 191	102,6	539 642	269 846	132 859	7,66	7,51	7,81	62 257	106,0	8,93
Prague	43 978	101,1	42 512	22 334	9 568	5,08	5,14	5,03	9 021	95,7	4,88
Středočeský	58 214	102,7	57 163	29 444	14 811	6,52	6,67	6,38	8 453	102,9	6,89
Jihočeský	29 666	107,3	28 398	14 012	9 759	6,67	6,35	6,99	4 264	117,4	6,96
Plzeňský	23 383	103,3	22 659	11 598	6 645	5,90	5,95	5,85	5 216	105,9	4,48
Karlovarský	17 787	102,9	17 077	8 427	3 491	8,43	8,12	8,73	1 658	100,6	10,73
Ústecký	62 140	102,2	60 349	30 695	10 461	10,89	10,94	10,85	3 276	93,9	18,97
Liberecký	23 778	101,2	22 767	12 236	5 466	7,77	8,02	7,52	3 871	107,6	6,14
in that counties:											
Česká Lípa	5 752	100,4	5 448	3 064	1 359	7,79	8,31	7,28	906	121,1	6,35
Jablonec n. N.	4 362	100,2	3 995	2 208	967	6,68	6,68	6,69	448	106,4	9,74
Liberec	9 709	101,9	9 432	5 109	2 093	8,25	8,72	7,78	1 974	107,5	4,92
Semily	3 955	101,8	3 892	1 855	1 047	7,95	7,64	8,26	543	92,0	7,28
Královéhradecký	24 236	101,6	23 442	11 342	6 712	6,45	6,10	6,78	3 086	111,4	7,85
Pardubický	22 982	104,8	22 505	10 867	7 266	6,53	6,27	6,78	3 785	109,2	6,07
Vysočina	26 431	103,5	25 906	12 676	8 248	7,60	7,46	7,73	2 344	112,2	11,28
Jihomoravský	67 613	102,1	65 877	32 844	16 443	8,42	8,26	8,56	5 262	116,3	12,85
Olomoucký	40 555	104,0	39 089	18 993	9 851	9,20	8,70	9,69	3 365	119,6	12,05
Zlínský	30 247	102,7	29 730	14 186	8 069	7,57	7,21	7,92	3 033	110,3	9,97
Moravskoslezský	85 181	101,6	82 168	40 192	16 069	9,96	9,48	10,43	5 623	104,1	15,15

Source: https://www.czso.cz/csu/xl/20150210_nezam MPSV, author's edition

Table No. 8: Unemployed by age and gender in Liberecký Region

UNEMPLOYED		Czech Republic		Region (in thousands)	
		Total	in %	Prague	Liberecký
		CZ0		CZ010	CZ051
TOTAL		305,3	100,0	12,1	13,4
AGE GROUPS:	15 - 24 yo	54,5	17,9	1,3	3,3
	25 - 29 yo	37,3	12,2	2,0	.
	30 - 34 yo	40,9	13,4	1,3	1,4
	35 - 44 yo	75,8	24,8	2,5	3,9
	45 - 54 yo	59,4	19,5	3,1	2,6
	55 and more	37,4	12,3	1,8	1,5
	level				
Education :	primary	1, 2	56,2	18,4	.
	high school	3	128,0	41,9	3,2
	high school (maturita exam)	3, 4	90,4	29,6	6,5
	college	5, 6	30,6	10,0	1,7
Specific groups:					
	People being employed within 3 months		10,8	3,6	1,1
	Unemployed, not registered		49,8	16,3	4,3

Source: <https://www.czso.cz/csu/czso/zamestnanost-a-nezamestnanost-podle-vysledku-vsps-ctvrtletni-udaje-4-ctvrtleti-2014-qtwqsbs3uw>, author's edition

Data from table 9 indicate that the most unemployed age group of the Liberecký Region is group consisted of people of 34 – 44 years of age. That confirms the trend in the entire Czech Republic. There are no other obvious similarities in the data of unemployed age groups between the average of the Czech Republic and the Liberecký Region.

Sorting unemployed people by the level of their education, according to the Czech Statistical Office, people with education on level 3 (high school – no maturita exam) are to find the employment the hardest. On the other hand people with college degrees are very likely to find employment. This statistic is not only similar in the Liberecký Region and the Czech Republic but in all other regions of the Czech Republic.⁷

⁷ <https://www.czso.cz/csu/czso/zamestnanost-a-nezamestnanost-podle-vysledku-vsps-ctvrtletni-udaje-4-ctvrtleti-2014-qtwqsbs3uw>

11 Conclusion

The aim of my thesis was to clarify the concepts related to unemployment and also to describe the data concerning this thesis and also concerning the regions described in this thesis. The main theme in the first half of this work is to describe labor market, supply and demand for labor, causes and types of unemployment, consequences of unemployment, the high-risk groups, and impacts of unemployment. The second half of my thesis was to approach the problems of unemployment in the European Union in comparison with the Czech Republic and a description of the Liberecký Region and comparing data of unemployment of the Liberecký Region with the same kind of data of Czech Republic. Data were compared between the years 2010 - 2014 and were drawn entirely from governmental and EU institutions.

Development of unemployment in the Czech Republic was from 1993 to 1996 relatively stable and unemployment in the Liberecký Region was always very close to the national average. In 1997, however, the Czech Republic faced a high increase in unemployment mainly for political reasons; poor fiscal and monetary policies and also due to the high indebtedness of banks. At the turn of the millennium a small revival occurred again in the Czech economy, which was mainly a result of higher investments and restructuring of industry, but on the unemployment figures, this phenomenon is not reflected in any positive way and unemployment, and especially long-term unemployment, continued to rise. The Liberecký Region, however, got to its best position in relation to unemployment levels of the Czech Republic since it's the beginning of 1990s. The Liberecký Region was 2.34% below the average of unemployment rate of the Czech Republic in 2000, making it its best result so far.

When looking at the development history of unemployment of independent Czech Republic we may see the first real recovery in 2004, when the Czech economy was doing very well and had a very positive balance in foreign trade. Another even more important factor, however, was the entry into the European Union and the great expansion of the labor market. Czech Republic's entry into the European Union made easier entry for new employers to the labor market and vice versa, easier for applicants to apply for a job abroad.

2006 and 2007 were in terms of unemployment figures very successful years. The average unemployment rate in the Czech Republic first got ahead of the unemployment rate the Liberecký Region. The positive development of unemployment lasted until 2009, the year that followed and was hit by the financial crisis. Year 2008/2009 shook all the economies of most of developed countries.⁸

A comparison of unemployment data of the Liberecký Region can be concluded that this region is overall very close to the average statistics of unemployment of the Czech Republic although in most of the statistics the average is approached from the lower side. As example we can state age group with the most unemployed or the data for unemployment by education or gender.

⁸ <https://www.czso.cz/csu/czso/ceska-republika-v-cislech-od-roku-1989-wau52m1y38>

12 References

12.1 List of tables, graphs and figures

12.1.1 Graphs:

- Graph No. 1: Substitute effect
- Graph No. 2: Labour demand
- Graph No. 3: Phillips curve
- Graph No. 4: Economic subjects registered in Liberecký Region
- Graph No. 5: Unemployment by gender; Liberecký Region/Czech Republic
- Graph No. 6: Unemployment by counties in Liberecký Region

12.1.2 Tables:

- Table No. 1: Unemployment by countries (2010-2014)
- Table No. 2: Jobseekers registered at Labour Office (2010-2014)
- Table No. 3: Unemployment in Czech Republic by MLSA
- Table No. 4: Unemployment in Czech Republic by LO CZ
- Table No. 5: GDP comparison
- Table No. 6: Labour Force Survey
- Table No. 7: Job applicants by regions
- Table No. 8: Unemployed by age and gender in Liberecký Region

12.1.3 Schemes:

- Scheme No. 1: Unemployment by counties 2014
- Scheme No. 2: Administrative breakdown of the Liberecký Region

13 References:

13.1 Literature sources:

- MAREŠ, Petr. Nezaměstnanost jako sociální problém. Praha: Sociologické nakladatelství, 2002. 172 s. ISBN 80-210-3049-8.
- VÁCLAVÍKOVÁ, Anna, Helena KOLIBOVÁ a Alena KUBICOVÁ. Problematika trhu práce a politiky zaměstnanosti. Vyd. 1. Opava: Optys, 2009. ISBN 978-80-8581-976-2.
- ŠIMEK, Milan. Ekonomie trhu práce. 1. vyd. Ostrava: Vysoká škola báňská - Technická univerzita Ostrava, 2007. ISBN 978-80-2481-416-2.
- NORDHAUS, W D. – SAMUELSON, P A. Ekonomie : 19. vydání. Praha: NS Svoboda, 2013. ISBN 978-80-205-0629-0.
- MANKIWI, N G. Zásady ekonomie. Praha: Grada, 1999. ISBN 80-7169-891-1.
- MAITAH, M. Macroeconomics. Praha: Reprografické studio PEF ČZU, 2015. ISBN 978-80-213-1904-2.
- FROYEN, R T. Macroeconomics : theories and policies. New York: Pearson/Prnce Hall, 2004. ISBN 0-13-143582-5.
- VLČEK, Josef. Ekonomie a ekonomika. 4. vyd. Praha: Wolter Kluwer ČR, 2009. ISBN 978-80-7357-478-9
- BROŽOVÁ, Dagmar. Kapitoly z ekonomie trhů práce. Vyd. 1. Praha: Oeconomica, 2006. ISBN 80-245-1120-7.
- JUREČKA, Václav. Makroekonomie. 1. vyd. Praha: Grada Publishing, 2010. ISBN 978-80-2473-258-9

13.2 Internet sources

- *Unemployment statistics* [online]. [accessed 24-2-2016]. Available at: http://ec.europa.eu/eurostat/statisticsexplained/index.php/Unemployment_statistics
- *Labour economics* [online]. [accessed 11-11-2015]. Available at: https://en.wikipedia.org/wiki/Labour_economics
- *The labour demand* [online]. [accessed 11-11-2015]. Available at: <http://www.eurmacro.eu/tutor/c13.html>

- *Unemployment calculation changes* [online]. [accessed 22-11-2015]. Available at:
https://www.czso.cz/csu/czso/zmena_vypoctu_ukazatele_registrovane_nezamestnanosti20121107
- *Registered applicants* [online]. [accessed 7-12-2015]. Available at:
https://vdb.czso.cz/vdbvo2/faces/index.jsf?page=vystup-objekt&verze=1&z=T&f=TABULKA&nahled=N&sp=N&filtr=G~F_M~F_Z~F_R~F_P~_S~_null_null_&katalog=30853&zo=N&pvo=ZAM10&str=v172&c=v3_RP2014&v=v166_null_null_null#w=
- *Phillips curve* [online]. [accessed 19-12-2015]. Available at:
<https://www.boundless.com/economics/textbooks/boundless-economics-textbook/inflation-and-unemployment-23/the-relationship-between-inflation-and-unemployment-105/the-phillips-curve-399-12496/>
- *Unemployment development* [online]. [accessed 7-1-2016]. Available at:
<http://ec.europa.eu/eurostat/web/lfs/data/database>
- *Calculation explanation* [online]. [accessed 22-11-2015]. Available at:
https://www.czso.cz/csu/czso/zmena_vypoctu_ukazatele_registrovane_nezamestnanosti20121107
- *The Liberecký Region* [online]. [accessed 13-1-2016]. Available at:
<http://liberecky.denik.cz/>
www.kraj-lbc.cz/
https://en.wikipedia.org/wiki/Liberec_Region
- *Employer of the year* [online]. [accessed 19-1-2016]. Available at:
<http://www.klubzamestnavatelů.cz/prvni-kraje-znaji-sve-zamestnavatele-regionu-2014/zprava/>
- *Gender and age groups unemployment* [online]. [accessed 14-2-2016]. Available at:
<https://www.czso.cz/csu/czso/zamestnanost-a-nezamestnanost-podle-vysledku-vsp-ctvrtletni-udaje-4-ctvrtleti-2014-qtwqsbs3uw>
- *Actual unemployment in LR* [online]. [accessed 21-2-2016]. Available at:
<https://www.czso.cz/csu/czso/zamestnanost-a-nezamestnanost-podle-vysledku-vsp-ctvrtletni-udaje-4-ctvrtleti-2014-qtwqsbs3uw>