

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

Department of Economics



Selected Aspects of Economic Transformation in East Germany

Diploma thesis

Author: Iva Šlosarová

Supervisor: doc. Ing. Karel Tomšík, Ph. D.

© 2013 CULS

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Department of Economics
Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

Šlosarová Iva

European Agrarian Diplomacy

Thesis title

Selected Aspects of Economic Transformation in East Germany

Objectives of thesis

Main objective of the theoretical part of this thesis is to write quality literature and to show the main differences between East and West Germany.

Main objective of the practical part of this thesis is to gain data and analyze causes and consequences of transformation of economy after 1989. It describes also impact to the social sphere.

Methodology

Theoretical part will be described from specialized books and internet sources.

Practical part of this diploma thesis will be based upon economic analysis. That analysis will compare data from West Germany and East Germany such as : inflation, unemployment rate and GDP.

Schedule for processing

till July 2012 - Aim and Methodology

till September 2012 - Theoretical part of diploma thesis

till November 2012 - Practical part of diploma thesis

till January 2013 - Conclusion

The proposed extent of the thesis

60 - 80 stran

Keywords

transformation of economy, unemployment, labour market, GDP

Recommended information sources

Jörn Altmann , Wirtschaftspolitik, 8.Auflage, Lucius&Lucius Stuttgart, 2007, 615 p, ISBN:978-3-8282-0389-1.
Karl-Heinz Paqué, Die Bilanz, Eine wirtschaftliche Analyse der Deutsche VW, Carl Hanser Verlag München, 2009, 298 p, ISBN:978-3-446-41958-2
Kröhner, Medicus, Klingholz, Die Demografische Lage der Nation, 2. Auflage, Deutscher Taschenbuch Verlag, 2006, 189 p, ISBN:978-3-423-34296-4
Ulrich Busch, Wolfgang Kühn, Klaus Steinitz, Entwicklung und Schrumpfung in Ostdeutschland, VSA - Verlag, 2008, 200 p, ISBN: 978-3-89965-331-1.
Baldwin, R., Wyplosz, C.: The Economics of European Integration. McGraw-Hill Higher Education, 2009. ISBN: 0077121635
Pestieau, P.: The Welfare State in the European Union: Economic and Social Perspectives. Oxford University Press, 2006. ISBN: 0199261024

The Diploma Thesis Supervisor

Tomšík Karel, doc. Ing., Ph.D.

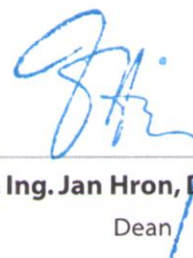
Last date for the submission

March 2013



prof. Ing. Miroslav Svatoš, CSc.

Head of the Department



prof. Ing. Jan Hron, DrSc., dr.h.c.

Dean

Prague November 23. 2012

Declaration

I declare that I worked on this diploma thesis titled **Selected aspects of economic transformation in East Germany** completely on my own and that I marked all quotations in the text. The literature and other sources I have used are mentioned in the references of the diploma thesis.

In Prague, March 15, 2013

.....
Iva Šlosarová

Acknowledgement: I would like to express my deep and sincere gratitude to my supervisor, doc. Ing. Karel Tomšík, Ph.D. His knowledge, personal guidance and experience have provided a good basis for my diploma thesis. I would like also express my gratitude to my family for their support during my study.

**Selected Aspects of Economic Transformation
in East Germany**

**Vybrané aspekty transformace ekonomiky
východního Německa**

Summary

This diploma thesis is focused on the transformation of the German economy from 1989 until now. It introduces basic differences between East and West Germany. It deals with the history of Germany after World War II until reunification. It also describes the impact on the economic and social sphere such as: unemployment rate, inflation rate, life expectancy and life satisfaction.

The previous part is followed by the results of socio-economic analysis. The analysis represents the development before and after reunification, as well as showing the economic situation before and after reunification, life satisfaction after 1990. This economic analysis is complemented by index number analysis, which was used in selected aspects.

The last part shows an evaluation of the given analysis and outlines the expecting development in the unified Germany.

Keywords: Germany, West Germany, East Germany, reunification, labour market, GDP, unemployment rate

Souhrn

Tato diplomová práce je zaměřena na ekonomickou transformaci po roce 1989 až po současnost. Představuje základní rozdíly mezi východním a západním Německem. Pojednává o historii Německa po druhé světové válce až do znovusjednocení. Dále tato diplomová práce popisuje dopady znovusjednocení na ekonomicko-sociální sféru, jako míra nezaměstnanosti, míra inflace, délka života a životní spokojenost.

Na předchozí teoretickou část navazuje ekonomicko-sociální analýza. Analýza představuje vývoj před a po sjednocení a zároveň také mapuje ekonomickou a sociální situace v době před a po sjednocení. Tato ekonomická analýza je doplněna indexem růstu, který byl použit ve vybraných ekonomických aspektech.

V poslední části diplomové práce je znázorněno celkové zhodnocení sociálně-ekonomické analýzy, dále je zde naznačen očekávaný vývoj sjednoceného Německa.

Klíčová slova: Německo, západní Německo, východní Německo, znovusjednocení, trh práce, HDP, míra nezaměstnanosti

CONTENT

1. INTRODUCTION	7
2. OBJECTIVE AND METHODOLOGY OF THESIS.....	8
3. THE HISTORY OF GERMANY	10
3.1. History of Germany from 1945 till 1948	10
3.1.1. Currency reform in 1948.....	12
3.1.2. The Marshall Plan	13
3.2. 50s and 60s.....	14
3.2.1. Construction of Berlin wall.....	15
3.3. Year of 1989	17
3.3.1. Berlin	17
3.4. Reunification.....	18
4. SOCIO-ECONOMIC INDICATORS.....	21
4.1. Gross Domestic Product	22
4.2. Labour market.....	25
4.2.1. Demand for labour	26
4.2.2. Labour supply	27
4.2.3. Labour market imperfections.....	28
4.2.4. The price of labour.....	29
4.3. Unemployment.....	29
4.4. Inflation.....	32
4.5. Social indicators.....	35
Human Development Index	42
5. SELECTED SOCIO-ECONOMIC DEVELOPMENT INDICATORS	45
5.1. Economic of German Democratic Republic	48
5.1.1 Labour market.....	49
5.1.2. Economic situation of inhabitants.....	54
5.2. The transformation of German Democratic Republic	56
6. EVALUATION AND EXPECTING DEVELOPMENT.....	78
7. CONCLUSION	80
8. BIBLIOGRAPHY	81
9. SUPPLEMENTS	88

List of figures

Figure 1: Approaches of GDP	23
Figure 2: Population in developing country	25
Figure 3: Population in developed country	26
Figure 4: Demand for labour	27
Figure 5: Labour supply.....	28
Figure 6: Business cycle	31
Figure 7: Philips curve.....	35
Figure 8: Population growth in developing countries.....	36
Figure 9: Population growth in developed countries	36
Figure 10: Life expectancy in developed countries	37
Figure 11: Life expectancy in developing country	37
Figure 12: Water coverage in developing countries	38
Figure 13: Water coverage in developed countries	39
Figure 14: Primary education in developing countries.....	40
Figure 15: Primary education in developed countries	41
Figure 16: Income and economic activity in developing countries	41
Figure 17: Income and economic activity in developed countries	42
Figure 18: Components of the Human Development Index	43
Figure 19: HDI in developing countries	43
Figure 20: HDI in developed countries.....	44
Figure 21: World map.....	44
Figure 22: Map of divided Germany	45
Figure 23: Unemployment in old federal states including West Berlin	53
Figure 24: GDP growth.....	54
Figure 25: Growth of price level.....	55
Figure 26: ERDF East Germany	57
Figure 27: Unemployment rate - old federal states.....	58
Figure 28 :Model of unemploymnet rate - old federal states.....	59
Figure 29: Trend functions of unemployment rate - old federal states.....	60
Figure 30: Unemployment rate- new federal states	61
Figure 31: Model and trend functions for unemployment rate - new federal states.....	62
Figure 32: Unemployment rate in Germany	63
Figure 33: Model of unemployment rate - Germany	64
Figure 34: Trend functions of unemployment rate - Germany	65
Figure 35: Development of GDP in East Germany	66
Figure 36: GDP in Germany	67
Figure 37: Model of GDP (billion)	68
Figure 38: Trend functions of GDP (billion USD)	69
Figure 39: Inflation rate in Germany	70
Figure 40: Model of inflation rate.....	71
Figure 41: Trend functions of inflation.....	71
Figure 42: Development of life satisfaction	72

List of tables

Table 1: New federal states - basic indicators	46
Table 2: Old federal states - basic indicators	47
Table 3: Germany - basic indicators	47
Table 4: Share of public and private sector in East Germany	49
Table 5: Labour market in East and West Germany – 1989.....	50
Table 6: Employment by sectors in East Germany.....	51
Table 7: Sectoral employment in East Germany	51
Table 8: Minimum wage in East Germany	54
Table 9: Average monthly salary in East Germany	55

List of graphs

Graph 1: Unemployment Rate- Germany	48
Graph 2: GNP in current price	50
Graph 3: Unemployment rate in West Germany	52
Graph 4: GDP annual growth rate in Germany	66
Graph 5: Population growth in East and West Germany	73
Graph 6: Life expectancy men in East and West Germany	74
Graph 7: Life expectancy women in East and West Germany	75
Graph 8: Net migration in East Germany	75
Graph 9: Birth rates in East Germany	76
Graph 10: Demographic development in East Germany	77

1. INTRODUCTION

The Federal Republic of Germany is a highly inhabited country, with almost 83 million inhabitants. It is divided into 16 states. The capital city is Berlin and it is one of the states. Germany was one of the founders of the European Union. Germany is the strongest economic power in the EU and has the fourth largest economy in the world. The main reason for this is its high technological development. Germany is focused on exporting goods to the rest of the world, mainly to Asia. They produce high quality products such as: cars, pharmaceutical goods, and electronic and communication equipment.

In addition more than 29 million people work in the sector of services. More than 12 million people work in public and private service providers, 10 million in hotels and transport and 7 million in the finance sphere. The main pillar is created by bank institutions. These institutions are concentrated in Frankfurt am Main. It is also the home of the European Central Bank, Federal Bank and the German Stock Exchange.

This diploma thesis deals with problem of transformation in East Germany. After World War II Germany was divided into two parts. The first part was the German Democratic Republic (East Germany), and the second, the Federal Republic of Germany (West Germany). East Germany was occupied by the Soviet Union and West Germany belonged to the USA, Great Britain and France.

Furthermore, this thesis is focused on continuing differences between East and West Germany. There is still awareness about persisting differences between West and East Germany. The economy in East Germany was driven by centrally planned economy. It was driven by the Soviet Union, such as in Czechoslovakia.

Currently Germany is troubled by a high rate of unemployment, decreasing birth rate and increasing ageing population. Most of these problems are common to all countries in Europe.

2. OBJECTIVE AND METHODOLOGY OF THESIS

The main objective of this thesis is to evaluate the socio-economic situation in unified Germany. The objective of the theoretical part of this diploma thesis is to write a high quality comprehensive literature retrieval and describe basic terms, such as the transformation of the East Germany Economy, its historical background, the causes and consequences of the transformation and the differences between East and West Germany. Furthermore, it will introduce socio-economic indicators, which show the current situation in Germany. The main objective of the practical part is data gathering and evaluation of socio-economic indicators such as GDP, unemployment rate, inflation, and population growth. Partial goals are to show what the differences in socioeconomic indicators were between East and West Germany.

The theoretical part will be described from specialized books, internet sources and global statistic sources. Furthermore, this part will be complemented by graphs and diagrams related to the socio-economic indicators. The indicators provide data on the rate of unemployment, inflation, GDP, life expectancy, population growth and other indicators. The data will be sourced from official statistical research from Europe and global statistics. In selected aspects of reunification a trend analysis and index number analysis will be used. The main economic indicators will be described in detail in the theoretical part. The theoretical part describes the selected social indicators such as demographic growth, life expectancy and etc. The aim is to identify differences in the selected social indicators across regions and income groups.

The practical part of thesis will be based on economic analysis. This analysis will be based on the comparison of socio-economic indicators in West Germany and East Germany. Firstly, economic indicators, such as the inflation rate, GDP and unemployment rate in divided Germany, will be displayed, and afterwards the process of socio-economic transformation will be described. These indicators will be sourced from Germany's statistic office (e.g. Destatis.de), Eurostat and other statistic offices (e.g. Data.worldbank.org). Furthermore, the practical part will be complemented by time series analysis and index numbers analysis. This analysis will be in the form of figures and will be created with statistical software IBM SPSS. The aim is to explore the trend in development from the selected data, as well as predicting the future using the trend. The coefficient of determination plays an important role in determining the goodness of fit of the regression

line to the data. An R^2 close to 1.0 indicates that the regression line perfectly fits the data. Index number analysis compares changes in variables over a period of time. Fixed base index compares development to a fixed basis, and chain base index compares each year with the immediately preceding year. This practical part will concentrate attention on the differences still persisting in unified Germany.

3. THE HISTORY OF GERMANY

This chapter is focused on the history of Germany. It provides a concise summary of facts about Germany, its history and situation in given period. It introduces basic differences between East and West Germany.

3.1. History of Germany from 1945 till 1948

In 1945 Germany was defeated by coalition of France, Great Britain and the Soviet Union. Germany was divided into four zones during the time period 1945 till 1949. One part of Germany belonged to the USA, the second one belonged to France, the third one was covered by Great Britain, and finally the last part was assigned to the Soviet Union.

The part of the Americans was Bavaria and Hessen in the South of Germany and also North part of Germany, where nowadays the state Baden-Württemberg is situated. The British part was consisted of Brunswick, Hannover, Lippe, Odenburg, North Rhine-Westphalia, Schaumburg-Lippe, Schleswig-Holstein and Hamburg. The French zone included Rhineland-Palatine, Baden, Württemberg-Hohenzollern. The Soviet zone included Mecklenburg, Brandenburg, Sachsen-Anhalt, Thüringen. [14]

Due to coalition of four political super powers there was a flourishing cultural life though there was not enough food. People could choose from rich literature, film and music funds while the political scene was struggled by mistrust and suspicious. In 1947 the Bavarian Prime minister Hans Ehard invited all of German Prime Ministers from four occupation zones to the conference in Munich. Ehard hoped that it will prevent of mutual distancing. However, the opposite was true. The Munich conference ended in a complete fiasco. Ideas that can West Germany drive with Soviets, it was necessary to give it up. On 1st January 1947 the Americans and the British agreed to join their zones, which created the former West Germany. In 1948, the Berlin crisis began. Monetary reform was necessary, since the year 1945, the German money has devaluated. Three western victorious powers introduced German marks instead of Reich marks on 18th June 1948. The Soviet Union immediately reformed eastern currencies, including also Berlin. Nevertheless, all talks of four victorious powers failed, and West German marks were introduced in Berlin. During one year the whole town was dependent on food supplied from air. It was a big change that the airplanes, which bombed Berlin a year ago, dropped food. Berlin became a reconciliation symbol of Western powers with the Germans. The former enemies became

friends. Due to the Berlin blockade teamed mutually between the Western Allies and West Germans. It was only a matter of time before the establishment of one state to the East and to the West. On 1st July 1948 in the headquarters of the American occupation forces in Frankfurt am Main the three military governors of the western zones met with the eleven prime ministers of the countries. The Frankfurt documents included authorization of establishing West German state. So it is the birth certificate of the Federal Republic of Germany. In May 1949 the Basic Law was approved. The Basic law was supposed to function as the constitution; however, it was only a kind of makeshift. It was expected that the new constitution would come into force after Germany would be unified. Despite the tentative character of the Basic Law - due to democratic principles - The Basic Law was approved and adopted by former German Democratic Republic in 1990. In August 1949 first free election which were CDU/CSU. It formed a coalition with the third most successful party FDP. SPD went into opposition. The first Chancellor was Konrad Adenauer, Ludwig Erhard became First Minister of Economy. Konrad Adenauer was Prime Minister from 1949 to 1963. During his government the economy was growing and GDP as well. CSU party is Christian Social Union (Christlich Soziale Union); it operates only in Bavaria but its larger sister, CDU party – Christian Democratic Union (Christlich Soziale Union) operates in other 15 states of Germany. FDP, Free Democratic Party of Germany (Freie Demokratische Partei Deutschland) is a liberal party; it was founded in 1948. SPD – Social Democratic Party of Germany (Sozial Demokratische Partei Deutschland) is social - democratic party. The 50s are the period of changes and development. The sector of industry became the priority instead of agriculture. In 1951 we can determine this period of industry boom. The reasons are:

- Federal Republic of Germany had available enough qualified labour forces
- Increase export of German goods abroad
- Korean war

The reasons of enough qualified labour forces were also due to huge number of emigrants from East. The labour forces were also really high motivated. In 1950 the level of unemployment was around 2 million, after two year much lower.

The German goods became more and more popular not only due to its quality but also lower price. In comparison with USD was German marks undervalued.

Korean War was also a factor for increasing production. It was increasing demand in these sectors:

- machine tools,
- vehicles
- elector-technical products
- chemical products

Export also covered up the undervalued West marks.

Behind this “economic miracle” people saw Ludwig Erhard, the Federal Minister of economics. He didn’t see himself as a “miracle man”. The main determinants, which influenced this economics growth, were:

- Currency reform, which was implemented in 1948
- Economic aid from USA, due to Marshall plan [30]

3.1.1. Currency reform in 1948

The post- war economy suffered by hyperinflation, due to financing of war expenditures under the Third Reich. The Reich marks were devaluated and the American cigarettes acted as a currency. The monetary reform was also associated with social market economy reform. The building of social market economy necessarily needed law. The first law was Law of Deutsch bank, Bank of German states (Bank deutscher Länder). The Bank of German states was replaced by German Federal Bank (die Bundesbank). This central bank was highly independent and watched over the stability of the currency. It created a power shared between the government and the central bank. [30]

The next passed law was The Guiding Principle Law (Gesetz über Leitsätze für die Bewirtschaftungs- und Preispolitik nach der Währungsreform). This law affected the functioning of the German economy. The prices should be freely made by market and the economy should move from central controlled economy to a market economy. The currency reform was brought into force on 20 June 1948. Reich marks was replaced by German marks. Each person received 60 German marks; it was divided into two installments: first installment was 40 German marks and the second one was 20 German marks. Banking and private liabilities was converted at rate of 100 Reich marks to 1 German marks. The wages, rents, pension, and other repeating liabilities were converted at

a rate of 1 Reich marks to 1 German marks. Savings and cash were converted at rate of 100 Reich marks to 6.5 German marks. [19]

Ludwig Erhard also enforced the abolition of ration system, which led to favourable conditions and easier transition to the social market economy. The reform should take place not only in the Western zones but also in Berlin. It encountered strong resistance of the Soviets. As a final result about the monetary reform on 23 June 1948 reckoned that monetary reform will apply to entire Berlin. These disagreements broke out in Berlin crisis. It means blocking all access road to West Berlin. By creating an air bridge by Western zones were secure the basic course of daily life. During almost a year-long Berlin blockade around 200 thousand flights were carried out, in which Americans and Brits transported more than 200 tons of food, coal and other necessary things. Finally, the Soviet Union stood aside when they found out that it is futile effort to obtain Germany. On 12 May 1949 Soviet Union announced the end of Berlin blockade. This blockade can be called as a first strategic defeat of Soviet policy. [14]

3.1.2. The Marshall Plan

The European Recovery Program is known as the Marshall Plan. This plan had to secure aid in the post-war Europe. The post-war Europe was in economic crisis and thousands of people out of work. The USA was initiator of Marshall Plan due to fear of spreading communism. The Marshall Plan was introduced by George Marshall, Ministry of Foreign Affairs in the USA, on his speech at the Harvard University. He was initiator and inventor of this Plan. He was awarded the Nobel Peace Prize in 1953. The amount of assistance was set at 19 billion USD. The providing help lasted for five years from 1948 to 1952. It was spent 13.5 billion USD. The European Recovery Plan included 16 European countries such as: Great Britain, France, Italy, West Germany, Netherlands, Greece, Austria, Belgium, Denmark, Norway, Turkey, Ireland, Yugoslavia, Sweden, Portugal and Iceland. All of these countries were democratic, with exception of Yugoslavia. Yugoslavia was more or less independent on Soviet Union. Yugoslavia was leading to independent direction without Soviet interventions. The Marshall Plan implementation was entrusted to the newly formed Organization for European Economic Cooperation (OEEC). In 1961 OEEC was superseded by Organisation for Economic Cooperation and Development (OECD). The Marshall Plan counted with accepting the Soviet bloc, but Soviet bloc refused and other Eastern bloc countries were forced to reject it as well, including

Czechoslovakia. The assistance help was not only loans but also goods and food. [34] In 1948 the economy of West Germany started to grow. The main determinants were currency reform and the Marshall Plan.

3.2. 50s and 60s

As we already mentioned the period 1952 – 1966 was called economical “miracle” in Germany. In this period industry such as: engineering, mining and chemical industry were growing. The companies enlarged more and more. This situation led to lack of workers. The number of emigrants from East Germany was insufficient, too. The economic phenomenon of this time period is Gastarbeiter. It means guests workers. It was mainly emigrants who moved to West Germany. The Government of Federal Republic of Germany made an agreement with Italy in 1955 on the basis of Italians from Apennine Peninsula went to West Germany. Due to this agreement was to refresh agricultural fields, mining and construction, which suffered from acute labour shortages. The agreements were concluded with Turkey in 1961, with Greece in 1960, with Morocco in 1963, with Tunisia in 1965 and Yugoslavia in 1968. These guest workers were hired in low- skilled jobs, mainly in industry and agriculture. The idea was that guest workers will be one or two years in Germany and then return to their original homelands. In the first half of the 70s motivations to return to their homeland weaken, when the German labour market was closed for new foreign workers. They took necessary measures due to economic problems and rising unemployment. This measure was approved in 1973 and there were already over 2.5 million foreigners in Germany. Trade Unions also played an important role. They were established in 1949, they enforce those wage increases according to the increase of production. In the second half of fifties the Deutsch Bundesbank began to buy gold due to high export surplus and large foreign exchange reserves. It was passed law of compensation, which recompensed refugees and exiles for consequences of World War II. The compensation was in form of property compensation, housing assistance, pension, till 1980 was paid out 104 billion German marks. During World War II. more than 20% of the living area was destroyed and population of West Germany compared to the pre-war period rose by a fifth to about 51million due to refuges. In 1950 according to abstract of statistics three households shared two apartments and only half of the households had its own cooking area. More than five million houses were built between 1950 and 1960, of

which approximately 60 percent, as the government subsidized social housing, their equipment may not exceed certain standards. [28]

In 1961 was German marks revaluated, originally the rate set against dollar began to be undervalued. The next revaluation of German marks was in the years 1969 and 1971. The structure of economy was changing; the share of workers in the industry was increased to the detriment of agriculture sector. Around a quarter of the workforce was employed in agriculture, 40 percent were employed in trade and industry and one third in the tertiary sector including trade, transport and services in 1950. In 1960, the share of workers in agriculture fell to less than 14 %, while in trade and industry (secondary sector) more than 38 percent of workers were employed. In 1949 – 1961 over 2.6 million people were leaving for the West Germany.[1] The period from 1952 – 1966 was called the economic miracle. The industry was growing so much that there were not enough workers to fill the jobs created. The government of the Federal Republic of Germany therefore made an agreement with Italy, Turkey, Greece, Morocco and Tunisia to hire workers from these states.

3.2.1. Construction of Berlin wall

Almost 10.000 inhabitants of West Berlin worked in East Berlin and about 50,000 travelled in the opposite direction. They received 40 % of salary in the West German marks, after the exchange they received four times more. This was problem for East German chief that these people have unlimited access to all information, which was due to censorship prohibited. In 1958 a party purge was made in German Democratic Republic, which meant to let only members loyal to Walter Ulbricht. Walter Ulbricht was the Secretary of SED (Socialist Unity Party) and leader of East Germany from 1950 – 1971. Khrushchev's ultimatum, Khrushchev appealed to Western powers to leave from Berlin during six month if they do not, the Soviet Union make an agreement with German Democratic Republic of settlement after World War II and thus removes permission of Western powers for their stay in Berlin. Americans would have been left, but the Europe would be threatened by their departure. Khrushchev calmed after visitation of presidents of USA and Soviet Union in the U.S. During the meeting with President Kennedy in June 1961 when Kennedy refused to do Berlin the “free city” he threaten him by nuclear war. In 1962 the Caribbean crisis erupted. It began the New Berlin crisis but it was not only matter of Berlin. It was a new incentive to leave during the first seven months of 1961 to West

Germany, more than 200,000 people left. The situation became untenable, Walter Ulbricht became the President and more than 45,000 volunteers were enrolled to the secret police – it means the German Democratic Republic prepared restriction of free movements. On 13 August 1961 border streets were occupied by police, at 2. all phone connection was stopped. The border guarders were replaced by Soviet troops. People on the west side, who attempted to remove barriers, were forced away by bayonets and water cannons. Also on eastern side there were thousands of people who lost their jobs. Ulbricht made a speech that German Democratic Republic took down the capitalism, because the enemies cannot get to East Berlin. American condemned the wall, but they cannot do more, otherwise the action would endanger peace of the world. Only concrete pillars were built first in which consolidated barbed wire. Behind barbed wire had grown wall of concrete panel with a rounded top profile making impossible to catch the edge. The East side of wall was white painted in order to shooter saw silhouettes sharper. In 1963 was guarded along 160 km 20,000 troops, 193 watchtowers and 208 bunkers. Guards were walking with dogs, they had permission to shoot. On the west side there were warning signs “Stay away”. From the first moments of building the wall people tried to climb over. Most of them simply threw the rope over the wall and waited for someone on the other side, many swam from any waterway. Every known successful escape was processed by secret police and it received measures that it could not be repeated. The escapes became more and more difficult. Even during two years of wall construction there were 16,500 successful escapes, but also four people were condemned to death, 18 to life imprisonment and 68 people were shot while trying to escape. [44] In 1963 John Fitzgerald Kennedy arrived in Berlin and said one of his memorable speeches:

“All free men, wherever they may live, are citizens of Berlin and therefore, as a free man, I take pride in the words "Ich bin ein Berliner!"

Kennedy’s assassination was a few months later and funeral candles are lighted in the windows over Berlin. [32] That year Christmas visits from the West were allowed too; the charge was determined by closeness relationships. A further slight release occurred after the establishment of diplomatic relations between German Democratic Republic and Federal Republic of Germany and the signing of the Treaty of ununused force in their mutual relations in 1971. The first major economic crisis occurred in the period 1974-1975, the industrial production fell down in the most sectors as construction, metallurgy, chemical

and automotive. Behind this crisis we could see oil shock, Germany was high dependence on this raw material, they decided to speed up the construction of powerhouses and increase their own reserves of coal. Also inflation and rate of unemployment increased, so it was stopped received of guest workers. The unemployment rate rose since 1983 to 1989, it was around 9%. Also government under pressure from trade unions allowed earlier retirement. The greatest increase of unemployment was in industry sector. It was established Ministry of environment on 6 June 1986, about five weeks after the nuclear disaster at Chernobyl. Until then, there was no interest on environmental protection. [14] This period was highly influenced by the shock oil crisis. The inflation rate and rate of unemployment increased, and as a result guest workers were no longer needed.

3.3. Year of 1989

During his visit in 1987 Ronald Regan urged Gorbachev to demolish the wall. His request still remained unanswered. And then, in the year 1989 over 800,000 inhabitants of the German Democratic republic left the country. (Hungary opened its borders on 2 May 1989. West German embassies in Budapest and Prague were overwhelmed by applicants for political asylum. The German Democratic Republic tried to stop the emigrants by closing the borders on 4 October 1989. Meanwhile The New Forum was created and regular demonstrations strengthened in Leipzig. Honecker's command to shoot was cancelled. Honecker was responsible for building the wall, he became the leader of SED and GDR after Ulbricht. Honecker was removed from the position of leader on 18th October 1989. The border between German Democratic Republic and Czechoslovakia was opened on 1st November and Czechoslovakia opened its borders to the West on 3rd November 1989. On 4th November a demonstration for democracy in East Berlin was held, over half million people took part in it. On 9 November 1989 after 28 years the Berlin wall fell down. It was a symbol of the divided world and now it became a place of democracy and freedom. [44] After reunification, the eastern German industrial output collapsed. East Germany was faced with high unemployment rates in new federal states.

3.3.1. Berlin

After the end of war on 8 May 1945, Berlin was almost destroyed, 600,000 flats were destroyed and only 2.8 million people from original population of 4.3 million live in Berlin. Berlin was divided into 4 sectors: first sector was American, which involved

Neukölln, Kreuzberg, Tempelhof, Schöneberg, Steglitz and Zehlendorf Boroughs. The second one was British sector, which consisted of the Tiergarten, Wilmersdorf, Spandau and Charlottenburg Boroughs. The French sector consisted of Reinickendorf and Wedding and the Soviet sector included Mitte, Pankow, Köpenick, Treptow, Lichtenberg, Prenzlauer Berg, Weißensee and Friedrichshain. The Allies introduced the Deutschmark in 1948 without any Soviet consultation. As a result Soviet introduced own currency, Ostmarks. They used this incident as a reason for the first blockade of Berlin. In 1949 the Bundesrepublik Deutschland was evolved and the first Chancellor became Konrad Adenauer. The Soviet zone established German Democratic republic, making East Berlin its capital and Wilhelm Pieck its president. Most of young and well-educated people escaped to West Germany. The symbol of Cold war was Berlin Wall. The wall comes down in 1989. The two Berlin came together again. After the reunification Berlin became a separate city-state. In August 1990 the unification was signed on Unter den Linden. In September the FRG and GDR, France, The United Kingdom, the USA, the USSR signed the Two plus Four Treaty which ended the post-war occupation. In December the first unified elections were held. In 1991 members of Bundestag voted to move government to Berlin and made it the capital city of unified Germany. The German parliament moved from Bonn to Berlin in 1999. Since reunification Berlin has changed. Berlin has transformed to a vital and energy city. Nowadays it is popular for students due to low prices and many universities. We can define Berlin as one of the poorest federal state in Germany. The advertisement as “Berlin is poor but sexy” attracts many tourists. Berlin has the highest rate of unemployment. The main problem is really low number of foreign firms - we could find in the capital city only German firm such as: Deutsche Bahn, Siemens and Charité. [15]

Berlin used to be the most industrial city in the whole Germany but nowadays it belongs to the cities with the lowest share of industry there.

3.4. Reunification

October 3rd 1990, is the day of German unification. The treaty united West Germany with adding six federal states, Mecklenburg, West- Pomerania, Brandenburg, Saxony, Saxony Anhalt, Thuringia and city-state of Berlin to the Federal Republic of Germany .

From the economy point of view, the process of unification was a very long and difficult procedure. Most of residents expected the same economic 'boom', which was after Second World War. The creation of monetary, economic and social union was signed on 18.5. 1990 in Bonn. One of the most important part was implemented the common currency, German marks. It was established as official currency of the Federal Republic of Germany on 1. July 1990. The German mark was introduced in German Democratic Republic and it was necessary to determine the exchange rate. The exchange rate was determined according to the following rules: Part of cash was exchanges according to age in ration of 1:1. [13] In case of youth under 18 years it was exchanged sum of money up to 2,000 East Marks. The amount of 4,000 marks was set for people from 15 to 59 years and for older than 60 years in amount of 6,000 marks. In case that this limit was exceeding .the ratio was set in 2:1. The assets of people, who lived outside of German Democratic Republic after 31 December 1989, the exchange rate was set in ration 3:1. As a result, this meant that 64 billion East Marks was exchanged in a ratio of 1:1 and 211 billion East Marks in ratio of 2:1, which was an increase current cash reserves of 1,255 billion German Marks on about 170 thousand million German Marks, it is 14%. [17]

The currency revaluation of East Mark caused that East German companies lost competitiveness. Their product became more than triple times more expensive, although it should be their advantages on western markets. Many of them went bankrupt. One of the political achievements was establishment of the Federal agency as Trust agency, it was agencies, which privatized properties in East Germany. It was transferred of state property to the private ownership. This process was necessary to social market economy transition. The 4 million employees were supervised by the Federal Agency. The Federal Agency delegated authority to more than 8,500 companies and businesses. This Federal Agency made a decision in cases of liquidation, privatization of state company. The Trust Agency (Treuhandanstalt) was responsible for the rebuilt of east state property. Federal government or the government of the Federal states may not make contribution to influence Federal agency activity. The existence or liquidation was decided by officials. The Kohl government believed that price of nationalized property in GDR amount to 1200 billion, although the reality was totally different. In 1994 the Treuhandanstalt got the axe, leave a debt almost 300 billion German Marks. In 1990 was created German Unity Fund to finance reconstruction East Germany' s economy. The former German Democratic Republic's

economy was highly dependent on financial injection; they have become addicted to this financial injection. It is still necessary of the former GDR make a request for money. It reduces their freedom in cases of policy decisions. It is true, as some observes could say that the unified Germany is still a divided country. [10] East Germany was affected by the downturn in production. The reason for the downturns was the decreasing demand for eastern goods, and eastern enterprises were not able to compete with western enterprises.

4. SOCIO-ECONOMIC INDICATORS

Socio economic indicators provide a background to understanding the current situation in a given country. The socio economic indicators provide data on education, poverty, rate of unemployment, inflation, GDP, balance of payments and other economic indicators. These indicators help in identifying opportunities to improve the situation in the given country.

In selected aspects of transformation a time series analysis was used. Time series analysis includes methods which attempt to understand such time series, either to understand the context of the data or to make a forecast. Time series forecasting is a model that is used to forecast future events based on past events. Trend analysis and index numbers methods are two groups of methods. The trend analysis method studies the long-term tendencies and index numbers methods study the separate changes creating the development. The trend analysis is very often used to predict future events. A graph is the simplest way of presenting a time series. The simplest way to display a trend function is by using of MS Excel. Then it is easy to add a trend line such as:

- Linear
- Logarithmic
- Exponential
- Polynomial

The final result is a line with trend function and with the coefficient of determination, which is close to 1.0.

The other method of obtaining trend function is by using the following equation:

$$\begin{aligned}b_1n + b_2\sum x_i &= \sum y_i \\ b_1\sum x_i + b_2\sum x_i^2 &= \sum x_i y_i\end{aligned}$$

It is necessary to obtain the coefficient of determination.

$$r^2 = \frac{[\sum y_i u_i - (1/n)(\sum y_i)^2]}{[\sum y_i^2 - (1/n)(\sum y_i)^2]}$$

R^2 is a statistic that will give information about the goodness of fit of a model. In the case of regression the R^2 coefficient of determination shows how well the line of regression fits with the real data. If the R^2 is 1.0, the regression line perfectly fits the data.

Index numbers analysis is the other type of development in time series analysis. This analysis is used in the study of the separate changes constituting the development within a time interval. Index numbers are one or more types of relative or comparative quantities, which are extensively applied in economics. Index numbers analysis is a technique for characterizing a business of economic time series. The main uses are finding changes in stock prices over time.

For a simple comparison within a time series, there are two ways available:

Comparison of the development to a fixed basis:

$$y_1/y_0, y_2/y_0, y_3/y_0, \dots, y_n/y_0 \rightarrow \text{fixed base index series}$$

Comparison of each level in the time series to the one immediately previous

$$y_1/y_0, y_2/y_1, y_3/y_2, \dots, y_n/y_{n-1} \rightarrow \text{chain base index series}$$

From the time series analysis it is also possible to predict the development. MS Excel is one method of obtaining values for the future– using the trend function. Further to choose the trend function, which describes the development of data most precisely? Afterwards the x variable is substituted in the function with the number of the next observation. If we observe a tendency in last 10 years and we want to estimate the values for next three years, instead of x variable 11, 12 and 13 are substituted. Through this way the values for the independent variables can be obtained. [41]

4.1. Gross Domestic Product

GDP (Gross Domestic Product) measures and shows if the economy is doing well. “GDP is the total market value of all final goods and services produced in the economy in a single year.” [18]. The GDP is calculating by three approaches:

- Expenditure approach
- Income approach
- Product approach

Expenditure approach is calculating the final spending on goods and services. GDP is sum of Consumption(C), Investment (I), G (Government purchases) and NX = net exports.

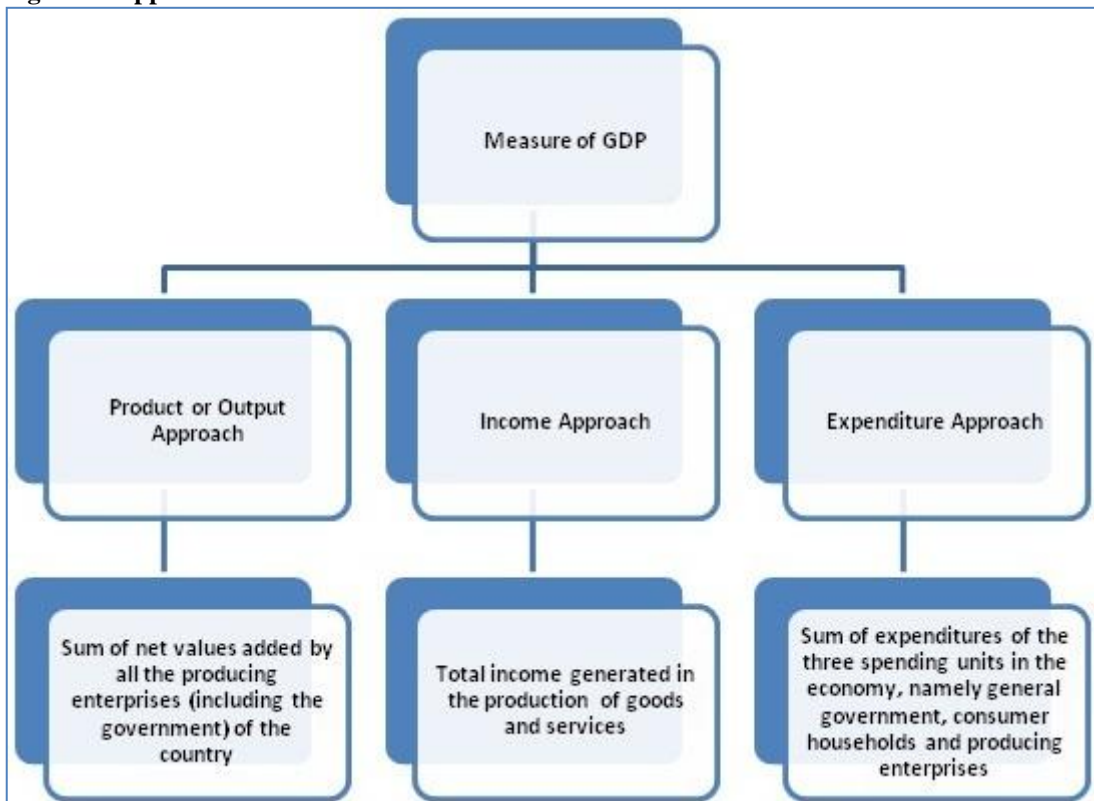
$$\text{GDP} = C + I + G + NX$$

Consumption is the largest component of GDP equation. Three categories fall under consumption: durable goods, nondurable goods and services. There are fixed investment and inventory investment under investments. Government purchases are the sum of government expenditures. It means all expenditures which were done by a government. Net export is the difference between exports and imports.

$$NX = X - M$$

X = exports, goods and services which are domestically produced, but sold to foreigners
M = imports, goods and services which are produced by foreigners, but purchased domestically. [42]

Figure 1: Approaches of GDP



Source: <http://www.tccmanagementsystems.com/images/GDP.jpg>

Income approach determines GDP as the sum of factors. “Incomes earned from economic activities within a geographic location during a period of the time.” [22] It

includes wages, rents, interest and profits received by all factors of production in producing final goods.

$$\text{GDP} = \text{Compensation of employees} + \text{Rent} + \text{Interest} + \text{Proprietor's Income} + \text{Corporate Profits} + \text{Indirect business taxes} + \text{Depreciation} + \text{Net foreign factor income}$$

Compensation of employees includes wages, salaries, social security contributions and health and pension plans. Rent means the income of the property owners. Interest is the income of the money capital supplies. Proprietor's Income is the income of incorporated business, sole proprietorships, and partnerships. Corporate Profits is the income of the corporations' stockholders whether paid to stockholders or reinvested. Sum of the above items is the National Income (NI). Indirect business Taxes (general sales taxes, business property taxes, license fees etc.) should be added to NI. They are not considered to be payments to a factor of production, but they are part of total expenditures. Depreciation is another cost, which should be added. Net foreign factor income (income earned by the rest of the world – income earned from the rest of the world) should be added to adjust GNP to GDP. [27]

Product approach- it is calculating the market value of goods and services, which were produced during a period of time. The goods and services whose values are included in GDP are the nation's final products that are sold to final users. GDP is calculated by multiplying the quantity of each individual type of final product and its market price.

$$\text{GDP} = Q_1 \times P_1 + Q_2 \times P_2 + Q_3 \times P_3 + \dots + Q_n \times P_n$$

The second possible way, how to calculate it, is to employ the value added. The value added of firms is defined as revenue minus cost of intermediate goods purchases.

$$\text{Value added} = \text{Revenue} - \text{Cost of Intermediate Goods}$$

Then we get by summing value added all firms in the given economy. [45]

The goal of GDP is to measure total market value of goods and services which is produced in the economy in a given period of one year. Level of GDP depends on some

factors such as production factors (Labour, Capital), technology, education, innovation and political situation.

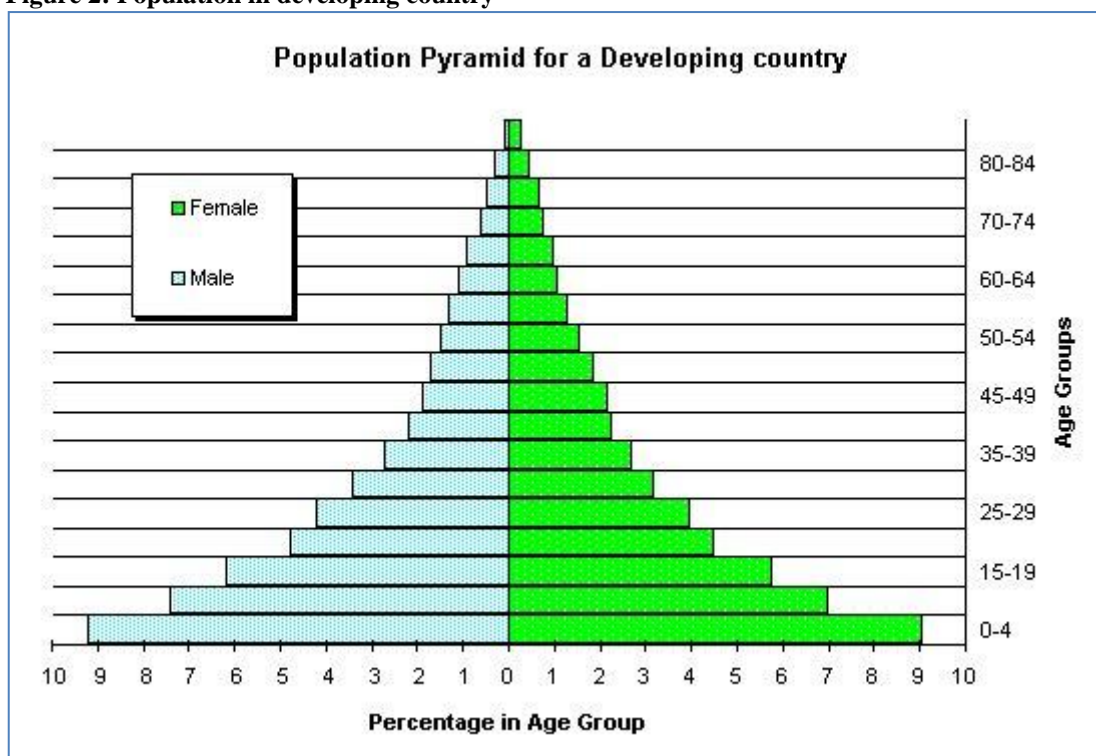
4.2. Labour market

Labour is one from production factor. The production factor is divided into:

- labour
- land
- capital

Labour market refers to the demand for labour by employers and supply of labour by potential employees. The demand for labour is influenced by factors such as: cost of hiring labour, wages, and insurance contribution and administration costs. Supply of labour is influenced by age, gender, skill level, education and trainings. The salary/wage is defined as financial compensation an employee for performing the job. Labour market includes issues such as employment, unemployment and wages. The population structure of a given country is made of people of different ages and divided into male and female. Population pyramid is a common method, which shows the structure of population. It is quite a big difference between population in developed and developing countries.

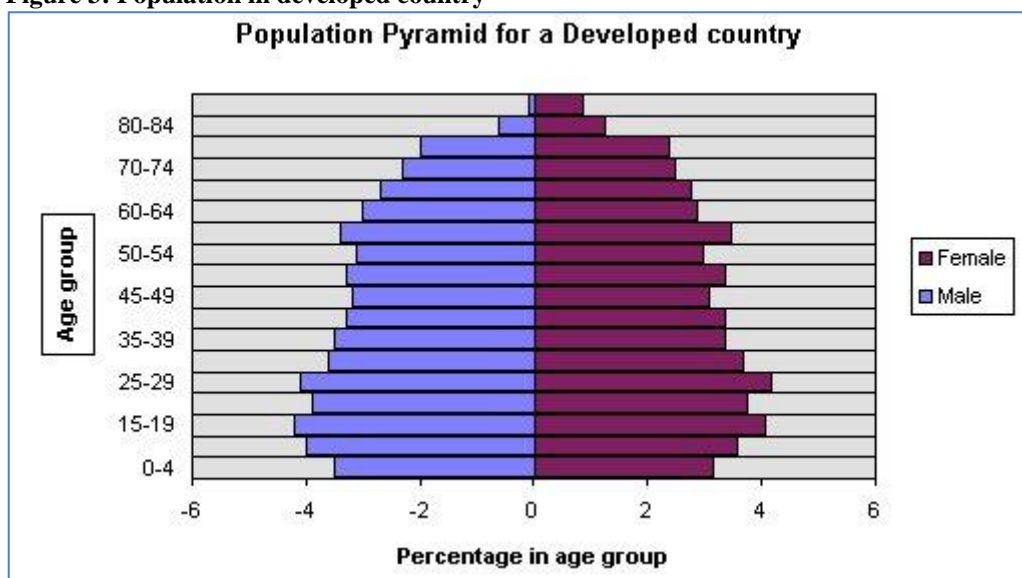
Figure 2: Population in developing country



Source: <http://www.scalloway.org.uk/popu4.htm>

In this pyramid, which belongs to the developing countries, there is large proportion of young people. The pyramid is narrow at the top, which shows small proportion of old people. In developed countries the shape of the pyramid is totally opposite. It is really narrow at the base and wider in middle and at the top as well.

Figure 3: Population in developed country



Source: <http://www.scalloway.org.uk/popu4.htm>

Currently, Germany is struggled by ageing population. Germany has to adapt to increasing ageing workforce. Especially, developed countries are affected by low natality rate and ageing population. [37]

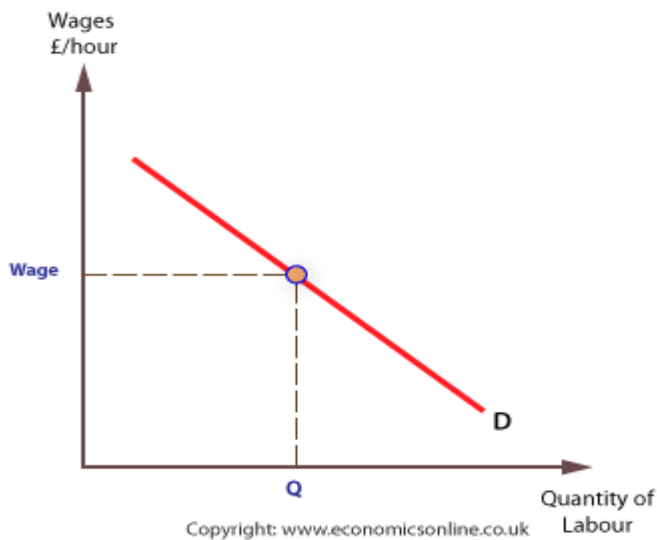
4.2.1. Demand for labour

It represent the amount of work (labour force, working times) required by employers, for which they are willing to pay a certain wage. It is divided into satisfied and unsatisfied. The satisfied demand for labour is represented by occupied jobs. The unsatisfied means that the employers want to occupy free positions.

Demand for labour is a derived demand. The demand for labor is determined by the amount of work force that the company hires at different levels of wage rates. The company demanded by such a quantity of labor at which the marginal revenue product equals marginal cost of the work – it means wages. Demand affects labour productivity

(which is influenced by skilled labour, quality and quantity of cooperating factors, technology and work organization). [23]

Figure 4: Demand for labour



Source :http://www.economicsonline.co.uk/Competitive_markets/The_labour_market.html

4.2.2. Labour supply

Labour supply curve shows how many people enter the labour market at every change of wage rate. This curve expresses the relationship between the quantity of labour, in which labour force are willing to work at a given wage rate. How the wage rate rise, the labour supply grows as well. However, from a certain point the labour supply decreases, because households prefer leisure time. The two terms such as substitution effect and income effect are associated with labour supply. Substitution effect means that anyone can decide if their times spend on work or leisure. If the wage increases, workers decide to spend additional hours instead of leisure and it leads to increase labour supply. If the wage rate increases the income of workers as well, it leads to an increase demands on leisure time of workers. Income effect means increase in wage rate, the labour supply reduce. Thus comes into conflict with substitution effect, which increases labour supply. [23]

Figure 5: Labour supply



Source: author's source

4.2.3. Labour market imperfections

The basic imperfections in the labour market include:

1) Wage rigidity

Wages and salaries are slowly responding to change in the labour market. The imbalance between supplied and demanded quantity of labour is compensated step by step and slowly.

2) Wage rates in companies

Many companies create their wage structure, according to which the employees are rewarded (the wage rate is used specially in large businesses that is to simplify the wage decision and to promote faire remuneration of employees).

3) Restrictions

Main restrictions are caused by collective agreements, labour- legislation, but also due to market influences (companies maintain employment in case of declining in production over the effective rate to have quality employees in the future) [23]

4.2.4. The price of labour

The core issue is the price of labour. It is the remuneration for work in the employment relationship, which is usually paid monthly. Salary is a general term for wages or other forms of compensation for work. The wages are divided into several kinds:

- Time wage – providing a reward for a specific time (hour, day, week, month). Monthly wage is determined by same amount for every month regardless of the number of working days and hours in the month. The hourly wage is calculated based on worked hours.
- Piece work – used mainly in less skilled jobs. It is based on the average number of products, which workers produced by given time. Main advantage is that a worker is trying to work intensively due to incentive of higher wage.
- Net wage – from the gross income after subtraction of income tax, social security and health insurance.
- Minimum wage is defined in the Labour Code of a given country. It is the lowest acceptable level of remuneration for work.
- The average wage is a term used in statistics. It determines, the average salary in the given field or area. It is understood that the average gross earnings for the relevant period. The relevant period may be one month, in which case the average hourly earnings recalculates the number of working hours per one month in an average year, an average year for such purposes is 365.25 days. Average hourly earnings multiplied by the employee's weekly working hours and coefficient of 4.348 (which is the average number of weeks per one month in an average year).

The Labour market tends to imbalance and unemployment. Nowadays, the government try to reduce imbalance in the labour market. This set some macroeconomic measures such as fiscal and monetary policy. [6]

4.3. Unemployment

The unemployment rate is the percentage of the labour force that is unemployed. It belongs to the one of the key indicator of the economy's health. One of the key terms is the

natural rate of unemployment. The rate of unemployment belongs to the natural component of the market economy.

In order to have the natural rate of employment stable – the inflation is stable as well. It does not tend to increase or decrease. In current economy it is necessary to prevent high inflation rate, the natural rate of unemployment is the lowest unemployment rate that is sustainable. Thus expresses the highest sustainable level of employment and the corresponding potential product country. In case of reduction the natural rate of unemployment, the government should implement some employment programs; remove barriers and creation of public jobs. The sum of employed and unemployed person is defined as a labour force. We divided labour force into employed and unemployed person but retiree and student do not belong to labour force.

The unemployment is divided into three types:

- Frictional:

It is the type of unemployment which can be found naturally in even health economy. Common examples include college graduates seeking their first job, people who quit their old job and find better job. These individuals are prepared for short time unemployment and do not stay unemployed for long time. This frictional unemployment is beneficial for people who find the job which they are best fits and even for companies the options to find the employees. Without the frictional unemployment, people stay in the same jobs whole life and it would make difficulties for firms to find new employees.

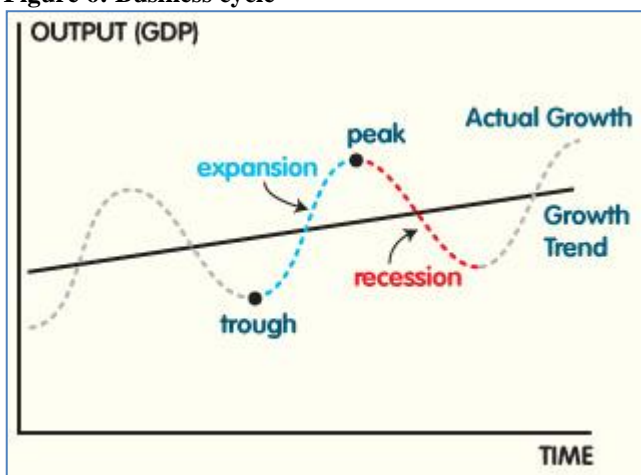
- Structural:

This kind of unemployment means that there is a mismatch between availability of jobs in the market and the skills of the available workers in the market. It can create a high rate of unemployment. Structural unemployment can arise when there is technological advance in an industry. It happened in manufacturing, where robots replaced workers. These workers have to get training in order to manage the robots and other technology. Structurally unemployed people have skills that they do not need in the current market. It is usually result of change in the economic situation or natural disaster and also new competitor. The most endangered group which is affected by structural unemployment is teenagers and minority groups. This category has few skills and little work experiences. Common example: People, 55-64 age are affected by high rate of unemployment. They look for work or just giving up. The main reason why:

- they are not willing to take lower-paid jobs
 - they are less willing to move to find new jobs
 - older workers are confronted with age discrimination
- Cyclical:

Cyclical unemployment is greater availability of workers than there are jobs for workers. It depends on the given state's economy. This type of unemployment increases during the recession and decreases during the expansion. Businesses are unwilling to spend money on wages due to lack of consumers disinterest and consumers do not buy their products. Businesses reduce their production and also cut the workforce. The common example is automobile makers. During recession car workers will be lay off, because people are buying fewer cars. If people buy fewer cars, the car makers do not need so many employees. In cases that demand for cars decreases, the demand for car workers falls down as well. If the economy strengthens and consumers start to spend money on goods, probably unemployed workers will be rehired. This type of unemployment is linked to business cycle. [48]

Figure 6: Business cycle



Source: http://dineshbakshi.com/images/economics_diagrams/Business_Cycle.jpg

Business cycle includes four periods. The lowest point of economic cycle is called the trough, there is defined the highest unemployment rate. Then the economic activity increases in the expansion and the top of business cycle is called the peak, which means recovery of economy and availability of work. A business cycle describes a periodic up and down movement of economic activity. The expansion of economic activity is

expressed as a percentage change of an economic indicator such as employment, GDP, production and etc. [24]

The unemployment can be determined according to some reasons:

- Seeking for the first job (especially students, they have lack of work experiences, it is a handicap to be hired)
- Re-entering labour market (baby break- long pause, their skills may be outdated)
- Dismissed people because of conditions of a firm (industry-wide phenomena, reduction of demand)
- Dismissed people because of personal conditions (illness can be a reason for firing)
- Lack of demand lead to reduction of labour demand
- Technologies – new technologies reduces employment

The common effects of unemployment are depression, apathy and lack of self-confidence. Nowadays the rate of unemployment is in most countries far from zero. Some countries have experienced with high level of unemployment rate. As a contrast the full employment is possible and historically documented.

4.4. Inflation

Inflation occurs when the average price level is increasing over the year. The price level is an indicator which determines how high prices are in a given year compared to average price in a certain base period. Inflation is measured in term of average price level; in other words the purchasing power of money will decline.

We divided inflation into fourth group:

- hyperinflation
- deflation
- disinflation
- stagflation

Hyperinflation

It is a very rapid increase in the overall price level. It is a very high inflation rate. Hyperinflation creates the high imbalance in the given economy. As an example countries in Africa can be taken, where there are wars or political unrests.

Deflation

The opposite of inflation is deflation, which represents a fall in price level. (Decreasing price of goods and services; rate of inflation is negative).

Disinflation

It is decreasing in the rate of inflation. In cases that prices increase and currency loses value, employers are forced to pay higher wages to their employees and subsequently that price increase transfer back to the price increase and situation is repeated. Economics call this phenomenon as inflationary spiral.

Stagflation

It is a combination of stagnation and inflation. There is a slowdown in economic growth and rising unemployment, an example: 1970s the dramatic oil prices caused the stagflation.

Consequences of inflation:

- the purchasing power of currency decline
- a decline of real wages
- growth of social tension
- decrease of wealth of creditors
- redistribution of wealth in the society

On the other hand inflation is good for people who are in debt. The purchasing power of currency will decline over the life of their loans. Inflation is measured by the price index.

There are three main approaches:

- GDP deflator
- Producer price index (PPI)
- Consumer price index (CPI)

GDP deflator represents the change in the average price of all goods and services included in GDP:

$$\text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

Producer price index represents a measure of the average prices received by producers for raw material, intermediate goods and final goods. Consumer price index represents the impact of prices changes on the cost of the typical bundle of goods and services purchased by households.

$$\text{CPI} = \frac{Q_0 \cdot P_1}{Q_0 \cdot P_0} \times 100$$

Q = quantity of goods

P= prices

Index = period

CPI (Consumer price index) helps us to set the price fluctuations and price level. Price level is necessary to know for calculating rate of inflation.

The inflation rate:

$$\text{Inflation rate} = \frac{\text{Price level}_t - \text{Price level}_{t-1}}{\text{Price level}_{t-1}} \times 100$$

t = period (year or month)

The inflation is evoked by 2 major types:

- Demand – pull inflation
- Cost-push inflation

Demand- pull inflation is type of inflation caused by increases in aggregate demand. The reasons are following:

- Increase government spending
- Lowering taxes increase demand and create demand-pull inflation

Cost-push inflation is presented as ‘supply shock inflation’ by declines in aggregate supply due to increase of inputs. An example decrease of the oil supply, which lead to increase oil prices. The reasons are following:

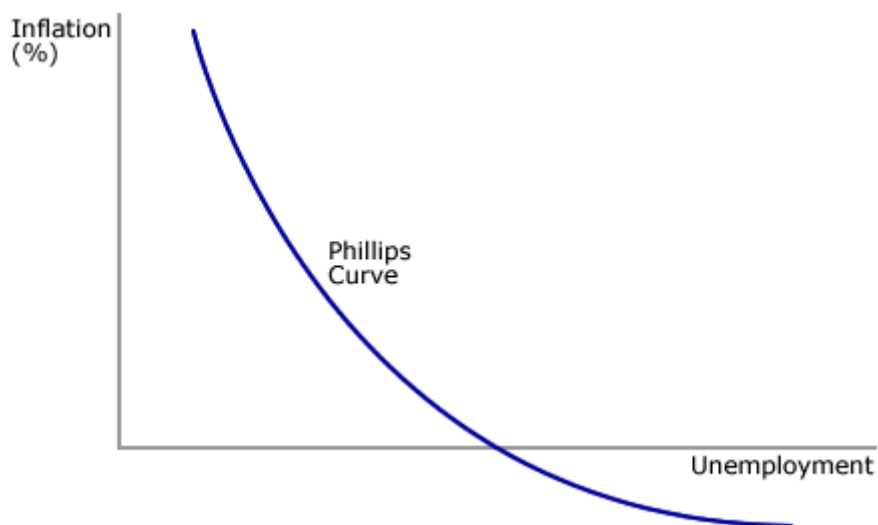
- Imperfect competition – firms can influence market prices such as monopoly and oligopoly

- Political events – wars and unrests can cause some increase in the price of imported materials

Philips curve

It is relationship between unemployment and inflation in the short-run. From the point of view the government has to choose between two goals. It can with its instruments increase employment, but the prices increase. Or they can reduce the rate of inflation, but it rising the unemployment. [6]

Figure 7: Philips curve



Source: <http://www.bized.co.uk/sites/bized/files/images/virtual/bank/phillips.gif>

4.5. Social indicators

These indicators define present and future position of the given country. Indicators cover wide-range fields in the given country. Indicators are on following areas:

- Population
- Health
- Housing
- Education
- Work

Population cover fields such as:

- population total,
- population by sex
- composition of the population

- annual population growth
- Immigration rate

Figure 8: Population growth in developing countries

Population growth	
Last update: December 2012	
Country or area	Annual population growth rate
	2010-2015 [%]
Belize	2.0
Benin	2.7
Cameroon	2.1
Ghana	2.3
Nigeria	2.5
Swaziland	1.4
Turkmenistan	1.2
Uzbekistan	1.1

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

Developed countries have low death rate and birth rate as well. These countries are with high level of technology development. Developing countries have high death rate and birth rate as well. These countries have lack of development. It is expected, that in 2025 death rate exceed birth rate in developed countries. Nowadays, the European countries are faced to high level of ageing population, in consequence of this governments increase health care cost and increase age to retirement.

Figure 9: Population growth in developed countries

Population growth	
Last update: December 2012	
Country or area	Annual population growth rate
	2010-2015 [%]
Austria	0.2
Belgium	0.3
Czech Republic	0.3
Denmark	0.3
Germany	-0.2
Japan	-0.1
Norway	0.7
USA	0.9

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

Health covers area such as:

- Life expectancy
- Infant mortality
- Obese population
- Public expenditure on health Prevention
- Estimated number of adult living with HIV/AIDS

Figure 10: Life expectancy in developed countries

Life expectancy			
Last update: December 2012			
Country or area	Year	Life expectancy at birth	
		Women	Men
Austria	2010-2015	84	78
Belgium	2010-2015	83	77
Czech Republic	2010-2015	81	75
Denmark	2010-2015	81	77
Germany	2010-2015	83	78
Japan	2010-2015	87	80
Norway	2010-2015	83	79
USA	2010-2015	81	76

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

Developing countries are affected by wars, diseases, famine and lack of health care. As a result of these factors, the developing countries have low life expectancy. In contrast to developed countries where citizens have form of health care and proper water disposal.

Figure 11: Life expectancy in developing country

Life expectancy			
Last update: December 2012			
Country or area	Year	Life expectancy at birth	
		Women	Men
Belize	2010-2015	78	75
Benin	2010-2015	59	55
Cameroon	2010-2015	54	51
Ghana	2010-2015	66	64
Nigeria	2010-2015	53	52
Swaziland	2010-2015	49	50
Turkmenistan	2010-2015	69	61
Uzbekistan	2010-2015	72	66

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

Housing includes:

- Person per room
- Water supply
- Sanitation
- Accessibility of Public transport
- Availability of Flushing toilet

Figure 12: Water coverage in developing countries

Indicators on water supply			
Last update: December 2012			
	Improved Drinking Water Coverage (%)		
	2010		
	TOTAL	URBAN	RURAL
Belize	98	98	99
Benin	75	84	68
Cameroon	77	95	52
Ghana	86	91	80
Nigeria	58	74	43
Swaziland	71	91	65
Turkmenistan	84	97	72
Uzbekistan	87	98	81

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

In developing countries people without access to an improved source of drinking water still remain. According to the Millennium Development Goals, 783 million people are without access to drinking water. In comparison, developed countries, have public standpipes, protected dug wells and protected springs.

Figure 13: Water coverage in developed countries

Indicators on water supply			
Last update: December 2012			
	Improved Drinking Water Coverage (%)		
	2010		
	TOTAL	URBAN	RURAL
Austria	100	100	100
Belgium	100	100	100
Czech Republic	100	100	100
Denmark	100	100	100
Germany	100	100	100
Japan	100	100	100
Norway	100	100	100
USA	99	100	94

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

Education comprises:

- Literacy rate
- Primary education
- Secondary education
- Tertiary education
- School life expectancy
- Evaluation of the State of Education in the country

Figure 14: Primary education in developing countries

Primary education					
Last update: December 2012					
Country	Net enrolment ratio in primary education			Girls' share of primary enrolment	
	Year	Girls	Boys	Year	%
Belize	2008	88	98	2010	49
Benin	2008	81	97	2010	46
Cameroon	2010	86	99	2010	46
Ghana	2011	84	84	2011	49
Nigeria	2010	55	60	2010	47
Swaziland	2010	85	86	2010	48
Turkmenistan	2000	84	85	2000	48
Uzbekistan	2011	88	91	2011	48

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

According to Millennium Development Goals (Goal 2), to achieve universal primary education in developing countries. By 2015 children everywhere will be able to complete primary school education. Sub-Saharan Africa is part, where majority of children is out of school.

Figure 15: Primary education in developed countries

Primary education					
Last update: December 2012					
Country	Year	Net enrolment ratio in primary education		Girls' share of primary enrolment	
		Girls	Boys	Year	%
Austria	...	...	...	2010	48
Belgium	2009	99	99	2009	49
Czech Republic	1999	96	96	2009	49
Denmark	2009	97	95	2009	49
Germany	2010	98	98	2010	49
Japan	...	...	...	2010	49
Norway	2010	99	99	2010	49
USA	2010	95	94	2010	49

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

Work includes fields such as:

- Income and economic activity
- Part- time employment
- Distribution of labour force
- Adult unemployment

Figure 16: Income and economic activity in developing countries

Income and economic activity					
Last update: December 2012					
Country	Year	Per Capita GDP (US\$)	Adult (15+) economic activity rate		
			Total	Men	Women
Belize	2011	4,636	64.9	82	48
Benin	2011	802	72.6	78	67
Cameroon	2011	1,319	70.7	77	64
Ghana	2011	1,570	69.4	72	64
Nigeria	2011	1,509	55.6	63	48
Swaziland	2011	3,399	56.8	71	44
Turkmenistan	2011	5,042	60.8	76	46
Uzbekistan	2011	1,641	61.0	75	48

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

Developed countries, their economies are based on technology and manufacturing instead of agriculture. The production factors are efficiency utilized as a result of increase

in production and consumption which lead to high level of per capita income. On the other hand, developing countries have low level of industrialization and their level of per capita income is developing. [47]

Figure 17: Income and economic activity in developed countries

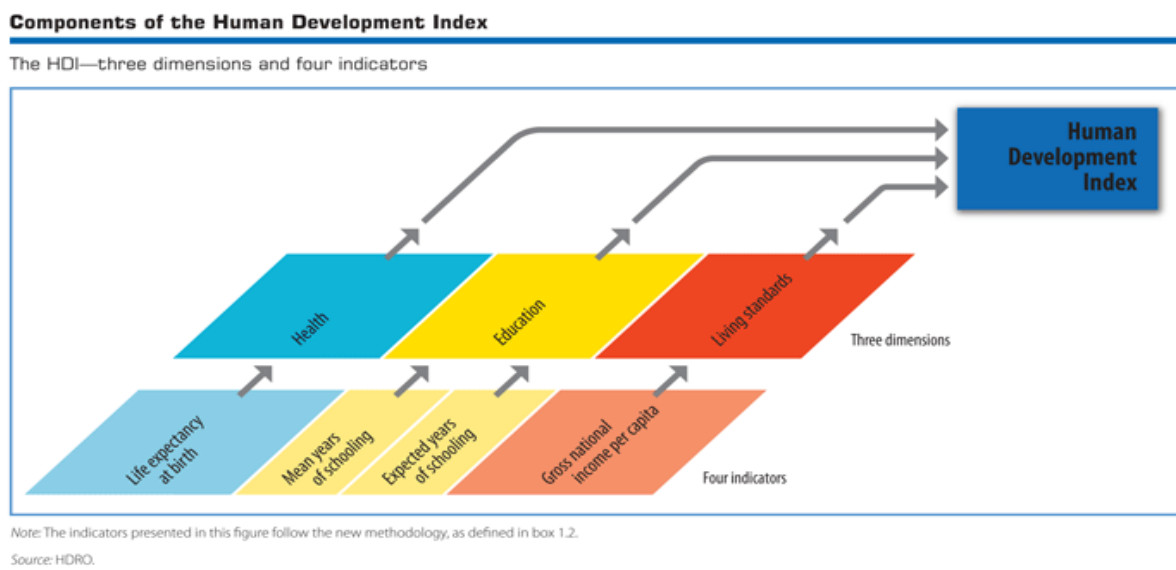
Income and economic activity					
Last update: December 2012					
Country	Year	Per Capita GDP (US\$)	Adult (15+) economic activity rate		
			Total	Men	Women
Austria	2011	49,686	60.5	68	54
Belgium	2011	47,807	54	61	48
Czech Republic	2011	20,607	58.6	68	50
Denmark	2011	59,581	64.4	69	60
Germany	2011	43,865	59.6	67	53
Japan	2011	46,407	60.1	72	49
Norway	2011	98,565	65.9	70	62
USA	2011	47,882	63.6	70	58

Source: <http://unstats.un.org/unsd/demographic/products/socind/default.htm>

Human Development Index

This index compares measure of life expectancy, literacy, education and quality of life along worldwide countries. It means well-being and welfare in given country. Due to this index, it is possible to distinguish developed or developing or an underdeveloped countries.

Figure 18: Components of the Human Development Index



Source : <http://hdr.undp.org/en/statistics/hdi/>

HDI is consisting of:

- Life expectancy and level of medical care
- Years of schooling
- Expected years of schooling
- Gross national income per capita

HDI is expressed between 0 and 1. The higher number is, the better country is.

Figure 19: HDI in developing countries

HDI		
Last update: 2011		
Country or area	Year	Value
Belize	2011	0.699
Benin	2011	0.427
Cameroon	2011	0.482
Ghana	2011	0.541
Nigeria	2011	0.459
Swaziland	2011	0.522
Turkmenistan	2011	0.686
Uzbekistan	2011	0.641

Source: http://hdr.undp.org/en/media/HDR_2011_EN_Table1.pdf

These graphs show which countries belong to the very high human development or low human development. It is obvious, that the HDI index in developed countries is really close to 1, which means good welfare. However in developing countries the values are much lower and these countries belong to low human development.

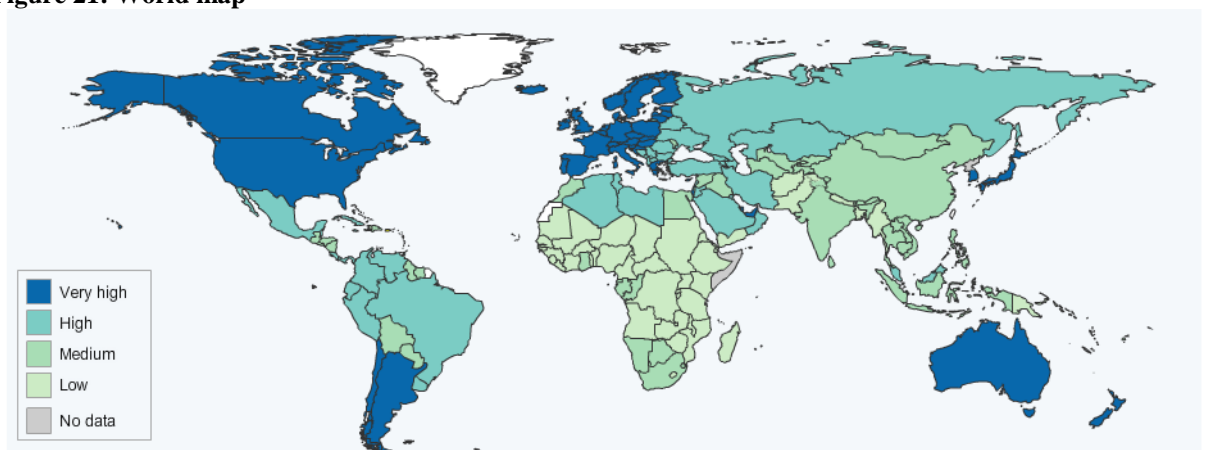
Figure 20: HDI in developed countries

HDI		
Last update: 2011		
Country or area	Year	Value
Austria	2011	0.885
Belgium	2011	0.886
Czech Republic	2011	0.865
Denmark	2011	0.895
Germany	2011	0.905
Japan	2011	0.901
Norway	2011	0.943
USA	2011	0.910

Source: http://hdr.undp.org/en/media/HDR_2011_EN_Table1.pdf

This map shows the differences between levels of HDI along the continents. The best situation is in the Europe and North America, the worst in Africa. [46]

Figure 21: World map



Source: <http://hdr.undp.org/en/data/map/>

5. SELECTED SOCIO-ECONOMIC DEVELOPMENT INDICATORS

For the comparison, this thesis shows differences between East Germany and West Germany. This thesis shows the socio economic indicator before and after reunification. The economy of East Germany was driven by Soviet Union; it was the centrally planned economy. Whereas in West Germany, the social market economy was set up. Germany was unified in 1990. The German reunification has had a huge impact on the economy. The process of reunification was economically costly. The western part invests hundreds of billions mark to boost the eastern German economy. In general, it was expected the improvements in standard of living in the eastern part of the country. However, the economic problem still persists.

Figure 22: Map of divided Germany



Source: http://europa.eu/abc/maps/members/germany_en.htm

This map shows which part belongs to the East and West Germany.

To the West Germany belong:

- Berlin
- Schleswig-Holstein
- Hamburg
- Lower Saxony
- Bremen
- North Rhine – Westphalia
- Hessen
- Bavaria
- Rhine – Palatinate
- Saarland
- Baden – Wuerttemberg

To the East Germany belong:

- East Berlin
- Mecklenburg-West Pommeria
- Brandenburg
- Saxony-Anhalt
- Saxony
- Thuringia

Following tables show which countries belong to the East part and West part. It shows area of federal states, its population and actual rate of unemployment. It was estimated in 2011. The East Germany had 16.5 million inhabitants 1990 and nowadays the number of inhabitants decreased to 13 million.

East part ('new federal states')

Table 1: New federal states - basic indicators

Federal State	Area in km²	Population (millions)	Rate of unemployment (%)
Brandenburg	29477,16	2,536	10.20
Saxony-Anhalt	20445,00	2,520	11.50
Saxony	18420,00	4,137	9.80
Thuringia	16172,00	2,227	8.50
Mecklenburg- West Pommeria	23193,00	1,630	12.00

Source: http://www.niedersachsen.de/land_leute/land/zahlen_fakten/niedersachsen-in-zahlen-20094.html

The terms of new federal states are five states which belong to the German Democratic Republic. It was the country under the Soviet Union control. On October 3rd 1990 unified Germany was formally established.

Table 2: Old federal states - basic indicators

Federal State	Area in km ²	Population (millions)	Rate of unemployment (%)
Berlin	900	3,520	12.30
Schleswig-Holstein	15 799	2,800	6.90
Hamburg	755,3	1,791	7.50
Lower Saxony	47 613	8,000	6.60
Bremen	326,73	0,548	11.20
North Rhine-Westphalia	34 000	18,000	8.10
Hessen	21 114	6,092	5.70
Rhinel.-Palatinate	19 854	3,999	5.30
Saarland	2 568	1,013	6.70
Baden-Wuerttemberg	35 751	10,786	3.90
Bavaria	70 550	12,596	3.70

Source: http://www.schleswig-holstein.de/Portal/DE/LandLeute/ZahlenFakten/Bevoelkerung/Bevoelkerung_node.html

Germany is most densely populated country in the European Union. Germany has one of the strongest economies in the world. Germany is strongly oriented on exports (including vehicles, chemicals, nanotechnology etc). Among the European Union member states, the unemployment rate in Germany is one of the lowest.

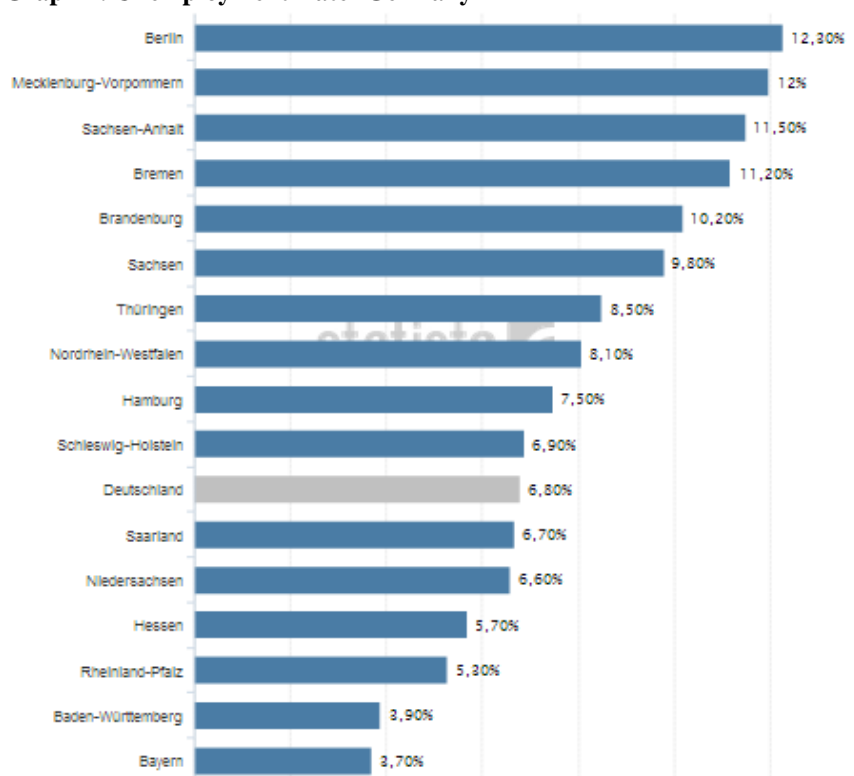
Table 3: Germany - basic indicators

Country	Area in km ²	Population (millions)	Rate of unemployment (%)
Germany	357 121	81,844	6.80

Source: <http://www.tatsachen-ueber-deutschland.de/cz/inhaltsseiten-home/cisla-a-fakta/geografie.html>

This graph shows the average unemployment rate in 2012. The highest unemployment rate was in Berlin. The unemployment rate represents the proportion of unemployed in total number of labour force.

Graph 1: Unemployment Rate- Germany



Source: <http://de.statista.com/statistik/daten/studie/2192/umfrage/durchschnittliche-arbeitslosenquote-nach-bundeslaendern/>

5.1. Economic of German Democratic Republic

The east part was transformed into German Democratic Republic. This part was under the control of the Soviet Union. In 1961 after construction of the Berlin Wall, East Berlin came under the East Germany. The west part (the Federal Republic of Germany) was formed from Western Zones, which was held by the United States, the United Kingdom and France. The east part in comparison to other communistic countries was in good economic condition. The economy was the most developed in the whole Soviet bloc. The economic structure was under political control and it was centrally planned economy. The standard of living was on a lower level than that of the inhabitants in Federal Republic of Germany.

Ownership of companies

The companies were mainly owned by the state. There was some space for private sector in the East Germany in contrast to Czechoslovakia. The following table shows the differences between state and private sector in given years. The biggest difference is in agriculture, in 1950 there was the share of public only 3% and private was 97% in contrast with 1988 when the share of state was 89.6% and private was 10.4%. The small private sector existed in light industry, crafts and trade. In German Democratic Republic the Central Bank was responsible for banking system in East Germany. This state bank was also responsible for redistribution of state funds. Other institutions were also highly dependent on state power.

Table 4: Share of public and private sector in East Germany

The share of public and private sector in total production in GDR (%)						
	State sector			Private sector		
	1950	1970	1988	1950	1970	1988
Agriculture	3.0	87.5	89.6	97.0	12.9	10.4
Industry	68.4	83.2	97.6	31.6	16.8	2.4
Construction	40.7	80.6	91.8	59.3	19.3	8.2
Transport	83.9	94.2	98.2	16.1	5.8	1.8
Trade	59.6	86.7	91.8	40.3	13.3	8.2
TOTAL	55.3	85.0	95.7	44.7	15.0	4.3

Source:<http://business.highbeam.com/437002/article-1G1-11206438/integrating-command-economy-into-market-economy>

5.1.1 Labour market

In German Democratic Republic labour supply was greater than in the Federal Republic of Germany to appearance of its population. In GDR a fundamental law entitled everyone to work and be employed and it was highly important for gaining government benefit payments. This lead to accumulation of resources and its ineffective use, which resulted in lower labour productivity. The result was excess demand for labour and already mentioned low labour productivity.

Following table shows really low participation of self- employees and also high share or employed women (about 10.2% higher share than in Federal Republic of Germany) on the market in German Democratic Republic.

Table 5: Labour market in East and West Germany – 1989

The labour market, 1989				
	GDR		FRG	
	Number (thousand)	%	Number (thousand)	%
Population (age 15-64)	11 077		43 393	
Labour force	8 885		29 779	
Participation ratio		80.2		68.6
Total employment	8 885		27 208	
Dependent employment	8 701	98.0	24 224	89.0
Self - employment	184	2.0	2 984	11.0
Share in total employment women	4 315	49.8	10 774	39.6

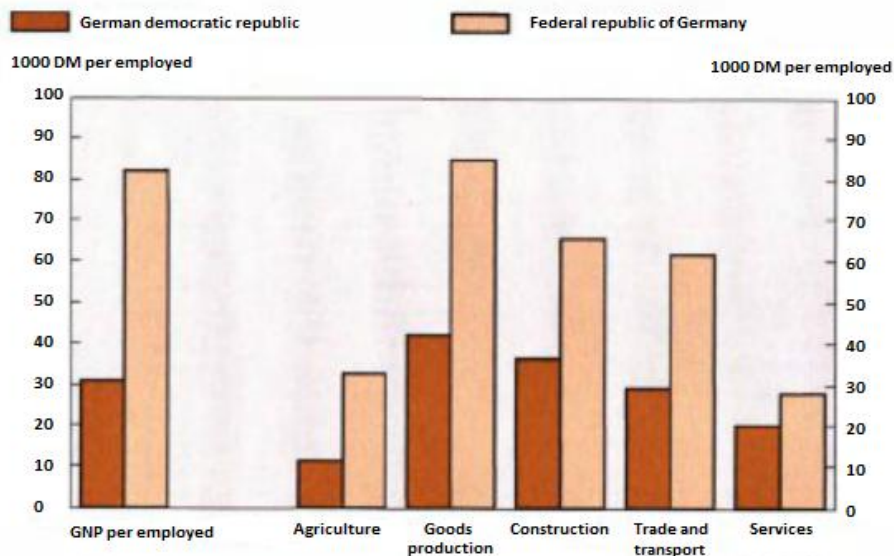
Source: http://www.keepeek.com/Digital-Asset-Management/oecd/economics/oecd-economic-surveys-germany-1991_eco_surveys-deu-1991-en

The ineffective use of labour force leads to low labour productivity – it was only a third of Federal Republic of Germany level. There was a huge difference between wages in GDR and FRD. In East Germany was the average wage 1,100 DM, while in West Germany it was 3,560 DM in year 1988.

Productivity level, 1989

GNP in current prices per employed

Graph 2: GNP in current price



Source: http://www.keepeek.com/Digital-Asset-Management/oecd/economics/oecd-economic-surveys-germany-1991_eco_surveys-deu-1991-en

Structure of economy in GDR

In GDR there were the most important sectors of industry, mining and manufacturing and construction, the service sector was quite underdeveloped. The following table shows the difference between economic structure in GDR and in FRG. The economy of FRD was a really high developed country with relatively high level of industry.

Table 6: Employment by sectors in East Germany

Employment by sectors and value added by sectors, 1989						
	Employment by sectors		Value added by sectors			
	GDR		GDR		FRG	
	%		DM billion	% of total	DM billion	% of total
Agriculture	10.0		11,0	3.8	35,7	1.7
Mining and manufacturing	37.9		152,6	53.4	777,3	35.9
Construction	6.2		21,3	7.5	119	5.5
Wholesale and retail trade	8.1		17,9	6.3	194,3	9.0
Transport	6.5		23,0	8.1	126,4	5.8
Services	9.3		15,6	5.5	627,3	29.0
Government services	18.1		36,3	12.7	238,6	11.0
Private non-profit institutions	3.9		8,0	2.8	46,5	2.1
TOTAL	100		285,7	100	2165,1	100

Source: http://www.keepeek.com/Digital-Asset-Management/oecd/economics/oecd-economic-surveys-germany-1991_eco_surveys-deu-1991-en

The following graph shows how many thousands of people were employed in which sectors. The most of people were employed in industry sector and service sector represents only 9.3% in GDR.

Table 7: Sectoral employment in East Germany

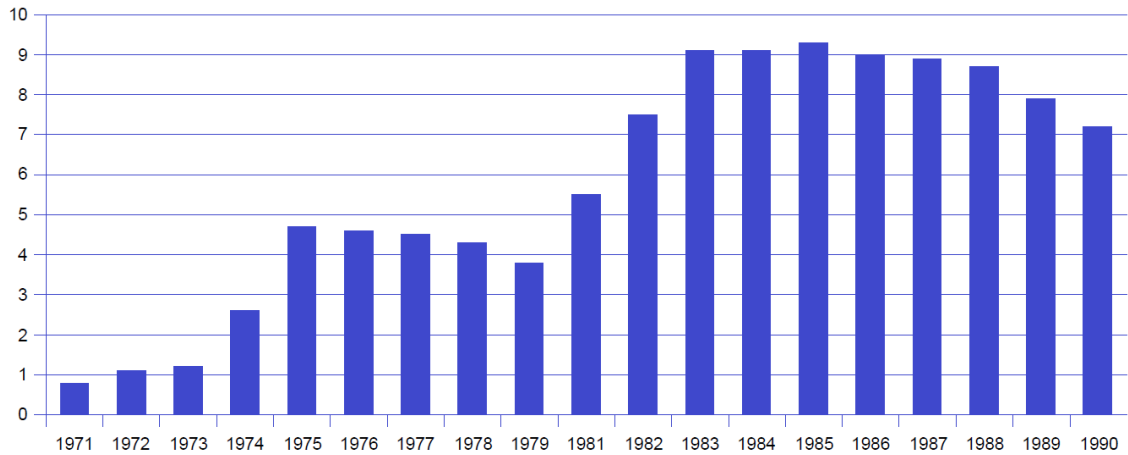
	GDR		FRG	
	Thousands	Per cent of total	Thousands	Per cent of total
Agriculture	960	10.0	1 066	3.9
Mining and manufacturing	3 655	37.9	9 140	33.1
Construction	598	6.2	1 810	6.6
Wholesale and retail trade	784	8.1	3 600	13.0
Transport	624	6.5	1 559	5.6
Services	899	9.3	4 978	18.0
Government services	1 746	18.1	4 267	15.4
Private non-profit institutions	374	3.9	1 203	4.4
Total	9 640	100.0	27 623	100.0

1. See Notes 1 and 2, Table 3.
Source : Submission from the Deutsches Institut für Wirtschaftsforschung; Statistisches Bundesamt, *Volkswirtschaftliche Gesamtrechnungen*, 1989.

Source: http://www.keepeek.com/Digital-Asset-Management/oecd/economics/oecd-economic-surveys-germany-1991_eco_surveys-deu-1991-en

West Germany was faced in 80s by highest unemployment rate, the highest was in 1985 – 9.3%. Half of 80s meant economic growth and decline of unemployment. In 1990 was rate slightly under 7%.

Graph 3: Unemployment rate in West Germany



Source: <http://www.destatis.de/indicators/d/lrarb01ad.htm>

The rate of unemployment was slightly under 7% in 1990, the year of reunification. The high unemployment rate was connected with declining of performance of German economy.

Figure 23: Unemployment in old federal states including West Berlin

Year	Number of unemployed	Rate of unemployment (%)
1990	1 883 147	7.2
1989	2 037 781	7.9
1988	2 241 556	8.7
1987	2 228 788	8.9
1986	2 228 004	9.0
1985	2 304 014	9.3
1984	2 265 559	9.1
1983	2 258 235	9.1
1982	1 833 244	7.5
1981	1 271 574	5.5
1980	888 900	3.8
1979	876 137	3.8
1978	992 948	4.3
1977	1 029 995	4.5
1976	1 060 336	4.6
1975	1 074 217	4.7
1974	582 481	2.6
1973	273 498	1.2
1972	246 433	1.1
1971	185 072	0.8
1970	148 846	0.7

Source:<https://www.destatis.de/DE/ZahlenFakten/Indikatoren/LangeReihen/Arbeitsmarkt/lrarb003.html>

The economy of West Germany was highly faced by consequences from oil prices shock from 1973 and 1978-1979. As a result was increasing the prices of energy. On the market was finding new competitors from the industrialized countries. The following table shows GDP growth compared to France, Japan and the USA. In Europe the position of Germany was quite good, but compared to Japan and the USA it was much lower economic performance.

Figure 24: GDP growth

GDP growth (%)				
Year	Germany	France	Japan	USA
1980	1.4	1.6	2.8	-0.3
1981	0.5	1.0	4.2	2.5
1982	-0.4	2.4	3.4	-2.0
1983	1.6	1.2	3.1	4.5
1984	2.8	1.5	4.5	7.2
1985	2.3	1.6	6.3	4.1
1986	2.3	2.3	2.8	3.4
1987	1.4	2.4	4.1	3.2
1988	3.7	4.7	4.0	4.1
1989	3.9	4.2	7.2	3.6
1990	5.3	2.6	4.2	1.9

Source: <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?page=6>

5.1.2. Economic situation of inhabitants

The income was different along the type of jobs. The price and salaries was set by state. If someone wanted to buy car, the waiting time was almost 15 years. If someone pays the highest price, the waiting time became shorter. The small TV costs 4 900 DM, bread roll 5 Pfennig and car “Trabant” 10,000 DM.

The following graph shows the development and increasing of minimum wage, the reason was increasing of National Income.

Table 8: Minimum wage in East Germany

Minimum wage	
Year	Minimum wage gross in German mark
1958	220
1967	300
1971	350
1976	400

Source: <http://www.ddr-wissen.de/wiki/ddr.pl?Arbeitseinkommen>

The following graph represents average monthly salary in GDR. Real income in 80s increased average of 4.4% annually.

Table 9: Average monthly salary in East Germany

Average monthly salary in German mark	
Income recipients	Net income in German mark
Employees (incl. Apprentices, employed pensioners)	969
Cooperative members and self-employed persons	1545
Pensioners	398
Engineer	500 - 1200
Shop assistant	600 - 800
Construction worker	900 - 1800

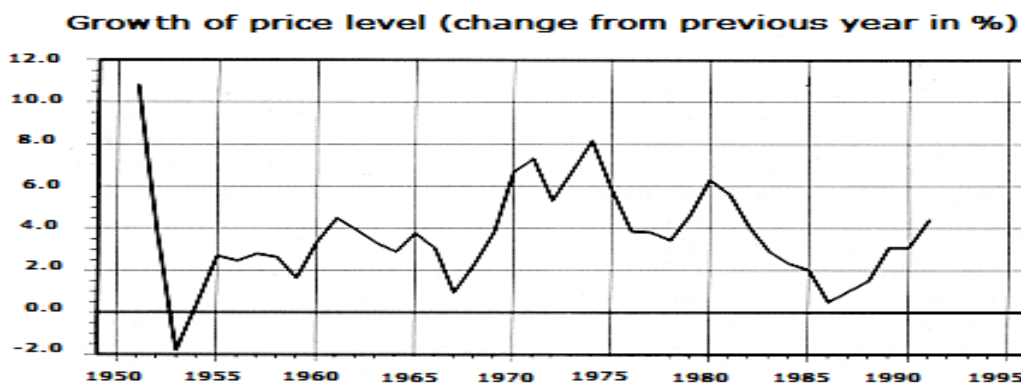
Source: <http://www.ddr-wissen.de/wiki/ddr.pl?Arbeitseinkommen>

Inflation

Inflation plays an important role in the given economy. It could be thread as a result of depreciation of the given currency. Price level is influenced by the Central Bank (Bundesbank). The common goal was to stabilize German mark and helps restrain inflation.

The following graph shows the development of price level from 1950 till 1992. From 80s it is obvious declining of price level and in 1986 it was getting closer to zero. The negative value was only in 1953.

Figure 25: Growth of price level



Source :<http://library.fes.de/fulltext/fo-wirtschaft/00310001.htm>

5.2. The transformation of German Democratic Republic

The East Germany became a part of well-functioning market economy in West Germany. The eastern part received substantial help from them. It was estimated that transfer payment achieved 1.5 trillion dollars. The other payments were flowed from funds of European Community, because in 1990 the East Germany became the most backward part of it. Most of eastern enterprises fell into hands of western candidates, who restructured or closed them. The two third of 14,000 state enterprises were privatized or transferred to municipal ownership. Three thousand of them were liquidated. Also the constitutional and legal system was taken from the west. The East Germany had better position than other post communistic countries such as Czechoslovakia or Poland to transform to the democratic and market-economy system. The problem was that citizens of new federal states accustomed to the fact that every problem was arranged by the richer west and they relied on generous support as well. The European Union also support help in 1994. The European Commission approved support by the European Regional Development Fund (ERDF). It also included the new federal states. The program was implemented for new federal states in Germany from 1994 till 1999. The programme included following:

- Productive and supplementary investments (development of infrastructure and tourist sites and etc.)
- Assistance for Small and Medium enterprises (SME), to simplify their access to market
- Assistance for research and technological development (RTD) and innovation (investing in research department and laboratories, modernization of information technology and etc.)
- Environment investments (investment in industry, development of waste disposal plants and development processes of recycling)

Figure 26: ERDF East Germany

REGION	TOTAL CONTRIBUTION (in € millions)
East Berlin	743.112
Thuringia	1,021.771
Saxony - Anhalt	1,190.801
Saxony	2,081.244
Mecklenburg - West Pommeria	785.102
Brandenburg	964.768

Source: http://ec.europa.eu/regional_policy/archive/reg_prog/po/prog_20.htm

The program for new federal states is described in *Supplement 1: European Regional Development Fund*.

Since 1990 around 250 billion euro as a direct development help from west to east have been invested. Due to these transfers modern infrastructure such as high speed rail line, airport and water ways were built. However, some projects were superfluous such as: water junction near Magdeburg, which has no connection to the east, provincial airports, where are airplanes not landing or motorway A 20 to the Baltic Sea, which seems like an orphan.

Figure 27: Unemployment rate - old federal states

Year	Old Federal States	chain base index	base index (base year 1991)
1991	6.30		
1992	6.60	1.05	1.05
1993	8.20	1.24	1.30
1994	9.20	1.12	1.46
1995	9.30	1.01	1.48
1996	10.10	1.09	1.60
1997	11.00	1.09	1.75
1998	10.50	0.95	1.67
1999	9.90	0.94	1.57
2000	8.70	0.88	1.38
2001	8.30	0.95	1.32
2002	8.50	1.02	1.35
2003	9.30	1.09	1.48
2004	9.40	1.001	1.49
2005	11.00	1.17	1.75
2006	10.20	0.93	1.62
2007	8.30	0.81	1.32
2008	7.20	0.87	1.14
2009	7.70	1.07	1.22
2010	7.40	0.96	1.17
2011	6.70	0.91	1.06
2012	6.60	0.99	1.05

Source: Own computation based on http://www.sozialpolitik-aktuell.de/tl_files/sozialpolitik-aktuell/_Politikfelder/Arbeitsmarkt/Datensammlung/PDF-Dateien/tabIV20.pdf

This figure shows calculated index numbers. The data was available from 1991-2012. The chain base index shows the average decrease to 96% of the preceding year. The base index shows, where the highest growth has been highest since the base year. The biggest growth was in 2005 compared to the base year 1991. The lowest growth was in 1992 compared to the base year 1991. The reason for the high level of unemployment was the implementation of Hartz IV. reforms. The higher level of unemployment was affected by counting not only people who were on unemployment benefits but also people living on the other social benefits. Since 2005 only people who are out of work for a maximum of one year receive the unemployment benefit, after this time much lower amount is received.

There is a model which is related to unemployment rate in old federal countries. The R^2 was obtained from figure 28. It shows how well the regression line approximates to the real data.

Figure 28 :Model of unemploymnet rate - old federal states

Model Summary and Parameter Estimates

Dependent Variable: VAR00002

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	,005	,110	1	20	,744	17,081	-,034		
Logarithmic	,059	1,243	1	20	,278	14,736	,885		
Inverse	,220	5,627	1	20	,028	17,781	-6,523		
Quadratic	,869	63,017	2	19	,000	10,077	1,717	-,076	
Cubic	,869	39,800	3	18	,000	10,068	1,721	-,077	1,283E-005
Power	,065	1,386	1	20	,253	14,377	,060		
S	,256	6,866	1	20	,016	2,873	-,452		
Growth	,005	,106	1	20	,748	2,822	-,002		
Exponential	,005	,106	1	20	,748	16,818	-,002		
Logistic	,005	,106	1	20	,748	,059	1,002		

The independent variable is VAR00003.

Source: IBM SPSS Statistics

In case of quadratic and cubic model, the coefficient of determination is closest to 1.0, it gave us information about goodness of fit of a model.

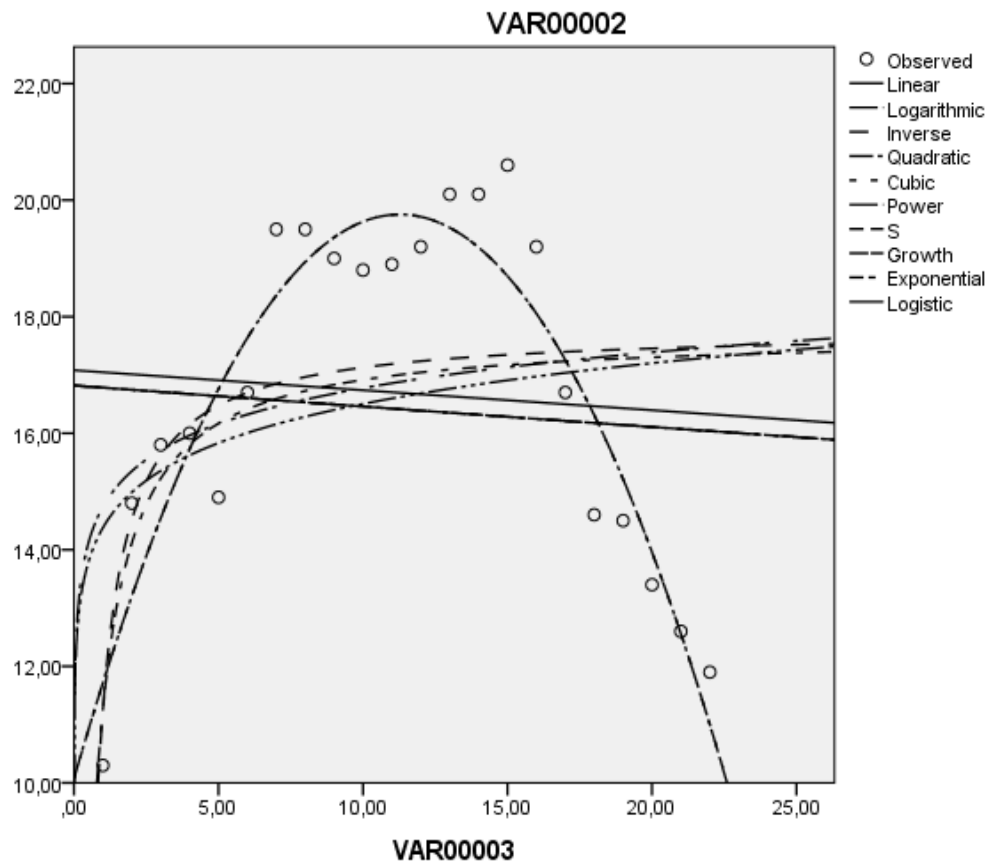
The quadratic equation is following:

$$y' = 10.077x^2 + 1.717x - 0.076$$

The cubic equation is following:

$$y' = 10.068x^3 + 1.721x^2 - 0.077x + 0.00001283$$

Figure 29: Trend functions of unemployment rate - old federal states



Source: IBM SPSS Statistics

Figure 30: Unemployment rate- new federal states

Year	New Federal States	chain base index	base index (year 1991)
1991	10.30		
1992	14.80	1.44	1.44
1993	15.80	1.07	1.53
1994	16.00	1.01	1.55
1995	14.90	0.93	1.45
1996	16.70	1.12	1.62
1997	19.50	1.17	1.89
1998	19.50	1.00	1.89
1999	19.00	0.97	1.84
2000	18.80	0.99	1.83
2001	18.90	1.01	1.83
2002	19.20	1.02	1.86
2003	20.10	1.05	1.95
2004	20.10	1.00	1.95
2005	20.60	1.02	2.00
2006	19.20	0.93	1.86
2007	16.70	0.87	1.62
2008	14.60	0.87	1.42
2009	14.50	0.99	1.41
2010	13.40	0.92	1.30
2011	12.60	0.94	1.22
2012	11.90	0.94	1.16

Source: Own computation based on http://www.sozialpolitik-aktuell.de/tl_files/sozialpolitik-aktuell/_Politikfelder/Arbeitsmarkt/Datensammlung/PDF-Dateien/tabIV20.pdf

The chain base index shows the average decrease to 97% of the preceding year in case of new federal states. The base index shows, where the highest growth has been highest since the base year. The biggest growth of unemployment rate was in 2005 due to implementation of Hartz IV. reforms, compared to the base year 1991. The lowest growth was in 2012 compared to the base year 1991.

There is a model which is related to unemployment rate in new federal states. The R^2 was obtained from Figure 31. It shows how well the regression line approximates to the real data. The most suitable model is quadratic and cubic.

The equations are following:

$$\text{Quadratic: } y' = 6.404 x^2 + 0.647 x - 0.030$$

$$\text{Cubic: } y' = 5.418 x^3 + 1.110x^2 - 0.079 + 0.001$$

In our cases it is not suitable to predict our values due to quite difficult function. Every small change can highly influence our function.

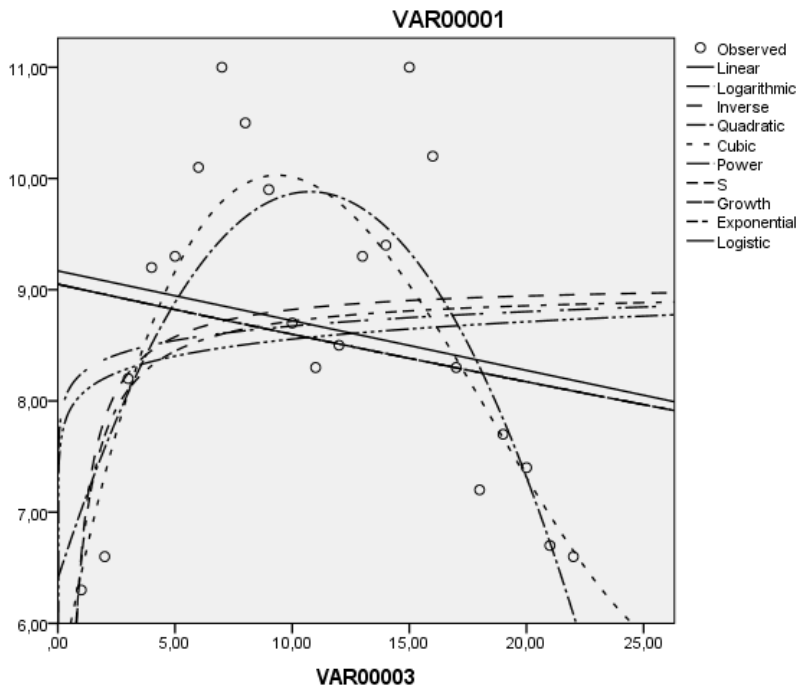
Figure 31: Model and trend functions for unemployment rate - new federal states

Model Summary and Parameter Estimates

Dependent Variable: VAR00001

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	,039	,819	1	20	,376	9,169	-,045		
Logarithmic	,011	,222	1	20	,642	8,243	,187		
Inverse	,131	3,024	1	20	,097	9,066	-2,455		
Quadratic	,608	14,729	2	19	,000	6,404	,647	-,030	
Cubic	,647	11,005	3	18	,000	5,418	1,110	-,079	,001
Power	,015	,311	1	20	,583	8,057	,026		
S	,154	3,642	1	20	,071	2,197	-,314		
Growth	,037	,758	1	20	,394	2,203	-,005		
Exponential	,037	,758	1	20	,394	9,049	-,005		
Logistic	,037	,758	1	20	,394	,111	1,005		

The independent variable is VAR00003.



Source: IBM SPSS Statistics

The following graph represents rate of unemployment in Germany. The data is available from 1991 – 2012. The chain base index shows the average decrease to 96% of the preceding year. The base index shows, where the highest growth has been highest since the base year. The biggest growth was in 2005 compared to the base year 1991. The reason of

the high level of unemployment was the implementation of Hartz IV. reforms. The lowest growth was in 2012 compared to the base year 1991.

Figure 32: Unemployment rate in Germany

Germany			
Year	%	chain base index	base index (year 1991)
1991	7.3		
1992	8.5	1.16	1.16
1993	9.8	1.15	1.34
1994	10.6	1.08	1.45
1995	10.4	0.98	1.42
1996	11.5	1.11	1.58
1997	12.7	1.10	1.74
1998	12.3	0.97	1.68
1999	11.7	0.95	1.60
2000	10.7	0.91	1.47
2001	10.3	0.96	1.41
2002	10.8	1.05	1.48
2003	11.6	1.07	1.59
2004	11.7	1.01	1.60
2005	13	1.11	1.78
2006	12	0.92	1.64
2007	10.1	0.84	1.38
2008	8.7	0.86	1.19
2009	9.1	1.05	1.25
2010	8.6	0.95	1.18
2011	7.9	0.92	1.08
2012	7.6	0.96	1.04

Source: Own computation based on http://www.sozialpolitik-aktuell.de/tl_files/sozialpolitik-aktuell/_Politikfelder/Arbeitsmarkt/Datensammlung/PDF-Dateien/tabIV20.pdf

There is a model, which is related to the unemployment in Germany. The R^2 was obtained from Figure 33. It shows how well the regression line approximates to the real data. The most suitable is quadratic and cubic model.

Figure 33: Model of unemployment rate - Germany

Model Summary and Parameter Estimates

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	,033	,682	1	20	,419	10,857	-,047		
Logarithmic	,018	,368	1	20	,551	9,705	,276		
Inverse	,152	3,587	1	20	,073	10,825	-3,048		
Quadratic	,745	27,805	2	19	,000	7,285	,846	-0,039	
Cubic	,756	18,627	3	18	,000	6,682	1,129	-0,69	0,001
Compound	,034	,714	1	20	,408	10,762	,995		
Power	,020	,408	1	20	,530	9,539	,029		
S	,171	4,114	1	20	,056	2,375	-,326		
Growth	,034	,714	1	20	,408	2,376	-,005		
Exponential	,034	,714	1	20	,408	10,762	-,005		
Logistic	,034	,714	1	20	,408	,093	1,005		

Source: IBM SPSS Statistics

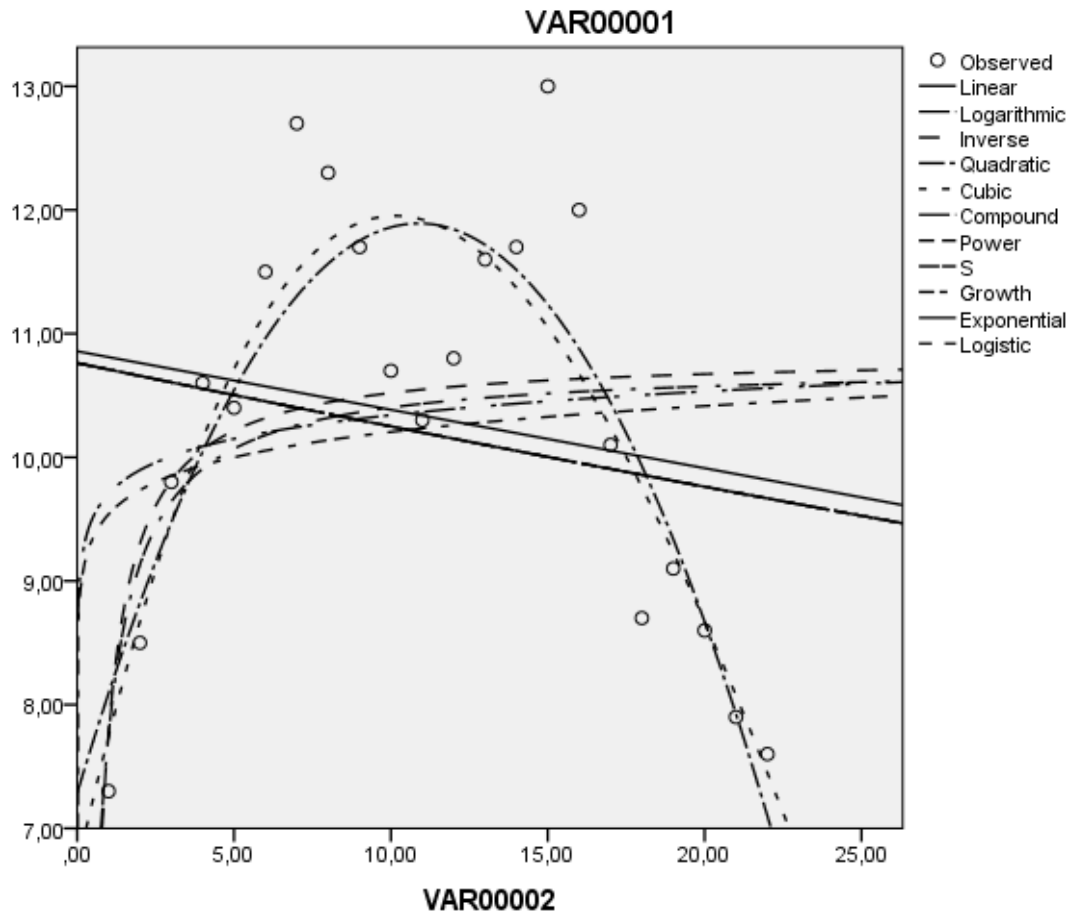
The quadratic equation is following:

$$y' = 7.285x^2 + 0.846x - 0.39$$

The cubic equation is following:

$$y' = 6.682x^3 + 1.129x^2 - 0.69 + 0.001$$

Figure 34: Trend functions of unemployment rate - Germany



Source: IBM SPSS Statistics

Development of GDP

The economy after reunification had a different development in eastern and western parts of country. Due to lack of goods from West part, it began big boom and increased demand for West goods. In East part it had totally the opposite impact. This demand shock caused rapid growth in west part of country on the other hand, the demand for East goods decreased. It caused problems for East German enterprises.

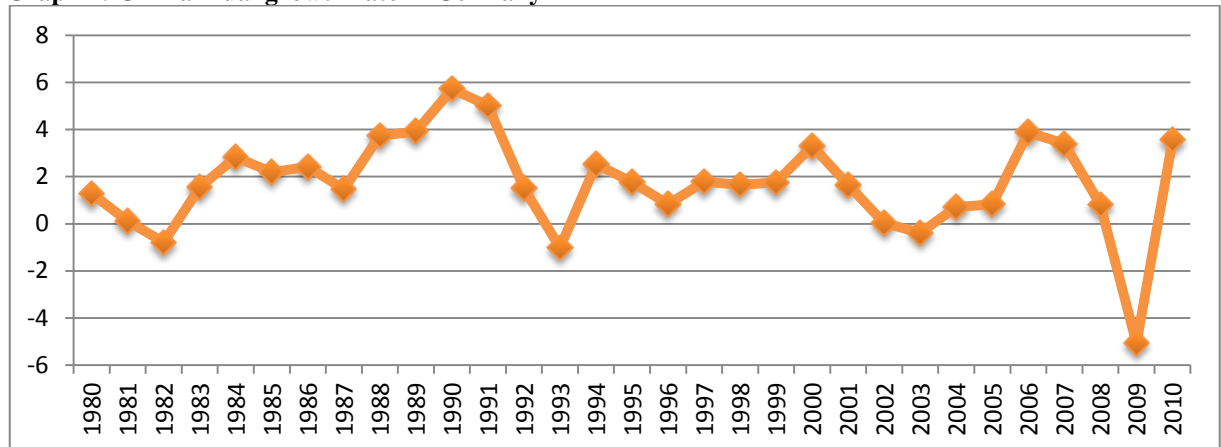
The East Germany was affected by downturn of production. The reasons of downturns are:

- Declining of demand for East goods
- The east enterprises were not able to competitiveness
- Fall apart of COMECON

COMECON (the Council for Mutual Economic Assistance)

It was an organization under the Soviet Union. The organization was established in 1949 to coordinate economic development of Eastern Europe countries. The original members were the Soviet Union, Bulgaria, Czechoslovakia, Hungary, Poland and Romania. The German Democratic Republic became a member in September 1950.

Graph 4: GDP annual growth rate in Germany



Source: http://www.indexmundi.com/germany/gdp_real_growth_rate.html

After reunification East Germany was in crisis caused by massive drop in production. This decrease in production was reflected in GDP of East Germany. Since 1992 was the economic growth restored. The foreign trade was also connected with development of GDP. The collapse of Eastern markets caused enormous demand for West goods. As a result the net exports fell into negative numbers.

Figure 35: Development of GDP in East Germany

Development of GDP in East Germany					
	1991	1992	1993	1994	1995
Growth of GDP (Constant prices 1991)	2.0	7.8	5.8	8.5	6.5
Share in overall GDP	7.2	8.5	9.8	10.4	-
Net exports (with inner German trade in DM billion)	-152	-140	-199	-211	-213
Exports (DM billion)	46.9	51.7	54.6	66.9	81.9
Imports (DM billion)	199.2	241.6	253.8	277.7	293.4

Source: http://www.wiwi.uni-jena.de/uiw/publications/pub_before_1999/Brezinski_Fritsch_1995.pdf

The following figure shows the development of GDP in Germany. The data is available from 1995 – 2011.

Figure 36: GDP in Germany

YEAR	GDP (billion)	Growth of GDP (%)	chain base index	base index (year 1990)
1995	1,867	1.5		
1996	1,886	1	0.67	0.67
1997	1,920	1.8	1.80	1.20
1998	1,959	2	1.11	1.33
1999	1,998	2	1.00	1.33
2000	2,062	3.2	1.60	2.13
2001	2,088	1.2	0.38	0.80
2002	2,089	0.1	0.08	0.07
2003	2,085	-0.2	-2.00	-0.13
2004	2,119	1.6	-8.00	1.07
2005	2,138	0.9	0.56	0.60
2006	2,630	3.7	4.11	2.47
2007	2,807	3.3	0.89	2.20
2008	2,918	1.1	0.33	0.73
2009	2,815	-5.1	-4.64	-3.40
2010	2,940	3.50	-0.69	2.33
2011	3,139	3.10	0.89	2.07

Source: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tec00115&plugin=1>

The chain base index shows the average increase to 29% of the preceding year. The base index shows, where the highest growth has been highest since the base year. The biggest growth of GDP was in 2006 compared to the base year 1995. The lowest growth of GDP was in 2009 compared to the base year 1995.

The R^2 was obtained from figure 37. It shows how well the regression line approximates to the real data. The most suitable model is linear, compound, growth, exponential and logistic. The linear function describes the development of data most precisely. In this case we are able to predict development of GDP for years 2012, 2013 and 2014. Afterwards the x variable is substituted in the function with the number of the next observation. If we observe a tendency in last 17 year and we want to estimate the values for next three years, instead of x variable 18, 19 and 20 are substituted. Through this way is obtaining the values for the independent variables.

The linear equation is following:

$$y' = 1597.890 + 80.365x$$

The following equations are used to predict development of GDP in billion USD.

$$y' = 1597.890 + 80.365x18$$

$$Y' = 3044.46$$

In 2012 the GDP reached the 3,044 billion USD.

$$y'' = 1597.890 + 80.365x19$$

$$y'' = 3124.825$$

In 2013 the GDP will reach the 3,124 billion USD.

$$y''' = 1597.890 + 80.365x20$$

$$y''' = 3205.19$$

In 2014 the GDP will reach 3,205 billion USD:

Figure 37: Model of GDP (billion)

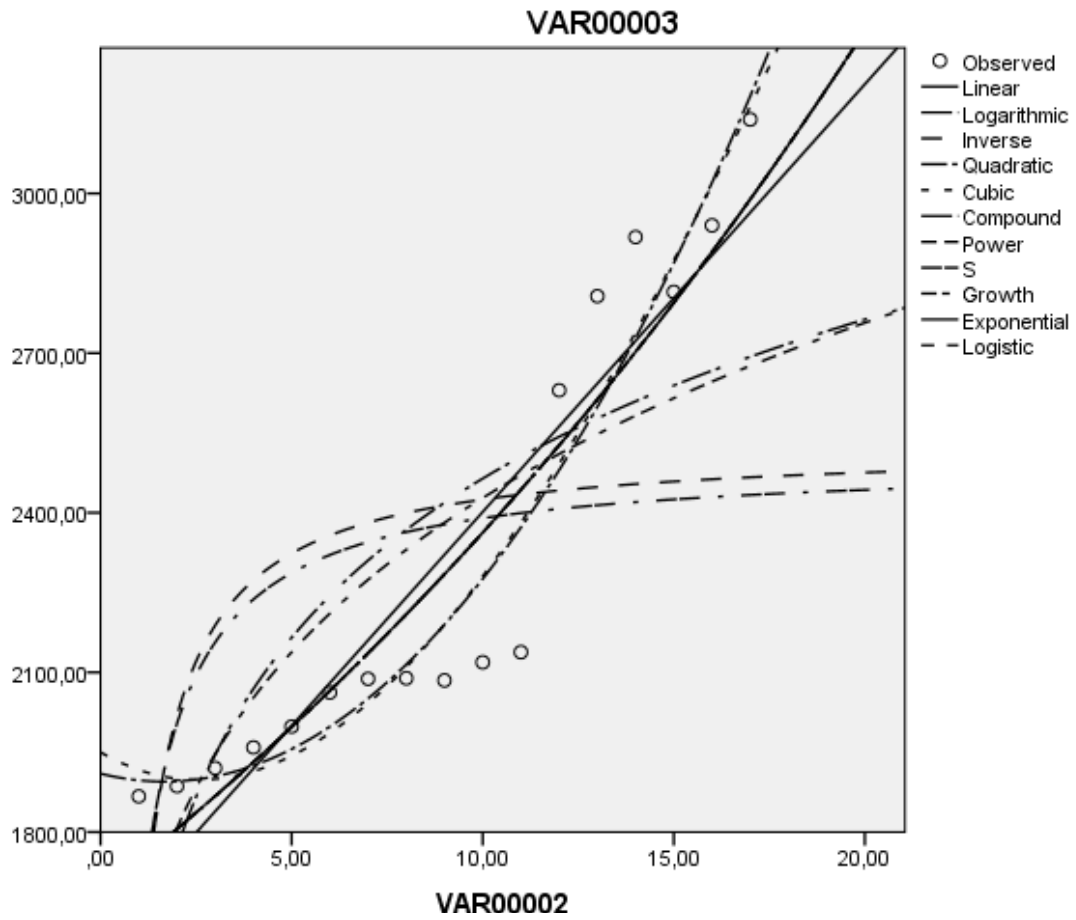
Model Summary and Parameter Estimates

Dependent Variable: VAR00003

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	,855	88,622	1	15	,000	1597,890	80,365		
Logarithmic	,612	23,620	1	15	,000	1471,198	431,267		
Inverse	,297	6,346	1	15	,024	2526,220	-1013,426		
Quadratic	,931	93,855	2	14	,000	1909,824	-18,140	5,473	
Cubic	,931	58,669	3	13	,000	1950,029	-41,652	8,647	-,118
Compound	,877	107,280	1	15	,000	1688,592	1,034		
Power	,649	27,794	1	15	,000	1591,612	,183		
S	,329	7,353	1	15	,016	7,823	-,440		
Growth	,877	107,280	1	15	,000	7,432	,034		
Exponential	,877	107,280	1	15	,000	1688,592	,034		
Logistic	,877	107,280	1	15	,000	,001	,967		

Source: IBM SPSS Statistics

Figure 38: Trend functions of GDP (billion USD)



Source: IBM SPSS Statistics

Inflation

This figure shows calculated index numbers. The data is available from 1990-2012.

Figure 39: Inflation rate in Germany

Year	Inflation rate	chain base index	base index (year 1990)
1990	2.6		
1991	3.7	1.42	1.42
1992	3.8	1.03	1.46
1993	3.2	0.84	1.23
1994	2.3	0.72	0.88
1995	1.5	0.65	0.58
1996	1.2	0.80	0.46
1997	1.5	1.25	0.58
1998	0.6	0.40	0.23
1999	0.6	1.00	0.23
2000	1.4	2.33	0.54
2001	1.9	1.36	0.73
2002	1.4	0.74	0.54
2003	1	0.71	0.38
2004	1.8	1.80	0.69
2005	1.9	1.06	0.73
2006	1.8	0.95	0.69
2007	2.3	1.28	0.88
2008	2.8	1.22	1.08
2009	0.2	0.07	0.08
2010	1.2	6.00	0.46
2011	2.5	2.08	0.96
2012	2.1	0.84	0.81

Source:<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tec00118&plugin=1>

The chain base index shows the average decrease to 11% of the preceding year. The base index shows, where the highest growth has been highest since the base year. The biggest growth was in 1991 compared to the base year 1990. The lowest growth was in 2009 compared to the base year 1990.

The R^2 was obtained from figure 40. It shows how well the regression line approximates to the real data. The most suitable in case of inflation rate is the quadratic and cubic function.

The quadratic function is following:

$$y' = 3.684x^2 - 0.034 + 0x12$$

The cubic function is following :

$$y' = 4.449x^3 - 0.686x^2 + 0.047x - 0.001$$

Figure 40: Model of inflation rate

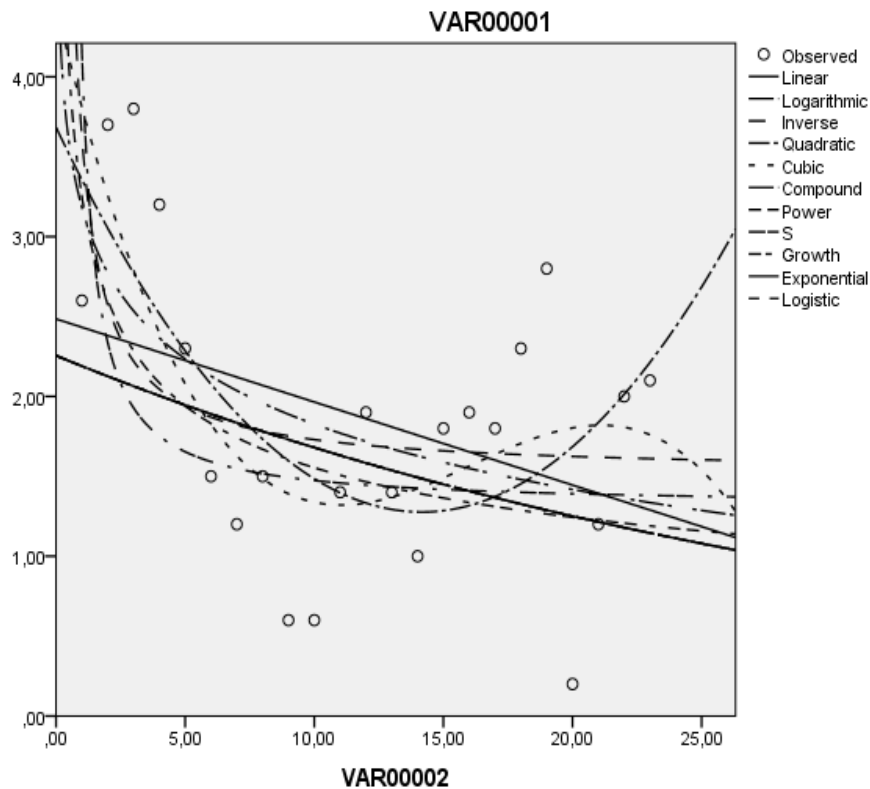
Model Summary and Parameter Estimates

Dependent Variable: VAR00001

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	,143	3,513	1	21	,075	2,485	-,052		
Logarithmic	,273	7,902	1	21	,010	3,183	-,589		
In verse	,231	6,325	1	21	,020	1,519	2,105		
Quadratic	,411	6,988	2	20	,005	3,884	-,340	,012	
Cubic	,470	5,824	3	19	,008	4,449	-,888	,047	-,001
Compound	,091	2,109	1	21	,181	2,255	,971		
Power	,181	4,015	1	21	,058	3,252	-,321		
S	,138	3,350	1	21	,081	,272	1,153		
Growth	,091	2,109	1	21	,181	,813	-,029		
Exponential	,091	2,109	1	21	,181	2,255	-,029		
Logistic	,091	2,109	1	21	,181	,443	1,030		

Source: IBM SPSS Statistics

Figure 41: Trend functions of inflation

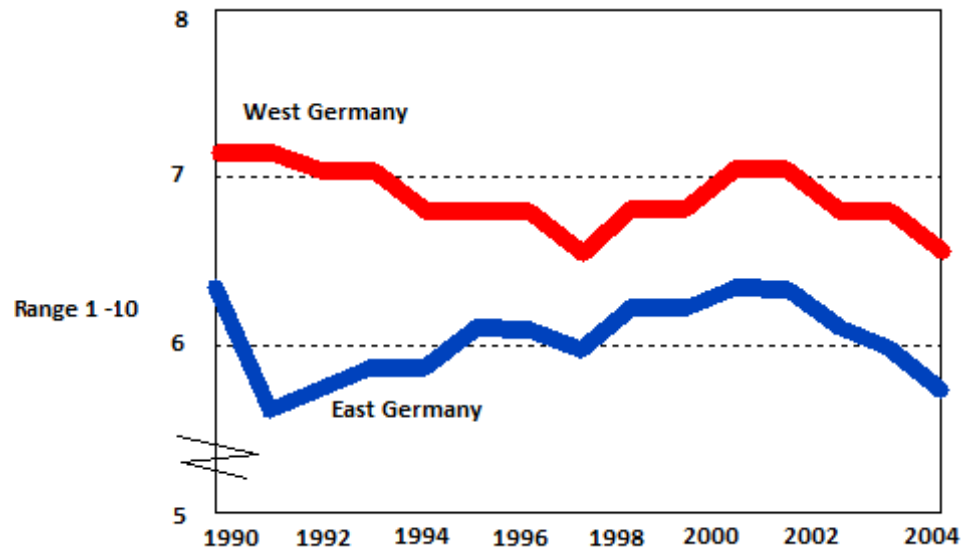


Source: IBM SPSS Statistics

Life satisfaction in Germany

Since 1990 after reunification of Germany, East Germans expected increasing of life satisfaction. They expected to achieve the West Germans life level, but this did not happen. Range from 1-10. The number 10 means highest satisfaction.

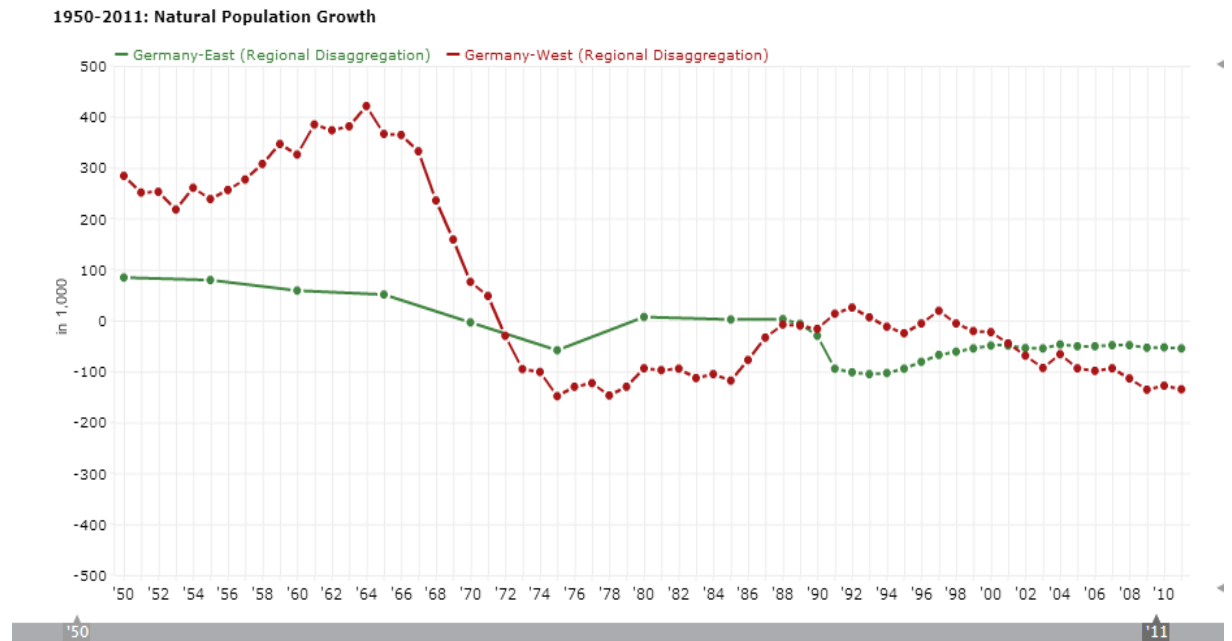
Figure 42: Development of life satisfaction



Source: <http://www.jjahnke.net/rundbr14.html>

In 2003 live in Germany 82.4 million people. In 2008 the number of inhabitants decreased to 82 million. It is expected that population shrink by 12.6 million in 2050 compared to the year 2008. The population growth is highly on migration dynamics. The population forecast in West Germany will increase by 2 million to 69.5 million in 2020. However in East Germany the immigration from abroad will be enough to cover natural decline of population.

Graph 5: Population growth in East and West Germany

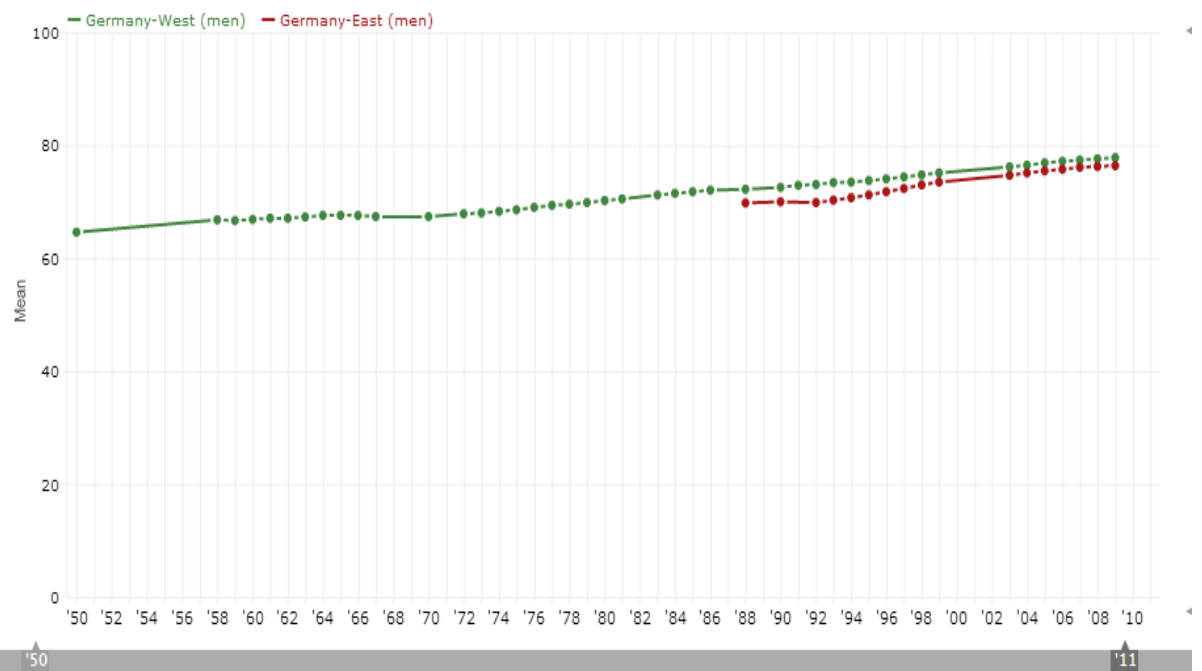


Source: http://www.gesis-simon.de/simon_disi/index.php?lang=en#

Development of life expectancy is highly influence by life style of people and medical care as well. In 1991 the life expectancy at birth of men was 3 years lower than in West. After reunification the life expectancy of men was 76.0 years, which in comparison with West level 1.3 years lower. The reason of improvement was the improved medical care in new federal states.

Graph 6: Life expectancy men in East and West Germany

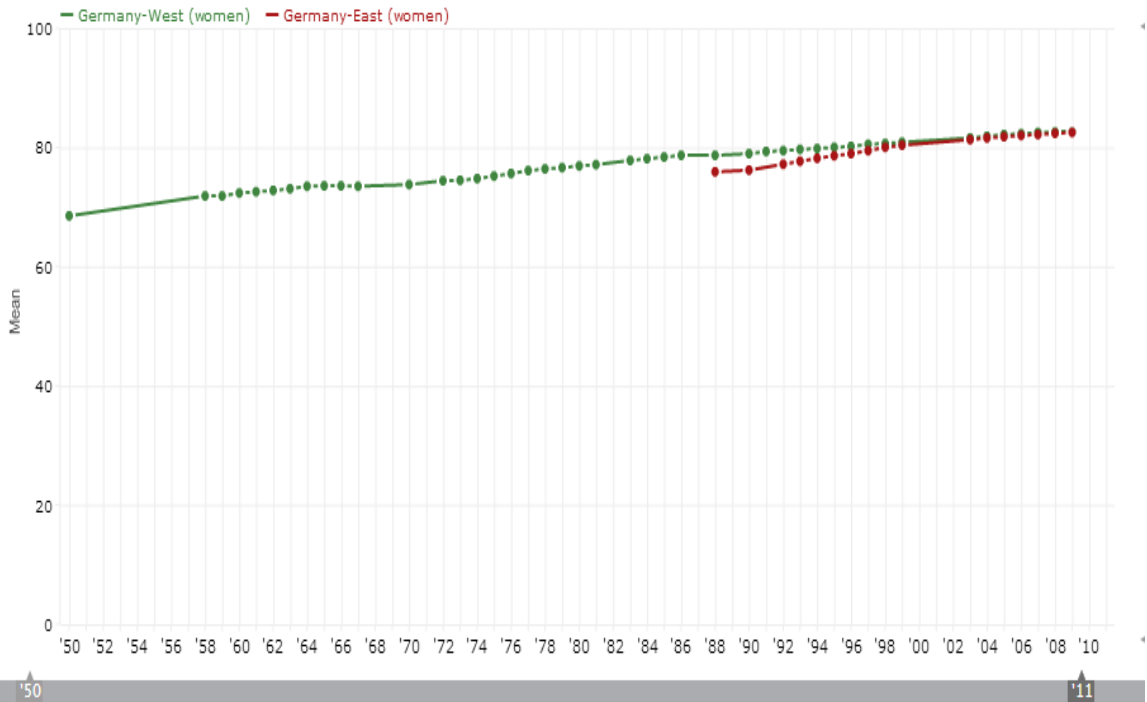
1950-2011: Life Expectancy at Birth



Source: http://www.gesis-simon.de/simon_disi/index.php?lang=en#

The life expectancy of women was two years lower than in West in 1991. After reunification the life expectancy for women was 82.2 years, which was by 0.3 years lower than in West.

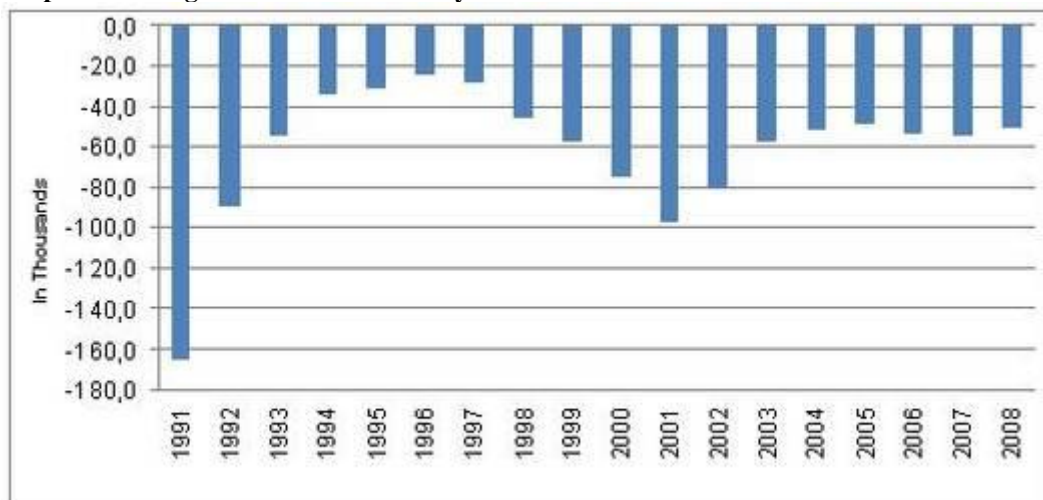
Graph 7: Life expectancy women in East and West Germany
1950-2011: Life Expectancy at Birth



Source: http://www.gesis-simon.de/simon_disi/index.php?lang=en#

The construction of Berlin wall limited emigration to the Federal Republic of Germany. After fell the Berlin wall the number of emigrants achieved almost 400.000 people each year. The emigration balance was in East Germany 100.000 people in 2001. Totally the net emigration was 1.6 million people during the period 1989-2005. This region lost around 10 percent of citizens. Emigration highly depends on age. People, who migrate from East to West are well educated and below 30 years.

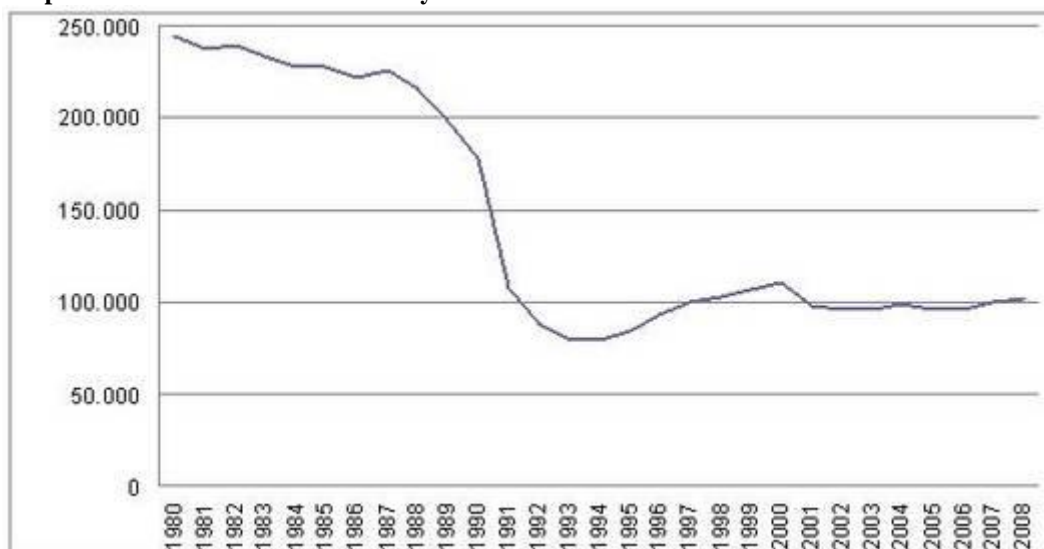
Graph 8: Net migration in East Germany



Source: <http://www.berlin-institut.org/online-handbookdemography/east-germany.html>

The following graph represents birth rates in new federal states, excluding Berlin during period 1980-2008. Before reunification in 1989 was fertility in GDR 1.6 children per women in comparison with 1.3 in West. The family policy in GDR encouraged the birth at an early age. The government also provided free kindergartens, nursery school and other benefits such as shorter weekly working hours. After reunification the fertility rate fell to 0.77 children per women. The average age of women at first birth was 22.9 years in GDR and 26.8 in FRG. In 1995 the average years increased to 28.2 years in West and 26.9 in East Germany.

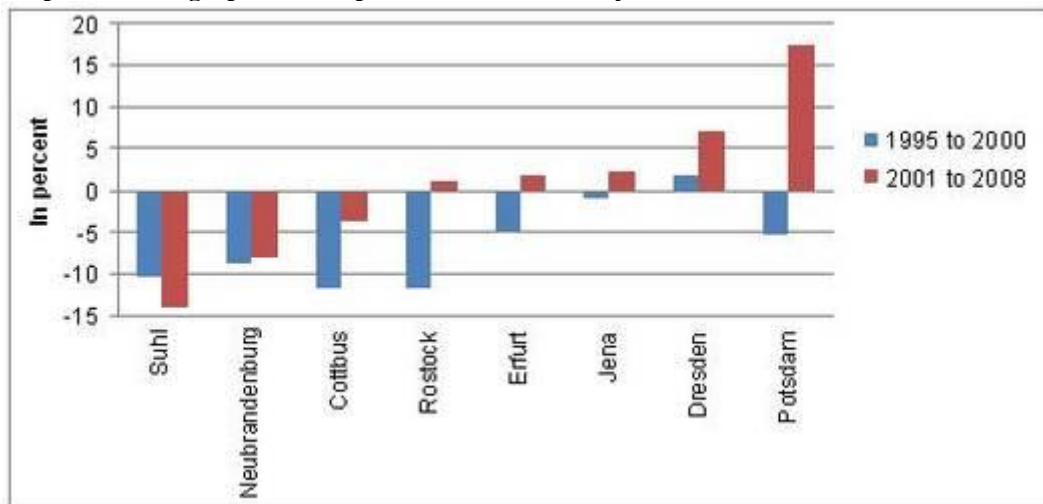
Graph 9: Birth rates in East Germany



Source: <http://www.berlin-institut.org/online-handbookdemography/east-germany.html>

The following graph represents demographic development in various East German cities. The cities such as Jena and Erfurt attract the decreasing the number of young people. The urban in East Germany become stabilize at the expense of rural areas. The less people will live in East Germany and mainly they will live in urban areas in the future.

Graph 10: Demographic development in East Germany



Source: <http://www.berlin-institut.org/online-handbookdemography/east-germany.html>

6. EVALUATION AND EXPECTING DEVELOPMENT

Almost 24 years after reunification, some problems still persist in unified Germany. The new federal states were under socialistic pressure for almost 40 years. One nationality was divided into two states; East Germany had low economic growth and low productivity of work. The EU also was providing them with financial supports through structural funds, because the new federal states had lower GDP per capita. Since 1990 around 250 billion euro has been invested as direct developmental help from west to east. In the case of unemployment rate, the highest number of unemployment is in the capital city, Berlin. Also the new federal states have a higher unemployment rate (11.90%), compared to the West (6.60%). After reunification the demand for goods from the west increased, leading to growth in west part of the country. On the other hand, the demand for goods from the east decreased, causing problems to enterprises, which were not able to compete with the west.

Moreover, people in east expected that after reunification the east and the west would become more equal. Demographic indicators, such as population structure, show that in 1989 the population in East Germany was much younger than in the West. More than 25.5% of the total population was younger than 20 years old. In 2008 the percentage decreased to 15.5% due to declining birth rate and emigration, however the Western level was 19.9%. The new federal states try to attract qualified young stuff. The people, who are well educated and are below 30 years old migrate to the West part of Germany. East Germany is attacked by natural decline in population, but this decreasing is covered by immigration from abroad. For example, life expectancy at birth was three years lower for men and two years lower for women in the east part of Germany compared to the west. Presently the differences are not so noticeable. In the East life expectancy at birth is 1.3 years lower for men and 0.3 years lower for women than in the West. For selected aspects, such as rate of unemployment, GDP (billion USD) and inflation rate, time series analysis and index numbers analysis was used. The aim of this analysis was to find the trend in development, as well as forecasting future development. The based index showed that the highest growth of unemployment rate was in 2005. The reason for this was the implementation of Hartz reforms. These reforms restricted unemployment benefits. For GDP, the linear function describes the development of data most accurately. It was able to

forecast the development of GDP in billion USD. It will be expected that in 2013 Germany's GDP will reach 3,124 billion USD and by 2014, 3,205 billion USD.

The population of Germany is expected to decrease to 12.6 million in 2050 compared with year 2008. Germany has the lowest population growth the European Union. The annual growth is -0.2% (2012 was year of determination). Demographic development indicates that less people will live in East Germany and the younger generation will mainly live in urban areas rather than in rural areas. The number of elderly people in Germany is significantly growing and the birth rate is decreasing. Expected employment development in Germany remains uncertain due to the euro zone crisis. Germany's economy is highly driven by exports, so Germany is dependent on the economic situation of their key trading partners. It is expected that Germany's economy will grow by 0.9% in 2013.

7. CONCLUSION

This diploma thesis has introduced to the reader, in the theoretical part, the historical background to Germany's economic situation and consequences of this. It has also showed differences between East and West Germany and described economic and sociological indicators. It was necessary to show the situation in Federal Republic of Germany and German Democratic Republic before the process of reunification. The formal reunification was in 1990. From an economical point of view, the process of unification was very long and difficult. The East German economy was centrally planned and under the Soviet control, so after reunification it became a part of market economy. The East German economy was undeveloped compared to the West German economy. The eastern part received help from the western part, as well as funds from the European Regional Development Fund.

In the practical part of the diploma thesis socio-economic indicators in West and East Germany were analyzed. It was complemented by time series analysis and index numbers analysis. The results showed that the new federal states have a higher unemployment rate than the old federal states, with double the number of people out of work. The east enterprises were not able to compete with west enterprises. As a result the east companies went bankrupt and unemployment rate increased. The population structure shows that West Germany attracts younger people than East Germany. West Germany offers them higher salaries. The life expectancy at birth among East Germans is 1.3 years lower for men and 0.3 year lower for women compared to West Germans. Some differences still exist such as higher unemployment rate in East Germany and a decreasing number of young well educated people. Currently Germany is highly hindered by its ageing population as well as decreasing birth rates.

After processing the socio-economic analysis it is evident that differences in income, unemployment rate, population structure and lifestyle in unified Germany are large. Difference between material and social life remain in Germany.

From the perspective of the former Eastern bloc, East Germany has much better position compared to the Czech Republic. In comparison to the Czech Republic, East Germany has more developed infrastructure, higher level of services and higher income.

8. BIBLIOGRAPHY

- [1] ALTMANN, Jörn, Thomas MEYER a Reiner KLINGHOLZ. *Wirtschaftspolitik: eine praxisorientierte Einführung*. 8., völlig überarb. Aufl. Stuttgart: Lucius, 2007, 512 p. ISBN 978-382-8203-891.
- [2] GEISLER, Rainer, Thomas MEYER a Reiner KLINGHOLZ. *Die Sozialstruktur Deutschlands: die gesellschaftliche Entwicklung vor und nach der Vereinigung*. 3., grundlegend überarb. Aufl. Wiesbaden: Westdeutscher Verlag, c2002, 512 p. ISBN 35-313-2923-5.
- [3] HUELSHOFF, Michael G, Andrei S MARKOVITS a Simon REICH. *From Bundesrepublik to Deutschland: German politics after unification*. Vyd. 1. Ann Arbor: University of Michigan Press, c1993, x, 396 p. Teritoria, sv. 2. ISBN 04-720-6527-0.
- [4] KREJČÍ, Jaroslav, Thomas MEYER a Reiner KLINGHOLZ. *Social structure in divided Germany: die gesellschaftliche Entwicklung vor und nach der Vereinigung*. 1. Aufl. Překlad František Štícha. London: Croom Helm, 1976, 262 p. XXI. století, sv. 12. ISBN 08-566-4164-2.
- [5] KRÖHNERT, Steffen, Franziska MEDICUS a Reiner KLINGHOLZ. *Die demografische Lage der Nation: wie zukunftsfähig sind Deutschlands Regionen?*. Originalausg. München: Deutscher Taschenbuch Verlag, 2006, 191 p. ISBN 34-233-4296-X.
- [6] MANKIWI, N. *Macroeconomics*. 7th ed. New York, NY: Worth Publishers, c2009, xxxvii, 598 p. ISBN 14-292-1887-8.
- [7] MLSNA, Petr, Heike ORTWEIN a Reiner KLINGHOLZ. *Německá centra - německé periferie: federalismus, regionalismus, subsidiarita*. 1. vyd. Praha: Kairos, 2010, 311 s. Studie a dokumenty (Kairos), sv. 1. ISBN 978-809-0481-800.

- [8] MÜLLER, Uwe, Thomas MEYER a Reiner KLINGHOLZ. *Supergau deutsche Einheit: die gesellschaftliche Entwicklung vor und nach der Vereinigung*. 1. Aufl. Překlad František Štícha. Berlin: Rowohlt Berlin, 2005, 255 p. XXI. století, sv. 12. ISBN 38-713-4523-7.
- [9] MYNAŘÍKOVÁ, Romana, Heike ORTWEIN a Reiner KLINGHOLZ. *Bohatým brát, chudým dávat: finanční vyrovnání spolkových zemí jako klíčové vnitroněmecké politikum přelomu tisíciletí*. Vyd. 1. Praha: Matfyzpress, 2011, 103 s. Teritoria, sv. 1. ISBN 978-807-3781-545.
- [10] PAQUÉ, Karl-Heinz, Thomas MEYER a Reiner KLINGHOLZ. *Die Bilanz: eine wirtschaftliche Analyse der Deutschen Einheit*. 8., völlig überarb. Aufl. München: Hanser, 2009, ix, 298 p. ISBN 34-464-1958-6.
- [11] PILZ, Frank, Heike ORTWEIN a Reiner KLINGHOLZ. *Das vereinte Deutschland: wirtschaftliche, soziale und finanzielle Folgeprobleme und die Konsequenzen für die Politik*. 8., völlig überarb. Aufl. Stuttgart: G. Fischer, c1992, 258 p. ISBN 38-252-1695-0.
- [12] SARRAZIN, Thilo, Heike ORTWEIN a Reiner KLINGHOLZ. *Německo páchá sebevraždu: jak dáváme svou zemi všanc*. Vyd. 1. Překlad František Štícha. Praha: Academia, 2011, 432 s. XXI. století, sv. 12. ISBN 978-802-0020-185.
- [13] ŠAUER, Jaroslav, Heike ORTWEIN a Reiner KLINGHOLZ. *Německá otázka v evropské politice: finanční vyrovnání spolkových zemí jako klíčové vnitroněmecké politikum přelomu tisíciletí*. Vyd. 1. Praha: Oeconomica, 2005, 247 s. Teritoria, sv. 1. ISBN 80-245-0940-7.
- [14] WOLFRUM, Edgar. *Zdařilá demokracie: dějiny Spolkové republiky Německo od jejích počátků až po dnešek*. Vyd. 1. Brno: Společnost pro odbornou literaturu - Barrister, 2008. ISBN 978-808-7029-435.

[15] Berlin | Berlin after 1945 [online]

URL: <<http://www.berlin.de/berlin-im-ueberblick/geschichte/1945.en.html>> [retrieved 2013-14-02]

[16] Berlin-Institut.org | Germany

URL:<<http://www.berlin-institut.org/online-handbookdemography/germany.html>> [retrieved 2013-03-06]

[17] Bpb.de | Währungsreform [online]

URL: <<http://www.bpb.de/nachschlagen/lexika/handwoerterbuch-politisches-system/40401/waehrung-waehrungsreformen?p=all>> [retrieved 2013-11-02]

[18] Cliffnotes | GDP [online]

URL: <http://www.cliffsnotes.com/study_guide/GDP.topicArticleId-9789,articleId-9733.html> [retrieved 2013-03-10]

[19] Currency reform | First law of currency reform [online]

URL: <http://www.cvce.eu/content/publication/2003/3/10/a5bf33f8-fca0-4234-a4d2-71f71a038765/publishable_en.pdf> [retrieved 2013-03-02]

[20] DW.de | German unification: subsidizing the East

URL:<<http://www.dw.de/german-unification-subsidizing-the-east/a-16279664>> [retrieved 2013-02-18]

[21] EBCOhost | Population Dynamics in East and West Germany--Projections to 2050

URL:<<http://connection.ebscohost.com/c/articles/14753183/population-dynamics-east-west-germany-projections-2050>> [retrieved 2013-03-06]

[22] Economics | The expenditure categories of GDP [online]

URL: < <http://economics.about.com/od/gross-domestic-product/a/The-Expenditure-Categories-Of-Gross-Domestic-Product.htm> >[retrieved 2013-03-10]

[23] Economicsonline | The labour market[online]

URL:<http://www.economicsonline.co.uk/Competitive_markets/The_labour_market.html>

[retrieved 2013-03-03]

[24] Economics.About | What is the Business Cycle? [online]

URL: < http://economics.about.com/cs/studentresources/f/business_cycle.htm>

[retrieved 2013-03-0

[25] Economy.com | Germany Economy - Economic Indicators, Analysis, and Forecasts

URL:<<http://www.economy.com/dismal/outlook/country.aspx?geo=IDEU>> [retrieved

2013-03-06]

[26] Eurostat | Chain index - Statistics Explained

URL:<http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Chain_index>

[retrieved 2013-03-06]

[27] Fullcoll.edu | GDP computation[online]

URL: < http://staffwww.fullcoll.edu/fchan/macro/2gdp_computation.htm>

[retrieved 2013-03-05]

[28] Gastarbeiter | Němci otevřeli Turkům brány [online]

URL: <http://www.tyden.cz/rubriky/zahranici/evropa/nemci-otevrel-turkum-brany-pred-padesati-lety_215762.html>[retriever 2013-02-02]

[29] Hamburg.de | Hamburg in Zahlen

URL:<<http://www.hamburg.de/info/3277402/hamburg-in-zahlen.html>> [retrieved 2013-

03-06]

[30] Hospodářský zázrak | Německý hospodářsky zázrak [online]

URL: <<http://www.czechfreepress.cz/svet-kolem-nas/nemecky-hospodarsky-zazrak.html>>.

[retrieved 2013-03-01]

[31] Hubert Faustmann - Academia.edu | Challenges of Reunification: The Case of Germany

URL:<http://www.academia.edu/367075/Challenges_of_Reunification_The_Case_of_Germany> [retrieved 2013-03-02]

[32] John F. Kennedy | Speaking at the Berlin Wall [online]

URL: <<http://130.18.140.19/stennis/jfk-berlin.html>>[retrieved 2013-02-02]

[33] Landesportal Nordrhein-Westfalen | Land und Leute

URL:<<http://www.nrw.de/nordrhein-westfalen/land-und-leute/>> [retrieved 2013-03-06]

[34] Marshallplan | Marshallplan Info [online]

URL: <http://www.peter-kersten.de/top_mar_info.htm> [retrieved 2013-03-02]

[35] Natuiononline.org | Human Development Index

URL:<http://www.nationonline.org/oneworld/human_development.htm>

[retrieved 2013-03-06]

[36] Portal Niedersachsen | Niedersachsen in Zahlen

URL:<http://www.niedersachsen.de/land_leute/land/zahlen_fakten/niedersachsen-in-zahlen-20094.html> [retrieved 2013-02-06]

[37] Scalloway | Differences between developed and developing countries[online]

URL:< <http://www.scalloway.org.uk/popu7.htm>>

[retrieved 2013-03-04]

[38] Schleswig-Holstein | Bevölkerung

URL:<[http://www.schleswig-](http://www.schleswig-holstein.de/Portal/DE/LandLeute/ZahlenFakten/Bevoelkerung/Bevoelkerung_node.html)

[holstein.de/Portal/DE/LandLeute/ZahlenFakten/Bevoelkerung/Bevoelkerung_node.html](http://www.schleswig-holstein.de/Portal/DE/LandLeute/ZahlenFakten/Bevoelkerung/Bevoelkerung_node.html)>

[retrieved 2013-03-06]

[39] SJSU.edu | The Economic History of Germany

URL:<<http://www.sjsu.edu/faculty/watkins/germany.htm>> [retrieved 2013-03-06]

[40] Statistik-Bremen.de | 1

URL:<http://www.statistik-bremen.de/tabellen/kleinraum/stadt_ottab/1.htm> [retrieved 2013-03-06]

[41] Statsoft | Time series analysis [online]

URL: <<http://www.statsoft.com/textbook/time-seriesanalysis/?button=3#systematic>>[retrieved 2013-03-10]

[42] Studymode | Economic growth is important [online]

URL: <<http://www.studymode.com/essays/Economic-Growth-Is-Important-Case-482786.html>> [retrieved 2013-03-10]

[43] Tatsachen-Ueber-Deutschland.de | Fakta o Německu: Geografie

URL:<<http://www.tatsachen-ueber-deutschland.de/cz/inhaltsseiten-home/cisla-a-fakta/geografie.html>> [retrieved 2013-03-06]

[44] Totalita | Berlínská zed' [online]

URL: <http://www.totalita.cz/vysvetlivky/berlin_zed.php>
[retrieved 2013-01-02]

[45] Tutorsonnet | Value addend approach[online]

URL:<http://www.tutorsonnet.com/homework_help/micro_economics/factor_pricing/value_added_approach_to_gnp_assignment_help_online_tutoring.htm>
[retrieved 2013-03-05]

[46] UNDP.org | HDI [online]

URL:< <http://hdr.undp.org/en/statistics/hdi/>>
[retrieved 2013-02-24]

[47] Unstats | Population [online]

URL: < <http://unstats.un.org/unsd/demographic/sconcerns/popsizes/default.htm>>
[retrieved 2013-03-01]

[48] Wisegeek | Unemployment [online]

URL:< <http://www.wisegeek.org/what-is-cyclical-unemployment.htm>>

[retrieved 2013-03-05]

[49] Worldbank.org | GDP growth (annual %)

URL:<<http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?page=6>>

[retrieved 2013-02-16]

9. SUPPLEMENTS

Supplement 1: European Regional Development Fund

ERDF East Berlin

Sub-programmes/Measures	EC contribution (in € millions)
Productive and supplementary investment	213.268
Assistance for SMEs	159.018
RTD and innovation	67.373
Environment	76.194
Human resources and employment	201.914
Agriculture and rural development	7.584
Technical assistance	17.761
Total	743.112

Source: http://ec.europa.eu/regional_policy/archive/reg_prog/po/prog_20.htm

ERDF Thuringia

Sub-programmes/Measures	EC contribution (in € millions)
Productive and supplementary investment	326.820
Assistance for SMEs	497.502
RTD and innovation	66.138
Environment	120.039
Technical assistance	11.272
Total	1,021.771

Source: http://ec.europa.eu/regional_policy/archive/reg_prog/po/prog_19.htm

ERDF Saxony - Anhalt

Sub-programmes/Measures	EC contribution (in € millions)
Productive and supplementary investment	700.291
Assistance for SMEs	272.691
RTD and innovation	73.106
Environment	98.847
Agriculture and rural development	33.226
Technical assistance	12.640
Total	1,190.801

Source: http://ec.europa.eu/regional_policy/archive/reg_prog/po/prog_17.htm

ERDF Saxony

Sub-programmes/Measures	EC contribution (in € millions)
Productive and supplementary investment	643.813
Assistance for SMEs	595.037
RTD and innovation	221.270
Environment	605.015
Technical assistance	16.109
Total	2,081.244

Source: http://ec.europa.eu/regional_policy/archive/reg_prog/po/prog_18.htm

ERDF Mecklenburg - West Pommeria

Sub-programmes/Measures	EC contribution (in € millions)
Productive and supplementary investment	288.395
Assistance for SMEs	326.735
RTD and innovation	73.586
Environment	88.145
Technical assistance	8.241
Total	785.102

Source: http://ec.europa.eu/regional_policy/archive/reg_prog/po/prog_15.htm

ERDF Brandenburg

Sub-programmes/Measures	EC contribution (in € millions)
Productive and supplementary investment	257.990
Assistance for SMEs	466.888
RTD and innovation	111.685
Environment	117.454
Technical assistance	10.751
Total	964.768

Source: http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=DE&gv_reg=ALL&gv_PGM=1099&gv_defL=9&LAN=7