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EMPLOYMENT CONDITIONS FOR SUSTAINABLE ECONOMIC GROWTH AND INTERNATIONAL RELATIONSHIP

/Sub-Title: Experiences from Saudi Arabia/

By

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CONTENTS

List of Tables

Tables:

List of Figures:

Abbreviations

AIC	Actual Individual Consumption
EIA	Energy Information Agency, Washington, USA
EMU	European Monetary Unit
ENP	European Neighbourhood Policy
GCC	Gulf Cooperation Council
IEA	International Energy Agency
IMF	International Monetary Fund
KMO	Kaiser-Meyer-Okin Measure
ILO	International Labour Office, UN, Geneva
MENA	Middle East and North Africa
MENA-4	countries, Middle-East and North-Africa, countries: Turkey, Saudi Arabia, Egypt and Algeria
NBSA	National Bank of Saudi Arabia
OECD	Organization for Economic Cooperation and Development-
PPP	purchasing power parity
PPS	purchasing power standard
RLP	real labour productivity
SME	Small and medium scale enterprises
TOT	Total Labour Costs
WAG	Wage and salary costs
WEF	World Economic Forum
SPSS	Special Program for Social Sciences

and its variances:

GDPCap2014	Real GDP per capita, growth rate and totals
GDPVol2014	GDP and main components – volumes
GovDebt2014	General Government gross debt
HICPan2014	HICP= Harmonised index of consumer prices
LLearn2014	Lifelong learning
RiskPov2014	People at risk of poverty or social exclusion by age and sex
SocProt2014	Expenditure on social protection
UnEmploy2014	Total unemployment rate

1. INTRODUCTION

Since the great Depression in 1930s the world economy faced its most deep crises started in 2008. Since the beginning of the crisis there is a lot of research to review and analyze the relationship of economic and financial crisis and the sustainable development. The effects of the crisis on the societies and economies and the responses to challenges are different by countries or group of them. This research gives some contribution to the previous research results on this field by making comparison the EU-28 countries and some economies of the MENA (Middle East and North Africa) including Saudi Arabia. Research is focusing mainly on the labour market and the international economic relationship.

The dissertation analyses the main economic conditions of the EU from points of view of emphasizing the employment, human resource management at EU-28 level. The different unemployment levels of EU member states stimulated the increasing gap between member states in GDP per capita, which was from 44% to 271% of the EU-28 average at the beginning of 2011. The unemployment rate of EU-27 increased from 6,7% in 2000 to 8,8% in 2010 based on the internal market conditions and influences of the world economic crisis after 2008. The human resource management has several problems in EU-28, for example the highly level of unemployment, less skilled level of employees, the unemployment rate is very highly in almost the entire EU even in case of youth under 25 year between 21,0-22,3% in 2010-2011. The data are collected mainly from the Eurostat, ILO, IMF, EIA (Energy Information Agency) and some national sources and yearly books issued by the national statistical offices in MENA regions' countries including the research of the Dissertation. For example the national statistical offices in MENA regions can be mentioned reports of Ministry of Economy and Planning in Saudi Arabia, in Riya, National Bank of Saudi Arabia (NBSA) and Saudi Arabian Monetary Agency.

The general main aims of the research can be summarised that

.- analyse the employment conditions in EU-28 and some economies of the MENA (Middle East and North Africa) including Saudi Arabia;

.- analyse the structure of employment conditions based on the age, masculine and famine and economic sectors emphasizing national economic role of main sectors;

.- determine reasons of the unemployment in Saudi Arabia and in the world economy including first EU-28;
.- compare the employment and unemployment conditions of Saudi Arabia with one of the international conditions; Also analyse the share of the foreign guest workers on national labour market in Saudi Arabia.

The Dissertation emphasizes the economic conditions of the EU-28 and its effects on the social-economic conditions of MENA regions. These research objects are important, because EU-28 plays leading role in the world economy and should follow the competitive economic conditions of the EU-28 by developing the advanced technology and techniques. Also the EU-28 should create employment conditions based on the economic structure concerning shares of different economic sectors of GDP. The differences of performances of EU-28 member states should be eliminated continuously by supporting the less developed EU-member states, increasing jobs to decrease the unemployment rate and less favourable economic regions or areas, also increase the skilled level of employees to easierly adapt new technology. The economic and social strategies can be developed and created based on knowing the clear economic conditions even by statistical data.

The EU-28 has considerable effects on economic conditions of neighbour economies surrounding areas of EU-28, mostly countries of Middle East and North-Africa (MENA). In order to determine the economic connections with MENA regions is for need to get overviewing for the economic conditions of MENA regions in some similar research fields of EU-28economic sectors and employment conditions. Therefore the Dissertation focuses on analysing the economic-social – employment conditions of these regions emphasizing some important Arab countries, for example Saudi Arabia and their possibility of the economic prosperity.

Also the study analyses the economic growth from point of view of competitiveness for Saudi Arabia in the world trade based on the export-oriented economic development by lower price and using advanced technology.
In the Dissertation the aim is at analysing the capital outflow of Middle East Region and its reasons emphasizing some difficulties of measure for absorption capacity either in EU-28 or in some economies of MENA regions.

Naturally the aim of the research to analyse economic conditions by the SWOT and SPSS analysing systems and the developing economic trends of GDP growth, employment issue, consumer price index, trade, social protection, risk poverty and governments debts in EU-28 and some economies of MENA regions.

In spite that the economic crisis has started since the beginning of the 2008, some EU member states are also pressed by crises at present. The study analyses the changing financial conditions of EU at the beginning of 2010 and difficulties of the EU, for example current account deficit, which was 17,2 billion euro in the second half of 2011 based on the increasing gap between both of EU-28 and EU-17 (EA) member state groups. Negative balance of external trade in main product of EU-28 non-seasonally was –130,9 billion euro by the end of September 2011, which stimulated to increase the EU-28 current account deficit.

Analyse the influences of world economic conditions on the changing EU-28 balance of trade in goods and services. The possible solutions for decreasing -30 billion Euro deficit of EU-28 balance of trade in goods need for restructuring export and import, and by through of this decreasing negative balance of foreign trade in goods, this can decrease the state debt at EU-28 level, based on the statistical data were described by Eurostat. The world economic crises impacted on the financial conditions of the EU and create longer time economic difficulties for some EU member states. In spite that the economic crisis has started since the beginning of the 2008, some member states are also pressed by crises at present.

By the structure of the SPSS the study mainly focuses on the compare among EU-28 member states and naturally tries the compare among EU-28 and MENA-4 countries, in Middle-East and North-Africa, namely Turkey, Saudi Arabia, Egypt and Algeria. Naturally the eight variances above mentioned provide good possibility to analyse differences among the economies, but MENA-4 countries have complete different economic growing rates from EU-28, for example the one-side economic structure, strongly dependence of Saudi Arabia from crude oil export revenues, less organized economic leadership in these countries.

Based on the different topics of the dissertation and analysing them there are some hypothesis, which determine the main directions in the analyses. ***Hypothesis*** including several declarations to be proofed, which are follows:

1. ***Hypothesis.*** The world economic crisis and financial crisis has effect on the national economies but in different rate and form. According to four dimensions of sustainable development the economic and social issues have got more attention, namely GDP growth rate, balance of foreign trade, balance of payment, unemployment rate. The *diversified economic growth* can ensure more advanced technologies and highly skilled *human resources*, because diversified economic growth becomes base for the highly value added products, therefore the deeply *specialization* is for the industrial production by the general economic development. *Employment issues* can be analysed at levels of *national labour forces (NLF)* and *foreign guest labour forces (FGLF)*. During the period of economic growth and the economic prosperity the number of the FGLF increases mostly in Middle East and Saudi Arabia. But the decline of the economic growth in general the level of employed NLF is not so fluctuating either in developing economic trends or crisis period.

2. ***Hypothesis.*** Volatility of the fossil fuel prices and their trends have negative effect on exporting countries. In the world market the *real price level of the fossil energy resources* is continuously decreasing in its future trends, when its nominal price level can increase. Naturally the highly level of nominal price level belonging to fossil energy resources contributes to extend using other, for example *rational renewable energy resources*, finally to decrease leading role of fossil energy resources. The *balance of foreign exchange rate* is going wrong for *economies exporting fossil energy* resources. This means that the *nominal price level of imported products increases more than the nominal price level of exported domestic products*. The exported products are not highly value added products than imported products including the machines, technical equipment and chemical materials.

3. ***Hypothesis***. The foreign trade among the Middle East economies and EU member states is very intensive, therefore *the strong mutual dependence is between two country groups, namely developed and developing economies*, in spite that the one side dependence of developing countries is dominate in their economic connects with highly developed economies. When the GDPVol2014 (GDP volume) has increasing growing rate and accompanying with decreasing UnEmploy2014 growing rate in EU-28 member states, and these economic conditions can be contradict to one of Saudi Arabia.

4. ***Hypothesis.*** The main challenges in the sustainable development are structural changes, the diversification of economy, which require changes in labour market, for example skill, education and regulation. It is proofed, that the developing trend of UnEmploy2014 follows the developing trend of RisPov2014 in case of the EU-28, and also this is not as same as in Saudi Arabia. It is proofed that the GovDebt2014 and SocProt2014 can be strongly affected by GDPVol2014, UnEmploy2014 and RisPov2014 they have common strong influences on the economic growth of the EU-28. Also it is proofed that the developing trend of the GovDebt2014 is somehow can be the same trend with one of SocProt2014 in case of EU-28. This means that when the SocProt2014 increased, resulted the increase of the GovDebt2014 in EU-28. It is proofed that the clustering for EU-28 and MENA-4 generally emphasizes the similarities for majority of the EU-28 and the main differences between EU-28 and Saudi Arabia in their economic conditions. It is proofed that in spite that the economic growing rate of the MENA-4 can be considerable, but it does not mean to create the diversified economic structure in these economies.

The case study emphasizes some economic trends of Middle East region comparably with Saudi economy, in directing to try setting up diversified economic structure. The Saudi Arabian Government focuses on increasing the national economic growth by the decreasing the foreign direct investments abroad. This means to increase the growth of GDP by through of extending national – local investments focusing on the developing the mining and service sectors accompanying with water management at the same time. Plans decided that the increasing rate of annual growth could be 4-5% till the end of 2010.

Also petroleum sector could increase its growth annual averagely by 2,5-3,0%, while the increasing growth of value added products generated by the non oil mining sector would be by 30% till the beginning of 2010s. According to official report of Government that state mining company realised about 7 billion dollar US valued investments, which led Saudi Arabia to be leader of phosphate fertilizers, alumina and aluminium by the end of 2010 based on SWOT analysis.

In Middle East Region the unemployment rate was decreasing by 1% from 11,2 in 2005 and to 10,2 in 2008 and then it has stagnated at level of 10,3% for three year period of 2008-2011

(see Table-4-5-2, ILO, 2010, the data estimated in 2011). The unemployment rate was the highest in cases of youth generation and women; large gap between male and female employment ratios, also increasing supports for SME-s to extent their employment. The vulnerable employment and working poverty are considerable. Vulnerable employment was at level of all workers about of 2009-2010 years. In general the unemployment rate was at lowest level, namely 5,8% in 2007, before the year of crisis, 2008, but 6,1% in 2008 and 8,4% in 2009 in highly developed countries, but in Middle East the lowest level of unemployment rate was 10,2% in 2008, and almost their unemployment rate did not change so much, as 10,3% in 2009, and about 10,3% in 2010 in this region (see Table-4-5-2, ILO, 2010).

This means, that the economic crisis started originally in 2007 in highly developed countries, and its influences only arrived the some parts of world economy, for example Middle East later by one year. But in this region the unemployment rate has not changed so much, not more than 1% by for period of 2000-2010. In North–Africa the largest difference in unemployment rate, because this has decreased by 4,2% for period of 2000-2009 (see Table-4-5-2, ILO, 2010). This shows that in the other parts of the Arab world, namely that the North – Africa was more dependent on the world economic crisis than Middle East in the first decade of 2000s. (JEL Code: J24)

2. LITERARY REVIEW

The dissertation analyses the sustainable economic growth of the EU from points of view of financial stability based on the financial issues concerning the EU-28 balance of payment, external trade balance and their economic correlations. Importance of the analysed subjects is that the world economic crises has impacted on the financial conditions of the EU and created longer time economic difficulties for some of member states. In order that the EU-28 can realise continuously positive balance of foreign trade, also new member states needs supports from EU. This was emphasized by Rossi and Tabernacki (Rossi-Tabernacki, 2006) strengthening the economies in Central Europe by supporting investments from the EU's regional and cohesion funds for their economic growth and foreign trade (Begg, 2008; Bairoch, 1993; Kaminsky et al., 2003).

Baldwin (Baldwin et al, 2000) declared that the increase in the number of EU members would lead to economic polarization between the block of richer Northern European countries and that of less-well-off South and Eastern European States, which could lead to decrease the positive balance of foreign trade of EU. Also Frankel and Rose (Frankel – Rose, 2002) similarly emphasized that different developed economies could play different role for creating the balance of trade in goods, therefore the South European EU member states have unfavourable economic conditions. Their economic conditions need more supports from developed North EU member states, because also Germany was the first and strongest economy in EU-28 in field of innovation growth to obtain competitive advantages on the world market. Naturally this development support should be accompanying with restructure of their economics, which mostly was absent (also see Koen, 2005; Kotler, 2010).

The other authors emphasized that the economic developed EU member states often prefer to borrow credit from private capital resources for less developed EU member states, which last one also should obtain credits from the World Bank and International Monetary Found instead of giving financial supports of the EU for their innovation (Glady et al., 2009; and Heilman, 2009; World Bank, 2013a; World Bank, 2013b; Head, 2012). Finally it can be

mentioned that the support for developing innovation cannot lead to increase state debt and negative balance of current account belonging to less developed EU member states. The longer term interests of less developed EU member states are to restructure of their economies with growth of innovation leading competitive advantages on the world market and less state debts (Lincoln - Samli, 2009; Porter 1998 and Porter 2011).

Naturally (Ansoff, 1957; and Rust et al. 2004; Bradford - Kletzer, 2005) this support can contribute to decrease negative balance of total external trade of EU-27. According to several authors mentioned above, the different economic developed levels can make possibility for decreasing the positive balance of total external trade of EU. A more optimistic view comes from looking at the volume of intra-European trade. While the extent of that trade has fluctuated since the mid-1980s, its pronounced growth after the start of EMU suggests that the single currency itself has encouraged commerce among EU countries, moving them closer to forming an optimum currency area (also see in Chauffour - Farole, 2009).

From point of view of above mentioned some financial difficulties, as Saleh- Mohamed Itimad (2013) declared that the trans-national corporations provide wide side job possibilities and enough salary incomes by their favourable capital capacity for increasing number of employees and economic growth of CEEC region. The new technologies can be used by corporations, which provide highly developed products contenting the international competitiveness. But the world economic crisis frequently provides economic difficulties for economies of the CEEC region with increasing unemployment rate, decreasing power purchase standard, and increasing negative balance of foreign trade of EU-10 member states. In EU the EU-10, as CEEC region of EU is considerable and developing region, which provide quite adequate human resources and market possibilities for all of EU-27. Also there is an important that the same financial support system should be ensured for this region and its population as the former member states and population of EU-15 could obtain (Saleh, – Mohamed Itimad, 2013).

Interregional trade in the United States remains greater than intra-EU trade, although it remains to be seen how far the European integration process will go. At the time the euro was launched, supporters entertained high hopes about the extent to which the euro would promote trade within the currency union. These hopes were bolstered by an influential econometric study by *Andrew K. Rose*, of the University of California-Berkeley, who suggested that on

average, members of currency union trade three times more with each other than with non-member countries - even after one controls for other determinants of trade flows (Rose, 2000). A more recent study of EU trade data by *Richard Baldwin*, of Geneva's Graduate Institute of International and Development Studies, has greatly scaled back the estimates as they apply to the euro zone's experience so far (Engel –Rogers 2004; Cuaresma et al, 2007; WTO, 2004). Baldwin's best estimate was that the euro increased the mutual trade levels of its users only by about 9 percent, with most of the effect taking place in the euro's first year, 1999. But he also concluded that Britain, Denmark, and Sweden, which did not adopt the euro, saw their trade with euro zone countries increase by about 7 percent at the same time, and that they therefore would gain little more if they adopted the euro (Baldwin, 2006). On balance, considering both the price and the quantity evidence to date, it seems unlikely that the combination of Single European Act reforms and the single currency has yet turned the euro zone into an optimum currency area (Baldwin, R, 2006). Rose based his methods on the "gravity model" of international trade. Rose scaled down his estimate. Using a more sophisticated model of international trade patterns, Rose and van Wincoop calculated the trade-creating effect of a currency union to be roughly a 50 percent increase in trade. (Rose, 2000; Rose – Wincoop 2001; Head, 2012; Hausmann et. al, 2005; also see in case of China and ASEAN for strengthening the financial cooperation in Chey, 2009 and Chia-Tan, 2011).

Also the EU-28 does not have enough competitive advantages against the USA in field of EU agricultural export, because the land ownership and using are so separated and not enough quantity lands are for farmers (see in detailed in FCIC, 2011). Also the EU exporters did not follow enough the behaviours of consumers based on the cultural traditions in developing countries. As some authors (Kotler - Keller, 2009; Kotler, 2010; Quinn 2009) declared that the company’s macro environment includes culture which includes the traditional consumption behaviours.

The developing trend of industry and energy use in the world economy shows that the sustainable economic growth has less possibility and the global warming and clime change will be stronger in consequence of strengthening effects of greenhouse gas. These negative trends should be changed or stopped by the international wider cooperation. The difficulties are coming from the costly expenditures of innovative advanced technology relevant to the environmental conservation. The highly developed economies and their large corporations are not interested in not so profitable production structure changes and central supports of

governments are continuously increasing for companies to turn environment friendly technologies (Asmi, et al, 2015).

There are two important partners of EU-28, namely *India and South Korea* (see in detailed in Neszmélyi et al., 2007; Neszmélyi, 2001a; Neszmélyi, 2001b). Both of them Korea and India have considerable export expansion in developing economy-group, but the EU-28 foreign trade import product structure from them are very different. Import from India consists of mostly basic products or agricultural one, for example fruits-vegetable, light industrial products, and while the import coming from South Korea light industrial products, machineries, cars, electronic equipment and also computer techniques. The cheaper cost level of human resources built in import price, which is resulted in low level import price and increasing import volume from Korea to EU. This trade condition created negative balance of foreign trade of EU-28 with South Korea. This shows that sometimes EU-28 member states also lose their market positions in field of foreign trade with developing countries (Blinder, 2006; Kozár – Neszmélyi, 2014).

Also analysing Chinese rule and system by comparing with some international experiences in South Korea and Japan based on the data index. Several problems are faced by China, for example not every time successful monitoring system and collecting data, missing knowledge of governmental offices in fields of environmental conservation, not every time well organized harmonization for different levels of governmental and local making – decision, missing cooperation among the governmental offices, corporations and firms in different economic areas. In spite that the difficulties are followed by governmental forces in China, there were some main positive results for environment friendly technological development based on the green policy, China became the fourth largest wind power supplier in the world economy and favourable economic and financial background were created for the corporations to follow green policy in this country (Gaál et al, 2015).

How Mobile Is Europe's Labour Force?

The main barriers to labour mobility within Europe ace no longer due to border controls. Differences in language and culture discourage labour movements between European countries to a greater extent than is true, for example, between regions of the United States. In one econometric study comparing unemployment patterns in U.S. regions with those in EU countries, Barry Eichengreen of the University of California-Berkeley found that differences

in regional unemployment rates ace smaller and less persistent in the United States than are the differences between national unemployment rates in the European Union (Eichengreen, B, 1990; Berg – Cazes, 2007; Carson, 2010).

Further study of the U.S. labour market has shown that regional unemployment is eliminated almost entirely by worker migration rather than by changes in regional real wages. This pattern of labour market adjustment is unlikely to be possible in Europe in the near future. Even within European countries, labour mobility appears limited, partly because of government regulations. For example, the requirement in some countries that workers establish residence before receiving unemployment benefits makes it harder for unemployed workers to seek jobs in regions that are far from their current homes. The evidence is on the frequency of regional labour movement in three of the largest EU countries, as compared with that in the United States. Although these data must be interpreted with caution because the definition of "region" differs from country to country, they do suggest that in a typical year, Americans are significantly more footloose than Europeans (Oe La Torre, et al, 2006).

The international literature emphasized some economic conditions concerning the unemployment difficulties and possible solutions. The ILO (International Labour Organization) declared that “Fifty-five% of the total increase in global employment between 2007 and 2010 occurred in the Developed Economies and European Union region, while the region only accounts for 15% of the world’s labour force. Employment contracted by 2,2% in 2009 and by a further 0,9% in 2010……Unemployment is projected to decline slightly in 2011, but to a level that is still 15 million (over 50%) higher than in 2007. Another manifestation of continued labour market stress the rapid growth of par-time employment” (ILO, 2010a; ILO, 2010b; ILO, 2011a).

There is a considerable economic issue, namely asymmetric macroeconomic shocks. The first decade of the euro was characterized by quite different economic performance among the currency union's members. The European Central Bank's monetary policy stance probably was not appropriate for all participants. One result was some divergence in inflation rates, which had two consequences (see in detailed in Maddison, 2006).

First, with the coming of the euro, and even for several years before as markets anticipated that intra-EU exchange rates would stabilize, nominal long-term interest rates on bonds

converged. Because inflation generally was higher in Ireland and southern Europe (Portugal, Italy, Spain, and Greece), however, real long-term interest rates in those countries fell relative to those in Germany, further stimulating demand, growth, and inflation. Data base show how real interest rates fell relative to German rates from the mid-1990s, and generally remained low through the late 2000s. This type of monetary instability was predicted by Sir Alan Walters, an economic adviser to Prime Minister Margaret Thatcher of Britain and a strong opponent of fixed exchange rates within Europe (Walters, 1990).

Second, of course, the real exchange rates of these countries appreciated relative to those of Germany even though the nominal exchange rate remained fixed at l due to the common currency. Current account deficits expanded, in some cases to staggeringly high levels. By 2008, Greece had a deficit of 14.6 percent of its output, while Spain, a much larger country, was borrowing around 10 percent of its output from abroad. In contrast, Germany, which had worked hard in previous years to reduce manufacturing costs, was running a big surplus (Goldstein, 2002; Ricardo, David, 1817; Krugman, 2012).

Why these are divergences? The deficit countries of the euro zone are poorer than those of North-Eastern Europe but have been modernizing their economies over time, in some cases (such as Ireland's) making rapid progress in raising living standards. The Balassa-Sarnuelson productivity effect theory suggests that if productivity was increasing in these countries, inflation would naturally be higher than that in Germany, leading to real appreciation over time (Walters, 1990; James, 2001).

The extensive trade with the rest of the euro zone makes it easier for a member to adjust to output market disturbances that affect it and its currency partners differently. But it does not tell us what factors will reduce the frequency and size of member-specific product market shocks (see in detailed in Zéman et al, 2013).

A key-element in minimizing such disturbances is similarity in economic structure, especially in the types of products produced. Euro zone countries are not entirely dissimilar in manufacturing structure, as evidenced by the very high volume of intra-industry trade - trade in similar products - within Europe (Evenson – Westphal 2005). There are also important differences, however. The countries of Northern Europe are better endowed with capital and skilled labour than the countries in Europe's south, and EU products that make intensive use

of low-skill labour thus are likely to come from Portugal, Spain, Greece, or southern Italy. It is not yet clear whether completion of the single European market will remove these differences by redistributing capital and labour across Europe or increase them by encouraging regional specialization to exploit economies of scale in production (Baldwin, 2006).

The investment activities of trans-national corporations and large companies were very less than it was needed, because considerable lack of infrastructure network, skilled workers, large distance resulting higher cost for transports, low level of density of population, which consequences on less local markets; and also the potential producing regions are very far from the world market centres. The FDI can strengthen the employment conditions by setting up the vertically integrated product channel to use high-tech and ensuring products to supply single market in EU (see in detailed in Zbida Adel et al, 2011; WIR, 2014).

Also the FDI helps the strengthening sustainability of the economic growth is in order to mitigate the climatic changes resulted by the human activities. The increasing share of the private sector should be based on the sustainable development trend and environment friendly investments of either developing countries or developed countries in the same time. The international organizations emphasize the strategic framework for investments of private sector in SDGs (SDGs = Sustainable Development Goals), which can help structure efforts to mobilize funds, to channel them to SDG sectors, and to maximize impacts and mitigate drawbacks (WIR, 2014; also see Török, et al, 2015).

.- The foreign direct investment (FDI) can be favourable for the domestic economic growth in EU-27, but sometimes this FDI can focus on the increasing foreign human resources instead of domestic-national workers-employees (WEF = World Economic Forum, 2010; UNDP/ESMAP, 2005).

The high level of unemployment rate can contribute to increasing the labour efficiency at the trans-national corporation (TNC) level, but this cannot solve the economic and social difficulties concerning the narrowing market positions for companies and decreasing life standard for wider social groups and the poverty at social level (Laskai - Zéman, 2013; Gomez-Mejia, 2005 Toon Otten et al, 2014; Luis R. Gomez-Mejia, et al, 2005).

The sustainable employment economic conditions of EU-27 need for increasing investment activities to meet market demand, to increase highly value added products and to increase the AIC of population and strengthening the PPS of population of the EU-27 based on the extending employment rate. The best way is to increase the highly value added products within vertically integrated product channel (see in detailed in Zsarnóczai, J. S., 2003 in case of Denmark). The successful moderately economic growth by increasing the employment can decrease the poverty at social level.

At present the real labour productivity rate concerning the GDP growth is very different in each region of the world economy and main country-group, emphasizing the economic role and conditions in EU-28. These differences in field of labour productivity are very vary in case of regions and show how each country can have more favourable conditions then the other one in field of labour productivity conditions, which can be titled as the important social approach of the economic growth. The real labour productivity growth per hour worked can provide the marginal competitiveness either for any economy or for any firm, or transnational corporation. Naturally the real labour productivity and the competitiveness based on either comparative or competitive advantages need for continuous education for employees in order that they become more skilled and satisfactory for demands of the world market (see in detailed Neszmélyi, 2001a; Neszmélyi, 1999).

Some experts emphasize wage conditions of company effecting the RLP (real labour productivity) growth was to pay for employees, which are as follows (Cole, 1988): 1- retain and motivate sufficient numbers of suitable employees to meet production needs; 2- encourage the optimum productivity from employees; 3- ensure of a high level of quality of output; 4- recognise the value of jobs in relation to each other; 5- enable employees to share in the growth and prosperity of the organization; 6- ensure the labour costs are suitably controlled in relation to other costs and in relation to revenues.

In spite that the Arab economies wanted to set up diversified economic structure, their capital outflow is very considerable to highly developed economies. By the end of 2007, the Gulf Cooperation Council (GCC) had estimated *investment capacity* about 100 billion US dollar, of which 57% were invested in Europe, 25% in North America and 14% in Asia, the remaining share was invested in GCC (Sénat, 2007). This economic condition proofs the economic dependence of Middle East on their investment activities out of their region. This

situation determines the economic growth of the region, which can be analysed from *comparing different statistical data* concerning the main economic trends of this region in fields of GDP growth, employment conditions, and investment possibilities (also see detailed in Saul, 2005). The case study uses *SWOT analysis concerning the economic conditions* of the region.

The Foreign Direct Investment (FDI) coming from Arab oil exporting countries to other Arab countries with lack of capital resulted in so separated and concentrated investments only in several sectors, which investment structure often remains the developed and backwardness gap between different regions even in one country. This situation is also described in case of Hungary (see in Zbida, et al, 2011, p. 63.; Zéman et al, 2013; Zéman et al, 2014).

According to the employment in agricultural sector also the advisory services frequently are absent even in financial issues and agricultural sector. According to some examples of some highly developed North-EU member states like Sweden and Finland the advisory system has very considerable role and also the cooperation among producers can make influences on increasing the efficiency of the production (see in detailed in Zsarnóczai, 2003; Végh et al, 2014).

The economies of Middle East also have a problem, namely so they have one side or not diversified foreign trade structure in field of their export, which make their economies be very depend on the world price of their several export products. Some other Asian countries, like South Korea and India show examples to create multi-side diversified export structure based on the export oriented policy. This one can ensure higher level of employment in any economy (see in Neszmélyi, 2001a; Neszmélyi et al, 2007).

There are some examples for cross border cooperation at the international level as co-operation of Hungary with South Korea and other Asian economies in works of Neszmélyi, (2001b) and Neszmélyi, (1999). Also other authors declared that how each economic sector or branch, for example the agricultural sector in Hungary should be developed to create the competitiveness Szabó - Zsarnóczai (2004). According to above mentioned works of different authors in general any economic branch can contribute to harmonized economic growth of each national economy.

Also some authors emphasized the costs for skill, when they selected costs for labour forces, namely Bosworth, (Bosworth, et al, 2006b) devised basis for making comparisons between rates of pay in different companies. They selected five factors for comparisons among jobs: Skill, Responsibility, Metal effort, Physical effort, working conditions. Other experts worked out that despite the apparent diversity of types of costs, the literature trends to classify them under three heading: *variable costs* (i.e. the hourly wage rate), *quasi fixed costs* (i.e. employer lump sum payroll taxes) and *adjustment costs*; i.e. hiring and firing costs, such as training costs and redundancy payment (see in detailed in Bosworth et al, 2006; and Nickell, 1986). It can be declared from point of view of variable costs, the productiveness of labour force is essential issue for competitiveness. Naturally there are some other costs of labour force, for example adjustment costs are for developing their skill and knowledge (Martínez, 2004; ILO = International Labour Office, 2011b).

For human resource analysing some experts emphasized the importance of the educational programs to increase skilled level of human resources in order that firms can became competitive on either national or the world markets. Demands of the job will be made up of appropriate proportion of knowledge, understanding skills and attitudes. Add to these factors the demands for change, and employees obtain overview about requiring perform the job in the context concerned (Davis – Taylor, 1979).

Also the agricultural production can be to increase and even the food production if the advisory system can be set up in region wide side. The food production issue is very sensitivity in Middle East. Also there are some difficulties in Saudi Arabia that the gap among regions of the country increased in field of economic developed levels. This can be solved by financing the development trends in less favourable developed economic regions, as examples of the EU show how the gap can be decreased (see in detailed in Végh et al 2010; Zéman et al, 2014). Also the foreign trade of Saudi Arabia should be developed based on the mutual governmental agreement, as an example can be shown by the Hungarian – South Korean governmental agreement on strengthening the foreign trade (see in Neszmélyi, 2001b). Also the ambition diversified foreign trade is shown by case of India (Neszmélyi, et al 2007).

3. MATERIAL AND METHODS

The international literature emphasized the sustainable economic growth concerning their perspectives. The economic growth surfaced with the world economic crisis based on the several economic difficulties, for example price income of fossil energy resources, sometimes cheap industrial products from developing economies and cheap human resource, as input-price including in prices of imported products can be competitive on single market of EU-27, which can lead to increase negative EU-27 balance of trade in goods. (Montiel, 2003; and see Table 4-1-1; EUROSTAT, 2011a; EUROSTAT, 2011b).

3.1 Correlations and coefficient among EU-28 and some economies of MENA regions

The solution for economic difficulties is either strong state based on the positive current account balance with less intervention actions or increasing economic role of trans-national corporations for economic growth, technology transfer and possibly increasing export of EU-27 in goods and services (Csaba, L, 2006, p. 159; Szentes, T, 2002).

The *objects of the dissertation* emphasizes the importance and the developing trends the economic growth in EU and Middle East, for example GDP growth, balance trade, export and import structure also the correlation and coefficient of these different economic variances of EU-28 and some economies of MENA regions. The economic growth should connect with the comparative and competitive advantages accompanying with innovation process. Naturally there are some other inputs of the production process as employment conditions and capital flow across borders of different economies of the world, which also these one concern economic conditions of Middle East Region. The employment conditions are very multi-side issues including structure of employment and unemployment in age, masculine and famine, skilled workers or managers of companies. The study emphasizes the difference among the poor or poverty employees at national or international levels, which can make influences on the human resource management at firm level and labour force market at national economic level in Middle East Region. The gross domestic product (GDP), which measures the total value of all goods and services produced in an economy. There is a strong empirical

relationship between the size of a country's economy and the volume of both its imports and its exports.

The *educational activities* have very highly effects on the labour force market of national economies either in EU member states and economies of Middle East Region to direction to innovation improvement. The skilled level and educational activities for employees determine the labour productivity, which leads to increase the stronger *competitive advantages* for nations from point of view of technological development. Naturally the salary level of employees also affects the *comparative advantages* of different economies in the world economy. The skilled workers can be adequate to use the more advanced technology, or otherwise the companies and transnational corporations cannot remain their competitive advantages in the world economy. The transnational corporations can stimulate the development of the world economy by their owned advanced technology as top level to remain their principle and dominance for the possible future economic growth. Therefore the role of transnational corporations is basic importance for the world economic growth (see in detailed in OECD, 2006; and OECD, 2012a; OECD, 2012b).

Also the *transnational corporations* have important role to extend the highly developed technology for the all of the world economy by means of *Foreign Direct Investments (FDI)* out of the mother countries based on the establishing their subsidiaries in other countries. The FDI system is the best possibility for the transnational corporations to extend their advanced technologies mostly provided and created by themselves (Park – Lippoldt, 2008; Zéman et al, 2014).

Naturally some developing countries, for example crude oil exporting economies including Saudi Arabia have possibility to create FDI system by their owned over plus capital capacity resulted by the considerable price income coming from crude oil selling. This over plus capital capacity of theirs cannot be used successfully in their national economies; which therefore they have to outflow from their national economies to other regions and countries of the world economy to find possible profitable investment. In this case for example these developing countries and Saudi Arabia don’t export advanced technologies, but only over plus capital resources, by which they can buy or purchase advanced technologies within their owned FDI system. Sometimes these economies owning over plus capital resources can only buy shares of any transnational corporations, which can provide the adequate profitable

possibility more than in their countries. The dissertation can show and describe this FDI establishing process from side of developing countries including the Arab economies (see detailed international experiences in Oe La Torre et al, 2006; and Stiglitz, 2010).

The dissertation analyses the *price level fluctuating of the fossil energy resources*, which can make influences on the supply-demand of energy resources and which is affected by supply-demand changes in world market. Naturally the world market price level of fossil energy resources stimulates or decreases the export-import volume of fossil energy resources in the foreign trade among the energy resource exporting or energy resource importing economies. The energy resource export-import volumes even by their value make considerable influences on changing export and import structure of considered economies. This means, that not only the volume of the energy resources can play the role in changing structure of export and import, but the price of main products, for example the fossil energy resources including crude oil's one. Also the price of crude oil can determine the value of export and import structure, as OECD data can extend economic growth (OECD, 2012a; OECD, 2012b; OECD-IEA, 2008).

3.2 Clustering the economies based on the variances of SPSS system

Therefore it can be declared that the price level of crude oil and demands of importing countries for this one determine the structure of import and export, or often the balance of foreign trade of economies. If the price level of energy resources increases by so much level, this can create the negative balance of foreign trade for any country. Naturally the positive balance of the foreign trade can stimulate a considerable economic growth, for example in case of Saudi Arabia, which can be followed in the dissertation. As the energy resources can play considerable role in the economic growth of any economy, these can play to create different conditions for the balance of foreign trade or balance of payment for any country in direction to either negative balance or positive balance (see more detailed information in OECD-IEA, 2008, 2010; and Pack, 2000; Pack – Saggi, 2006).

Within the SPSS system the study focuses on the correlations, principal analyses, total variance, factor analyses and cluster analyse based on setting up based on the Dendrogram using Ward Linkage by Rescaled distance cluster combine. The analyses were based on

different sources of the international data base of Eurostat in EU-28 and UN ILO. Also some national data sources were used from different national institutions, mostly from Saudi Arabia.

The Dissertation analyses the correlations by SPSS (Special Program for Social Sciences) analyse among the EU-28 and some economies in European Neighbourhood Policy region in main 8 different statistical fields, as components between 2005-2014: These statistical fields are namely Total unemployment rate in % (UnEmploy2014); GDP and main components – volumes (GDPVol2014); HICP - inflation rate (HICP: Harmonised index of consumer prices, HICPan2014); General government gross debt (GovDebt2014); Expenditure on social protection (SocProt2014); Lifelong learning in %, Total (LLearn2014)); People at risk of poverty or social exclusion by age and sex (RiskPov2014); Real GDP per capita, growth rate and totals (GDPCap2014). The analyse contents some correlation compares among EU-28 member states and some other countries out of the EU, for example Turkey, Saudi Arabia, Egypt and Algeria, but this two last one are included in European Neighbourhood Policy region, which contents some other Arab countries surrounding area belonging to the EU-28. The analyses extend from 2005 until 2014 based on data coming from Eurostat and different national statistical reports. Also the statistical data is valid for EU-28 from 2005, at present, but some statistical matrix provides data for EU-27, which will be mentioned in the Dissertation

The analyse uses statistical data of Eurostat calculated based on the growth rate in percent from 2005 to 2014, and calculate the growth rate share of 2014 in growth rate of 2005. In all cases the growth rate of 2005 is 100% and the growth rate of 2014 is as comparing share of the 2005 growth rate. These growing trends can be followed easer in all cases analysed in this case study. Also in some cases the statistical data are not given as value, but just only growth rate, for example inflation, by other name as Harmonised index of consumer prices (HICP). This large considerable data analysed by SPSS needs for completely unified analyse system. The growth rate can be increasing, less increasing or falling in this analyse.

During the research and analyses the compare was among the EU-28 member states, therefore it was important that the SPSS system does not include the data of Turkey, Saudi Arabia, Algeria and Egypt, as MENA-4 countries with data of EU-28, because data of these MENA-4 countries could have changed the complete economic overview of the EU-28 and also these

data made wrong the average value and matrix of the EU-28 in direction to the developing level of less developed economies. Naturally the cluster analyse can provide possibility for comparing the performance of EU-28 and performance of MENA-4 countries (Middle East and North Africa), as Turkey, Egypt, Algeria and Saudi Arabia. In spite that Turkey is sub-member state of the EU, in this research Turkey is not calculated with the EU-28.

The dissertation is also focusing on the statistical analysis using basic data about the GDP growth, employment issues, youth employment and unemployment, foreign guest labour forces, price levels of fossil energy resources and renewable energy resources, Purchase Power Parity for price and income levels, foreign trade and foreign exchange trade, export-import structure. The Foreign Direct Investment is realised by the companies of Saudi Arabia to EU member states, because the Saudi Arabia and the other economies of Middle East Region have a very low level of absorption capacity to adapt advanced technologies imported from highly developed economies. The absorption capacity is very low because of in backwardness is very considerable in several fields, which are as follows:

.- technological development;

.- less skilled employees;

.- regional, domestic and local markets are very narrow;

.- domestic markets are very large in point of view of geographical measures with large distant among local markets and town-markets, which results considerable expensive and costly transports;

.- infrastructure mostly absent or not advanced;

.- information network and market information are mostly absent.

All of these conditions are generally adapted for the economic situations of developing countries including economies of Middle East including Saudi Arabia.

According to the international authors the relationship by showing the correspondence between the size of different European economies-specifically, America's 15 most important Western European trading partners in 2008-and those countries' trade with the United States in that year. On the horizontal axis is each country's GDP, expressed as a percentage of the total GDP of the European Union; on the vertical axis is each country's share of the total trade of the United States with the EU. As we can see, the scatter of points clustered around the dotted 45-degree line-that is, each country's share of U.S. trade with Europe was roughly

equal to that country's share of Western European GDP. Germany has a large economy, accounting for 21 percent of Western European GDP; it also accounts 19,9 percent of U.S. trade with the region. Sweden has a much smaller economy, accounting for only 2,7 percent of European GDP; correspondingly, it accounts for only 3 percent of U.S.-Europe trade. (U.S. Department of Commerce, European Commission).

An equation such as is known as *gravity model of world trade*. The reason for the name is the analogy to Newton's law of gravity: Just as the gravitational attraction between any two objects is proportional to the product of their masses and diminishes with distance, the trade between any two countries is, other things equal, proportional to the product of their GDPs and diminishes with distance.

This equation says that the three things that determine the volume of trade between two countries are the size of the two countries' GDPs and the distance between the countries, without specifically assuming that trade is proportional to the product of the two GDPs and inversely proportional to distance. Instead, a, b, and care chosen to fit the actual data as closely as possible. If a, b, and c were all equal to 1, Equation (2-2) would be the same as Equation (2-1). In fact, estimates of ten find that (2-1) is a pretty good approximation (see more detailed in Thomas, 2008).

In the case of both the Netherlands and Belgium, geography and transport costs probably explain their large trade with the United States. Both countries are located near the mouth of the Rhine, Western Europe's longest river, which runs past the Ruhr, Germany's industrial heartland. So the Netherlands and Belgium have traditionally been the point of entry to much of North-Western Europe; Rotterdam in the Netherlands is the most important port in Europe, as measured by the tonnage handled, and Antwerp in Belgium ranks second. The large trade of Belgium and the Netherlands suggests, in other words, an important role of transport costs and geography in determining the volume of trade. The importance of these factors is clear when we turn to a broader example of trade data (gravity theory see Head, 2010; World Bank, 1995; and World Bank, 2008a; World Bank, 2008b).

The reason is that international trade produces this increase in world output is that it allows each country to specialize in producing the good in which it has a comparative advantage. A country has a comparative advantage in producing a good if the opportunity cost of producing

that good in terms of other goods is lower in that country than it is in other countries (Hausmann et al., 2005; World Bank, 2008b).

In this example, Colombia has a comparative advantage in winter roses and the United States has a comparative advantage in computers. The standard of living can be increased in both places if Colombia produces roses for the U.S. market, while the United States produces computers for the Colombian market. We therefore have an essential insight about comparative advantage and international trade: Trade between two countries can benefit both countries if each country exports the goods in which it has a comparative advantage (also see in World Bank, 2013b and World Bank, 2013c). This approach, in which international trade is solely due to international differences in the productivity of labour, is known as the *Ricardian model*. By this model to answer these questions, we must be much more explicit in our analysis. In this chapter we will develop a model of international trade originally proposed by the British economist David Ricardo, who introduced the concept of comparative advantage in the early 19th century (Ricardo, David, 1817).

To introduce the role of comparative advantage in determining the pattern of international trade, we begin by imagining that we are dealing with an economy-which we call Home-that has only one factor of production. We imagine that only two goods, wine and cheese, are produced. The technology of Home's economy can be summarized by labour productivity in each industry, expressed in terms of the unit labour requirement, the number of hours of labour required to produce a pound of cheese or a gallon of wine. For example, it might require one hour of labour to produce a pound of cheese, two hours to produce a gallon of wine. Notice, by the way, that we are defining unit labour requirements as the inverse of productivity-the more cheese or wine a worker can produce in an hour, the lower the unit labour requirement. For future reference, we define the unit labour requirements in wine and cheese production, respectively. The economy's total resources are defined as L, the total labour supply.

It is always tempting to suppose that the ability to export a good depends on your country having an absolute advantage in productivity. But an absolute productivity advantage over other countries in producing a good is neither a necessary nor a sufficient condition for having a comparative advantage in that good. In our one-factor model, the reason that an absolute productivity advantage in an industry is neither necessary nor sufficient to yield competitive

advantage is clear: The competitive advantage of an industry depends not only on its productivity relative to the foreign industry, but also on the domestic wage rate relative to the foreign wage rate. A country's wage rate, in turn, depends on relative productivity in its other industries. In our numerical example, Foreign is less efficient than Home in the manufacture of wine, but it is at an even greater relative productivity disadvantage in cheese. Because labour income makes up around two-thirds of GNP in the European Union and the hardships of unemployment are so severe, the low labour mobility between and within EU countries implies that the economic stability loss from euro zone membership could be high. Evidence that such losses may turn out to be costly indeed is provided by the persistently high unemployment rates in some euro zone countries. Furthermore, divergent economic performance under the uniform monetary policy of the ECB suggests that euro zone countries have been subject to asymmetric shocks.

The European Union's current combination of rapid capital migration with limited labour migration may actually raise the cost of adjusting to product market shocks without exchange rate changes. If the Netherlands suffers an unfavourable shift in output demand, for example, Dutch capital can flee abroad, leaving even more unemployed Dutch workers behind than if government regulations were to bottle the capital up within national borders. Severe and persistent regional depressions could result, worsened by the likelihood that the relatively few workers who do successfully emigrate would be precisely those who are most skilled, reliable, and enterprising. Given that labour remains relatively immobile within Europe, the European Union's success in liberalizing its capital flows may have worked perversely to worsen the economic stability loss due to the process of monetary unification. This possibility is another example of the theory of the second best, which implies that liberalization of one market (the capital market) can reduce the efficiency of EU economies if another market (the labour market) continues to function poorly (Baldwin, 2006; Armstrong – Kotler, 2011).

4. RESULTS AND DISCUSSION

4.1 Sustainable economic growth of the EU and it concerns the balance of payment

Introduction

The chapter analyses the total external trade structure change of intra-EU trade in goods and reasons of these changes. The study uses the SWOT analysis to discover reasons for the total external trade structure changes of EU and the possible solutions by stimulating investment activities of private capital of EU and foreign capital from China, US and Middle East Arab countries within Foreign Direct Investment scheme. The chapter focuses on the sustainable economic growth of the EU from points of view of emphasizing financial stability based on the financial issues concerning the balance of payment, external trade balance and their economic correlations.

Also in this chapter the analyses focus on the wide side overview for the EU-28 member states and MENA region with using eight variances of three principal components based on the factor analyses and cluster analyses with using dendrogram overviews for EU-28 and their neighbour countries in MENA region. The economic growing rate of EU-28 member states concerning some economic issues as GDP growing rate, employment, unemployment accompanying with social protection and government debt, price fluctuating, purchase power parity of consumers and also probably lifelong learning. These analyses can clear some developing trends of EU-28 member states and other international compares within EU-28 and with performance of the other economies out of the EU.

GDP growth and it concerns the balance of payment

The changing economic conditions of EU have been moderately at low level, which were proofed by data of *EU-27 current account balance* about between deficit -18,1 and -18,7 billion Euro since the middle of 2010, but the beginning of 2011 the EU-27 current account balance has sharply been decreasing to the level of deficit -35,2 billion Euro. The favour

economic conditions of the EU-27 their current account balance has increased to the level of less deficit -17,2 billion Euro in Q3/2011.

This negative trend of the EU-27 current account balance was mostly resulted by the considerable negative EU-27 balance of trade in goods, which was about deficit -30 billion Euro in 2010, and in the following year in 2011 the trend of EU-27 balance of trade in goods was less favourable than in 2010, namely this was deficit -47,5 billion Euro in the Q1/2011 and this trend was also below the level of deficit -40 billion Euro. Only in the Q3/2011, there was a better deficit namely -34,5 billion Euro, even less than in Q3/2010 (EUROSTAT, 2011).

The EU-27 current account balance could be at better level, than one of EU-27 balance of trade in goods, because the EU-27 balance of trade in services was quite better than the first one. Since the beginning of the Q3/2010 the EU-27 balance of trade in services has decreased moderately from 22,6 and then to 20,9 billion Euro in Q4/2010 and to 17 billion Euro in the Q1/2011. After that in spite that the economic growth was moderate the EU-27 balance of trade in services sharply increased to the level of 28,9 billion Euro in Q2/2011, and then only less decrease occurred to 25,1 billion of the EU-27 balance of trade in services in Q3/2011 (see Figure-1). Almost the same trend of EU-27 balance of trade in goods and EU-27 balance of trade in services were going on during 2012.

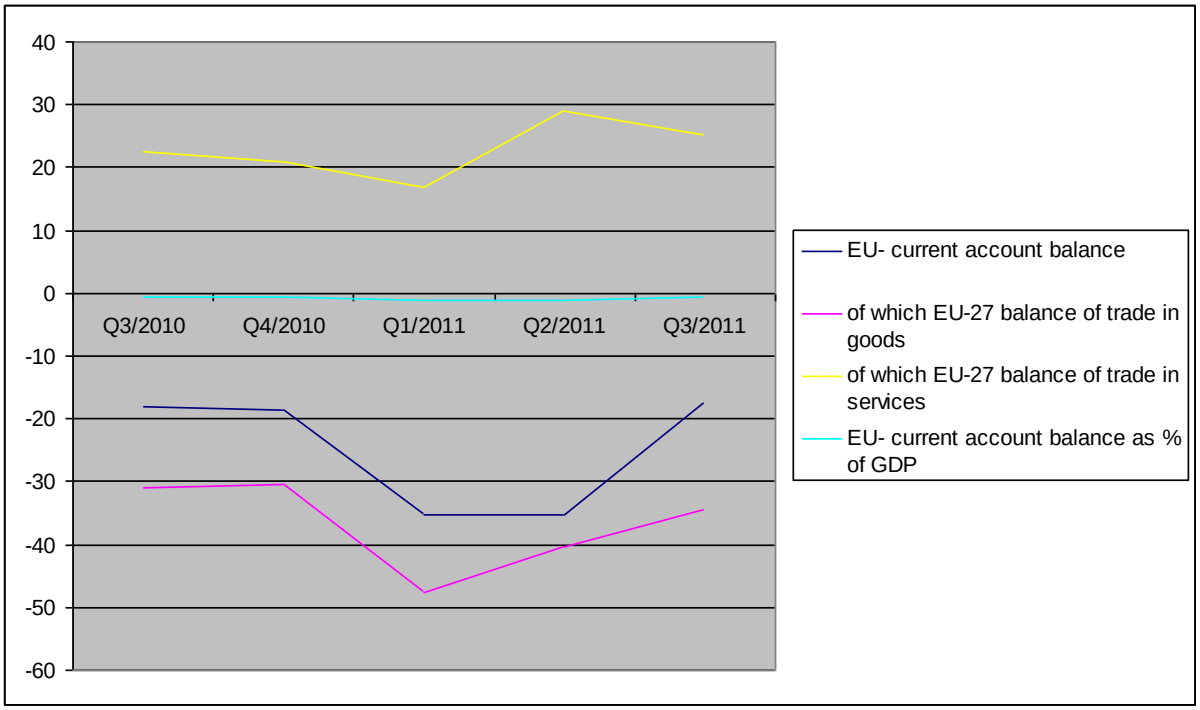
Because the EU-27 current account balance has been at very low level only for two quarters, namely in Q1/2011 and Q2/2011 at the first half of 2011 and EU-27 balance of trade in services could have been almost over the 20 billion Euro in Q2/2011 and Q3/2011, the EU-27 current account balance as in % of GDP was about -1% of GDP or between -0,5% and -1% in EU-27 at zero line of the Figure-4-1-1. This trend also was going on mostly in 2012 (see Figure-4-1-1). Naturally this moderately negative EU-27 current account balance in GDP could not eliminate or delete the considerable and sometimes increasing gap between member states in GDP per capita, which was from 44% to 271% of the EU-27 average by the beginning of 2011 (EUROSTAT, 2011).

According to the latest data, also the state debt in EU-27 made considerable influences on current account balance in GDP, namely the *state debt of EU-27* increased from *85,2% in Q1/2013* to 85,9% in Q2/2013 at present year, while the state debt of EU-27 was 88,3% of

GDP in *Q1/2012*. This means that the state debt moderately decreased by 3,1% within a year in EU-27, which shows that the EU-27 could decrease the negative governmental budget and negative balance of trade in goods. In EU-27 the biggest state debt was 160,5% in Greek, 130,3% in Italy, 125,1% in Portugal, 125,1% in Ireland, 82,4% in Hungary by the end of Q2/2013. In the same time the lowest level of state debt was 10% in Estonia, 18% in Bulgaria, and 22,4% in Luxemburg (EUROSTAT, 2013).

According to data base the *EU-17 EA, Euro area, current account balance* was considerable favourable generally than the *EU-27 current account balance*. In EU-17 *current account balance* has started to be negative by -7,1 billion euro since Q3/2010, which became positive by 3,4 billion euro in Q4/2010, much better than in EU-27, where this was -18,7 billion euro in the same time. Naturally the unfavourable world economic conditions affected by US economic decline, both of regions, EU-27 and EU-17 the current account balance was deep in Q1 and Q2/2011, but in EU-27 this was much deeper -35,2 billion euro, while the EU-17 current account balance has become better consequently form -30,2 to -11,7 billion euro for the period of Q1-Q3/2011 (see Table-4-1-1 and Table-4-1-2).

Figure 4-1-1. Balance of payments in the EU-27 in Q3/2010 –Q3/2011 in billion Euro



Source: EUROSTAT, 2011 December, Brussels

Note:

The *current account* shows flows of goods, services, income and current transfers between resident and non-resident entities. More specifically, the four main components of the current account are defined as follows:

The *goods* account covers general merchandise, goods for processing, repairs on goods, goods procured in ports by carriers and non-monetary gold. Exports and imports of goods are recorded on a f.o.b./f.o.b. basis, i.e. at market value at the customs frontiers of exporting economies, including charges for insurance and transport services up to the frontier of the exporting country.

The *services* account consists of the following items: *transportation* services performed by EU residents for non-EU residents, or vice versa, involving the carriage of passengers, the movement of goods, rentals of carriers with crew and related supporting and auxiliary

services, *travel*, which includes primarily the goods and services EU travellers acquire from non-EU residents, or vice versa, and *other services*, which comprise those service transactions such as communication services, insurance, financial services etc.

The *income* account covers two types of transactions: *compensation of employees* paid to non-resident workers or received from non-resident employers, and *investment income* accrued on external financial assets and liabilities.
The *current transfers* account includes *general government current transfers*, e.g. transfers related to international co-operation between governments, payments of current taxes on income and wealth, etc., and *other current transfers*, e.g. workers' remittances, insurance premiums - less service charges - and claims on non-life insurance companies.

The reason of the more decline of current account balance of EU-27 came from the EU-27 negative balance of trade in goods, which was very considerable, as -31,1 in Q3/2010. Naturally the negative balance of trade in goods was at deepest level -47,5 in Q1/2011 and -40,3 billion euro in Q2/2011. This negative balance of trade in goods was stimulated by the strong unfavourable external trade structure, in which share of the import of primary goods, at first the energy and different other manufactured goods was considerable. This negative balance of trade in goods also was resulted by increasing inhabitant diversified consumption in EU-27, mostly in highly developed part of EU-27, and continuous negative balance of trade in goods in EU-27, in which there are mostly Baltic and Balkans regions.

The inhabitant diversified consumption in highly developed part of EU-27 focuses on the energy consumption and electric machines at house consumption level, which accord to every day life standard of population. In less developed member states of EU-27, almost in Baltic and Balkans regions, the food import plays considerable role in house consumption, where the share of food consumption was about between 25-30% in all consumption in value by the beginning of 2010s. It seems that this trend will not change to turn less share of this one for the near future.

The EU-27 balance of trade in services was positive, so considerably higher than positive balance of trade in services EU-17 Euro area. In this field the positive balance of trade in services was lowest level in Q1/2011 either in EU-27 or EU-17, but also it remained positive in spite that the unfavourable world economic decline was in this period. In EU-27 recently

the *other current transfers* have more considerable role in consequence of free flow of human resources, when the visiting workers and employees send part of their salary, as remittance to their homeland member state. This means that the free flow of human resources stimulates free flow of workers' remittance as a part of capital's free flow among member states. This workers' remittance has been stronger among former and new member states to strengthen the balance of current account in EU-27.

Table 4-1-1: Balance of payments euro-indicators for the EU27 in Q3/2010-Q3/2011 in billion Euro

(in billion euro)	**Q3/2010**	**Q4/2010**	**Q1/2011**	**Q2/2011**	**Q3/2011**
EU27 current account balance	-18.1	-18.7	-35.2	-35.2	-17.2
of which EU27 balance of trade in goods	-31.1	-30.5	-47.5	-40.3	-34.5
of which EU27 balance of trade in services	22.6	20.9	17.0	28.9	25.1
EU27 current account balance as % of GDP	-0.6%	-0.6%	-1.1%	-1.1%	-0.5%

Source: EUROSTAT, Brussels, 2012

The EU27 includes Belgium, Bulgaria, the Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden and the United Kingdom.

Table 4-1-2: Balance of payments euro-indicators for the euro area (EA17) in Q3/2010-Q3/2011 in billion Euro

(in billion euro)	**Q3/2010**	**Q4/2010**	**Q1/2011**	**Q2/2011**	**Q3/2011**
Euro area current account balance	-7.1	3.4	-30.2	-20.8	-11.7
of which euro area balance of trade in goods	5.5	5.5	-13.0	-2.7	1.0
of which euro area balance of trade in services	16.1	10.5	7.0	17.5	15.4
Euro area current account balance as % of GDP	-0.3%	0.1%	-1.3%	-0.9%	-0.5%

Source: EUROSTAT, Brussels, 2012; European Central Bank, Frankfurt, 2012

Note:

In line with the agreed allocation of responsibility, the European Central Bank (ECB) (www.ecb.int, section statistics/statistical press releases) is in charge of compiling and disseminating monthly and quarterly balance of payments statistics for the euro area, whereas the European Commission (Eurostat) focuses on quarterly and annual aggregates of the EU. The data comply with international standards, in particular those set out in the IMF Manual on Balance of Payments Statistics (5th edition). The aggregates for the euro area and the EU are compiled consistently on the basis of Member States' transactions with residents of countries outside the euro area and the European Union respectively.

The euro area (EA17) consists of Belgium, Germany, Ireland, Greece, Estonia, Spain, France, Italy, Cyprus, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland.

The World Bank declared that Hungarian workers sent their remittance from other EU member state to home, their families' members, namely 292 million dollar in 2003; and 1,717 billion dollar in 2004 in the first year when Hungary became member state. In 2013 until October the remittance of Hungarian workers was 2,403 billion dollar equally to 1,8% of Hungarian GDP. The share of remittance in GDP of other nations was 2,1% of GDP in Romania and Slovakia, 1,4% in Poland, 1% of GDP in Czech Republic. The most of their remittance was sent into EU-27. 4,6% of all Hungarian population immigrated abroad, mostly

to Germany and UK (World Bank Report, 2013). Luxemburg has very considerable remittances of workers employed in neighbouring EU member states.

The basic data of Table-4-1-1 and Table-4-1-2 show that the EU-27 consequently try to keep the negative balance of current account within amount of 1% of EU-GDP, which was mostly successful, except in Q1/2011, when it was -1,3% of GDP in EU-17 Euro area, and in Q1/2011 and Q2/2011, when both of periods, quarter years the deficit was 1,1% of GDP in EU-27. This negative balance was affected by the world economic decline. Additionally to the state debt also the financial issues and business plans of big companies and trans-national corporations have become considerable to create stabile balance of EU-27 current account and balance of trade in goods, also balance of trade in services (see in detailed in Laskai, A – Zéman, Z, 2013, pp. 16-17).

Naturally the increasing state debt of member states made wrong for current account balance of EU-27, emphasizing the negative role of Greece, Italy and Portugal in EU-17 Euro area, and also UK and Balkan member states in EU-27. Mostly the state debt of member states was resulted by over spending and creating considerable negative balance of fiscal budget of Governments. The top negative balance of fiscal deficit was 543% of GDP of UK in 2012. In a fact this large amount of state debt in UK let to close UK to become member of EU Euro area (World Bank Report, 2013).

The negative *balance of external trade* in main product EU-27 non-seasonally was –130,9 billion euro by the end of September 2011, which stimulated to increase the EU-27 current account deficit. The increasing trend in negative balance of trade in products occurred in case of EU-27 almost after the beginning of the world economic crisis. This trend depends on the increasing energy demands of EU-27, which can be seen from the import structure in the foreign trade. The biggest shares of the import belonging to the EU-27 were the energy, namely 355,6 billion Euro, and the other session of imported products were machinery, namely 326,0 billion Euro in Jan-Sept-2011, share of both of them was 54,2% of EU-27 import in goods.

In spite that the EU-27 had considerable manufactured products in its export, namely 475,0 billion Euro in Jan-Sept-2011, finally the negative balance of foreign trade was -130,9 billion Euro. This means that the energy dependence has continuously became very considerable also

for the last decade. The main energy original countries for the EU-27 are Russia, Middle East countries (OPEC) and somehow Norway (see Table-4-1-3, Table-4-1-6). One quarter of the total fossil energy import of EU-27 originally came from Russia. This event pressed the leaders of EU to create more diversified import resources of fossil energy.

The EU wants to compensate the large amount of fossil energy import by increasing the role of renewal energy resources – like water, electricity, solar energy, wind and geothermic energy resources. Also the EU increased the share of atom energy use from all energy resources, for example Germany and France have increased mostly the nuclear energy resource. Naturally imported manufactured products also should be decreased in order to keep the positive balance of foreign trade of the EU. In this case the EU should decrease their imported light industrial – manufactured products from China. The EU has negative balance of foreign trade with China, which was -118,0 billion Euro in Jan-Sept-2011, which almost closely equally with the total negative balance of foreign trade belonging to EU-27 (EUROSTAT, 2011, 2012).

The EU-27 has considerable manufactured product export, in which the machinery and vehicles have the biggest share in EU export, namely 42,1% in Jan-Sept-2011, and the chemical products have share of all EU export, namely 16,7%. The EU-27 remained one of the biggest food and drink exporters on the world market by their food import equally to 64 billon Euro in Jan-Sept-2011. Also their food and drink import became more than their export in this kind of product-group. The reason of this considerable food-import share goes to the Uruguay Round negotiation, in which the EU made possibility for food importers of the world market to get their share, as 5% of all EU food – agricultural domestic consumption, in stead of earlier 3%. They can send food-agricultural import to the EU single market without import duty equally to 5% of EU food – agricultural single market demands (see Table-4-1-3).

Table 4-1-3. Main products – EU-27 – Exports and Imports and Trade balance non-seasonally adjusted data in January-September/2010 – January-September/2011 in billion Euro

	EU-27 Exports			**EU-27 Imports**			**Trade Balance**	
	Jan-Sept 10	*Jan-Sept 11*	*Growth, %*	*Jan-Sept 10*	*Jan-Sept 11*	*Growth, %*	*Jan-Sept 10*	*Jan-Sept 11*
Primary goods	**138,4**	**172,1**	***24***	**388,3**	**488,8**	***26***	**-249,9**	**-316,7**
Food, drink	54,3	64,0	*18*	58,6	67,8	*16*	-4,3	-3,8
Raw materials	27,8	33,4	*20*	51,9	65,4	*26*	-24,0	-32,0
Energy	56,2	74,7	*33*	277,9	355,6	*28*	-221,6	-280,9
Manufactured Goods	**815,3**	**925,2**	***13***	**694,3**	**746,7**	***8***	**121,0**	**178,5**
Chemicals	175,7	188,2	*7*	102,3	115,2	*13*	73,3	73,0
Machinery, vehicles	411,5	475,0	*15*	322,7	326,0	*1*	88,7	149,0
Other manufactured goods	228,1	262,0	*15*	269,2	305,6	*13*	-41,1	-43,6
Other	**28,5**	**29,4**	***3***	**21,0**	**22,1**	***6***	**7,5**	**7,3**
Total	**982,1**	**1126,8**	***15***	**1 103,5**	**1 257,7**	***14***	**-121,4**	**-130,9**

Source: EUROSTAT, 2011 December, Brussels

There is an important character of EU-27 foreign trade in goods, in which the internal trade within EU-27 between EU member states had share as 65,34% of all EU-27 foreign trade, and other remain share as 34,66% became out of EU member states. Foreign trade in goods between member states has been over than 60% for longer time period, which shows how

much economic and trade contacts are very strongly to strengthen the economic integration connection between member states (see Table-4-1-3 and Table-4-1-6).

The Table-4-1-4 shows the *main foreign trading partner countries of EU-27*, and no seasonally adjusted data in billion euro. The data base clearly show, how the EU became dependent on the mostly fossil energy resources imported from *Russia* as the second biggest importer of EU, and *Norway* as the fourth biggest importer of EU in 2011. Also the EU has considerable negative foreign trade deficit with this two countries. This shows that EU has such energy use structure, which sets up first fossil one, and share of their renewal energy resource use has not been so considerable yet. EU-27 import only within one year in 2011 comparably in 2010 increased by 26% from Russia, because of intensive increasing fossil energy resources in EU. At present the 25% of all energy resource used by EU-27 came from Russia.

Chinese Peoples' Republic has a considerable export oriented strategy by intensively increasing export also to the EU with large share of manufactured products. This export oriented strategy of Chine is based on the low cost level of human resources and enough large number of exported products to keep their market price at low level even on the world market. In case of the *US* the EU-27 has a very considerable positive balance of *extra-EU trade (out of EU-27)* with US, which is based on the diversified export structure of EU-27 to direction of US. Also this export structure is consisting of highly developed, qualified and highly value added products, as manufactured products into US. This resulted by the diversified and qualified consumption structure of consumers in US, mainly home machines, dresses, and cars. The US consumers need for cars less using fuel, electric equipment in houses.

The EU-27 has some main difficulties in *foreign trade with USA*, namely the EU transnational corporations and large companies have not built satisfactory measured product channels and ware house networks for selling final products in USA yet. The EU companies sold considerable licences and know-how for American companies in US to produce common final products, which stimulate the import to EU-27. Also the partly-product export from EU-27 to USA is considerable, which does not change export structure enough to be favourable for EU-27. In spite that the final products and manufactured machine products also have considerable share in EU export to USA; and balance of trade with US is positive, but this last one

accumulates the American state debt from year to year and not goes to create a moderate balance of foreign trade between USA and EU.

Table 4-1-4. Main trading partners – EU27 - Exports and Imports and Trade balance non-seasonally adjusted data in January-September/2010 – January-September/2011 billion euro

	EU27 exports to			**EU27 imports from**			**Trade balance**	
	Jan-Sep 10	Jan-Sep 11	*Growth*	Jan-Sep 10	Jan-Sep 11	*Growth*	Jan-Sep 10	Jan-Sep 11
United States	178.0	191.9	*8%*	125.7	136.7	*9%*	52.4	55.1
China	82.2	99.6	*21%*	204.8	217.6	*6%*	-122.6	-118.0
Russia	61.0	79.0	*29%*	117.1	146.9	*26%*	-56.1	-67.9
Switzerland	76.1	89.7	*18%*	61.9	68.4	*11%*	14.2	21.2
Norway	30.6	34.6	*13%*	57.6	70.3	*22%*	-26.9	-35.6
Turkey	43.9	55.4	*26%*	31.0	35.9	*16%*	12.9	19.5
Japan	32.0	35.6	*11%*	48.8	50.7	*4%*	-16.7	-15.1
India	25.1	30.1	*20%*	24.6	30.0	*22%*	0.5	0.1
Brazil	23.4	26.2	*12%*	23.8	29.1	*22%*	-0.5	-2.9
South Korea	20.4	23.8	*16%*	29.6	27.0	*-9%*	-9.2	-3.3

Source: EUROSTAT, 2011 December, Brussels

About 38,5% of all extra-EU export goes to several main highly developed countries in period of January-September of 2010, and 38,2% was in January-September of 2011. While the all extra-EU import was 37% of EU-27 in January-September 2010 and 2011(see Table-4-1-4). The other important country, as the fifth biggest importer, external partner of EU was *Switzerland*. In spite that this is a small economy, this has considerable national purchasing power capacity market for looking for even expensive imported highly developed and value added products. The import coming from Switzerland is some value added food products and some other manufactured products for personal consumptions. In case of Switzerland there is a considerable re-export foreign trade with EU-27.

Companies of Switzerland export a lot of sub-manufactured products to EU to produce final products, which are sent back to Switzerland. After that the Switzerland companies can again export to EU cheaper final products comparably than if these companies had produced final products in their homeland. The re-export of Switzerland is resulted by highly cost level of human resources, because in EU cost level of labour forces much cheaper than in Switzerland. The re-export system with Switzerland makes somehow highly value foreign trade with EU-27. The export of the EU-27 to Switzerland increased by 18% within a year, while the import increased by less growth, as 11% also in the same period (see Table-4-1-4).

Japan is a traditional main-trading partner country of EU-27, which has also considerable domestic purchasing power capacity market, but inhabitants of Japan are saving their salary in banks. This led to an intensive capital outflow of Japan mainly to US, Chine and South Korea. This is resulted in less import from the EU-27. The other reason of less import of EU-27 is that Japan is fossil energy resource importer, as same as the EU-27 also fossil energy resource importer, which does not make more possibility for increasing EU export to Japan. Japan increased his import of mostly fossil energy from Russia. All reasons resulted that EU-27 export was two times more to Switzerland than to Japan, also EU-27 export was little be more to Switzerland than to Russia in 2011. In spite that population of Switzerland is about 4 million people and once of Japan is about 160 million inhabitants (see Table-4-1-4).

The Table-4-1-5 shows member states' total trade (intra-EU + extra-EU) - non seasonally adjusted data in billion euro. It can be emphasized that during two years 2010 and 2011 the EU-27 had the same growth rate of total export and total import, namely about 13%. In the same period the trade balance remained at level of 60,5 billion euro, which seems as somehow favourable. But the total original foreign trade was not so favourable in fact based on data of intra-EU trade balance (out of EU), namely negative balance of foreign trade 121,4 in 2010 and also negative one 130,9 billion euro in 2011 (Table-4-1-3 and Table-4-1-6). Any negative balance of trade among EU member states cannot be calculated into the intra-EU foreign trade (out of EU).

Generally seven EU member states, namely Germany, Netherlands, France, Italy, Belgium, United Kingdom and Spain in list based on the volume of their total exports in 2010-2011. The total export of these seven member states was 2140,9 billion euro in period of the first

nine months of 2010 and 2405,7 billion euro in period of the first nine months of 2011. Their share of total exports of EU-27 was 75,3% and 74,6% in period of the first nine months of 2010 and 2011. The other part of the total exports was distributed to other 20 member states.

This large share of seven member states in total export of EU-27 shows their considerable economic importance for all EU. In general the share of seven member states is same in total imports of EU-27, which was also 75% either in period of the first nine months of 2010 or 2011. The value of seven member states' total imports was 2179,7 billion euro in 2010 and 2460,6 billion euro in 2011 (data based on Table-4-1-5). Germany has a considerable share of total exports of EU-27, which was 24,5% in 2010-2011, and also Germany has share of total imports, as about 20,4% in the same time (see Table-4-1-5). Germany plays main role to strengthen the economic conditions and total trade of EU-27, in order that EU-27 can tray to realise their competitive advantages in the competition on the world market and in EU single market.

The *competitive advantages* are built up the *consequent innovation* developing investments. The innovation development is the basic essence either for competitive advantages or *sustainable economic growth*. The sustainable economic growth is needed for creating the fixed social and economic activities and also this means that the companies, firms and corporations are efficiently working with ensuring adequate *tax-incomes* for governmental budget. Also within this kind of economic growth, firms can ensure jobs for employees based on paying *salary* for their survival and acceptable life standard. Also competitive economic activities of firms provide *price income* for themselves to realise their future efficient and competitive production process based on innovation development.

Successful firms can develop this innovation based on environment friendly advanced technology. The real sustainable economic growth can be going on from point of view of environment strategy either at firm level or national economic level. This means that the sustainable economic growth can be extending based on the competitive and profitable production process with environmental strategy and environmental economic principles at firm and national economic levels.

For the future the sustainable economic growth of the EU-27 can be strengthened by different elements, which are as follows:

.- Develop the *innovation* to increase the production efficiency, *international competitiveness* either on the world market or national market, increase the export of highly developed inputs and outputs based on the *export orientation* conceptions.

.- EU-27 should be *net exporter*, in any time their balance of all foreign – extra-EU – trade, out of EU, should be positive.

.- *Capital accumulation* even with decreasing the national domestic consumption, saving capital of populations in banks, increase the credit stock possibility for firms to extent their production based on qualified demands of the world market.

.- The future innovation development should follow the *environment friendly strategy* at firm and national levels.

.- The *qualified demands* should be relevant to *environment friendly strategy* and to be realised in production of inputs and outputs at world economic level.

.- The energy consumption should transfer from using fossil energy resource to *renewal energy resources.*

Table 4-1-5. Member States' total trade (intra-EU + extra-EU + trade balance) - non seasonally adjusted data in January-September/2010 – January-September/2011 in billion euro

	Total exports			Total imports			Trade balance	
	Jan-Sep 10	Jan-Sep 11	*Growth*	Jan-Sep 10	Jan-Sep 11	*Growth*	Jan-Sep 10	Jan-Sep 11
Belgium	228,8	258,5	*13%*	217,6	250,3	*15%*	11.2	8.2
Bulgaria	11,2	15,0	*33%*	13,6	16,6	*22%*	-2.4	-1.7
Czech Republic	72,7	87,0	*20%*	68,9	81,5	*18%*	3.8	5.5
Denmark	54,3	60,9	*12%*	47,0	52,4	*11%*	7.3	8.5
Germany	695,7	790,1	*14%*	582,4	672,2	*15%*	113.3	117.9
Estonia	6,1	9,0	*47%*	6,6	9,5	*44%*	-0.5	-0.5
Ireland	65,6	68,3	*4%*	33,8	35,9	*6%*	31.7	32.4
Greece	11,2	15,9	*42%*	36,3	29,1	*-20%*	-25.1	-13.2
Spain	139,3	156,7	*12%*	180,3	193,4	*7%*	-41.0	-36.7
France	291,1	317,9	*9%*	338,2	383,7	*13%*	-47.1	-65.8
Italy	246,5	279,7	*13%*	267,5	302,9	*13%*	-21.0	-23.1
Cyprus	0,8	1,0	*27%*	4,7	4,7	*0%*	-3.9	-3.7
Latvia	5,1	6,8	*33%*	6,2	8,3	*33%*	-1.1	-1.4
Lithuania	11,0	14,9	*35%*	12,5	16,7	*34%*	-1.5	-1.9
Luxembourg	10,9	11,7	*7%*	13,8	15,0	*9%*	-2.9	-3.3
Hungary	52,2	60,1	*15%*	48,3	54,7	*13%*	3.9	5.5
Malta	1,4	2,0	*46%*	2,3	2,8	*19%*	-1.0	-0.8
Netherlands	315,7	353,1	*12%*	284,1	320,3	*13%*	31.6	32.8
Austria	83,8	95,2	*14%*	87,4	101,8	*17%*	-3.5	-6.6
Poland	88,9	100,5	*13%*	97,9	111,3	*14%*	-9.1	-10.8
Portugal	27,0	31,4	*16%*	41,7	43,8	*5%*	-14.7	-12.4
Romania	26,9	33,5	*25%*	33,9	40,4	*19%*	-7.0	-6.9
Slovenia	16,0	18,7	*16%*	16,4	19,0	*16%*	-0.3	-0.3
Slovakia	34,9	41,8	*20%*	34,9	41,0	*17%*	0.0	0.9
Finland	37,2	42,5	*14%*	37,5	44,5	*19%*	-0.3	-2.0
Sweden	86,2	101,3	*18%*	81,3	94,1	*16%*	4.9	7.2
United Kingdom	223,8	249,7	*12%*	309,8	337,8	*9%*	-86.1	-88.1
Total	2844,3	3223,2	*13,32%*	2904,9	3283,7	*13,0%*	-60,6	-60,5

Source: EUROSTAT, 2011 December, Brussels

Table 4-1-6. Total trade (intra-EU + extra-EU) in EU-27 – non seasonally adjusted data in January-September/2010 – January-September/2011 in billion Euro

	Total Export				**Total Import**			
	Jan-Sept 2010	Jan-Sept 2011	*In % 2010*	*In % 2011*	Jan-Sept 2010	Jan-Sept 2011	*In % 2010*	*In % 2011*
Trade inside of EU-27	1862,2	2123,4	*65,47*	*65,05*	1801,4	2026,0	*62,02*	*61,7*
Trade out of EU-27	982,1	1126,8	*34,53*	*34,95*	1 103,5	1 257,7	*37,98*	*38,3*
Total Trade	**2844,3**	**3223,2**	***100,0***	***100,0***	**2904,9**	**3283,7**	***100,0***	***100,0***

Source: EUROSTAT, 2011, 2012, December, Brussels

.- First the EU-27 should realise the *competitive and efficient production* and then they can realise new technological development based on the environment friendly development. Therefore this last one needs for adequate enough price income at firm level and by through of firm taxes to governmental budget, the national government provides *supports to develop innovation based on the environment friendly technology*.

.- Use renewal energy resources needs for *costly innovation*, which partly should be covered by governmental supports.

.- Innovation should be based on the *preventing* the pollution in natural environment and *cleaning* technology to withdrawal pollution from the nature environment.

.- The environment friendly innovation should also be available for *SMEs* (small and medium scale enterprises).

There are strong correlations between foreign trade balance and current account balance of EU-27 from point of view of sustainable economic growth and environment friendly development, which can be described based on the SWOT analysis, which are as follows:

Sustainable economic growth based on SWOT analysis in EU-27

Strengthen

There is an important character of EU-27 foreign trade in goods, in which the internal trade within EU-27 between EU member states had share as 65,34% of all EU-27 total export from foreign trade, and other remain share as 34,66% became out of EU member states in Jan-Sept-2011. Also the share of all EU-27 total import in goods was 61,7% between EU member states in Jan-Sept-2011. The government can help the small and medium scale private enterprises (SMEs) from the tax-revenue system of governmental budget. From this point of view the strong Government is needed based on the possibly positive balance of fiscal budget in order that Government could help SMEs and their introducing steps into setting up their economic – business activities. Almost the *strongest EU member states* participate in Euro area, which can strengthen the current account balance. In EU-17 Euro area the balance of trade in goods better than in EU-27, but less balance of trade in service than in EU-27.

Weakness

Large dependence of EU-27 is on imported fossil energy resources, expensive input of EU-27 production leading highly level output price with less international competitiveness.

.- The EU-27 the energy consumption increase;
.- Slowly restructuring of the energy consumption from fossil energy resource to renewal one. Also this energy restructures needs for considerable new technology used based on renewal energy resources;
.- The innovation and highly developed technology growth is not completely in all EU-27.

The *centre – periphery conditions* remains an increasing gap between economic and technologic developed levels of EU member states. This increasing gap makes difficulties for harmonizing between rates of different currencies of EU-27, and results in more weakness for the common EU currency, namely euro, also makes difficulty to introduce euro in other member states out of EU euro area. Also the common EU currency, as euro can be much weaker in consequence of *negative balance of Euro area current account* even in case of each member state, for example Greece, Italy and Portugal.

Opportunity

Increasing foreign investment activities in EU-27 and foreign companies increase foreign trade exports to create possibly wider employment. The foreign direct investment (FDI) can be favourable for the domestic economic growth in EU-27. Considerable large part of the world market can demand for highly qualified developed products coming from EU-27, even in developing countries, as Chine, India and Brazil. In these economies there is a middle class with considerable purchasing power capacity.

Threaten

From point of view of output: the imported non-qualified of cheap products – for example from China – can make negative influences on increasing negative balance of trade of EU-27 in goods. Sometimes this FDI can be resulted in the increasing negative EU-27 balance of trade in goods within trans-national corporations, but cross borders of EU-27 and the third economy. The transnational corporations creating FDI stimulate cross border foreign trade among EU-27 and countries out of EU within a transnational scheme.

The developing country-members of G-20 economy-group, first Chine realises such innovation based on the mainly non-environment friendly technological development. Chine uses mainly fossil energy resources for their innovation concerning partly less highly developed process. China could realise highly positive balance of foreign trade with the EU-27, which was partly resulted by cheap Chinese products based on cheaper labour forces. The China's labour force was caused by poor costly human resources and less payment for social security including pension and health-care than this is at the world economic level. From point of view of Chinese cheap labour forces, this one contributed to create comparative advantages for Chinese exporter companies in foreign trade with EU-27.

Naturally China could harmonize or mix the highly developed advanced technologies and less developed or traditional technologies based on fossil energy resource use. Also the same harmonisation was realised in field of highly developed, educated or less developed human

resources. This harmonization led the Chinese products to be competitive either on markets demanding qualified advanced final products or less qualified one. This means that the Chinese producers and their products could become very flexible for different demands of the world market, even if the market demands were very sharply different. Chinese economy has a very strengthen, namely they can produce large amount of products even at highly developed level, because the Chinese economy could concentrate production process based on strong accumulation of input use. All of these strengthens belonging to Chine could become negative or threaten for foreign trade of EU-27 in goods.

Finally it can be mentioned that the EU-27 balance of trade in goods has been negative for the last years, which could increase EU-27 current account deficit leading to devaluate the common currency Euro, but the internal EU-27 trade in goods is very strongly considerable, namely over 60% either in export or in import. Also the EU-27 balance of trade in services has continuously been very active for long time, which balances not too considerable negative balance of EU-27 trade in goods (see Table-4-1-2). This foreign trade deficit of EU-27 in goods is resulted by not the EU economic weakness, but the EU's one side dependence on foreign imported fossil energy resource and the cheap Chinese light industrial products. The fossil energy import does not impact on the employment issue in EU, but cheap Chinese light industrial products make dangerous for the light industry of EU and its employment conditions (see Table-4-1-2).

According to the sustainable economic growth the following analyses are based on the SPSS with main 8 different statistical fields, as components between 2005-2014: These statistical fields mentioned before, namely Total unemployment rate in % (UnEmploy2014); GDP and main components – volumes (GDPVol2014); HICP - inflation rate (HICP: Harmonised index of consumer prices, HICPan2014); General government gross debt (GovDebt2014); Expenditure on social protection (SocProt2014); Lifelong learning in %, Total (LLearn2014); People at risk of poverty or social exclusion by age and sex (RiskPov2014); Real GDP per capita, growth rate and totals (GDPCap2014). The analyse would like to clear the economic development process of EU-28 from 2005 to 2014 with some correlation compares among EU-28 member states and some other countries out of the EU, for example Turkey, Saudi Arabia, Egypt and Algeria. Some MENA countries are playing important role in economic connections between EU and MENA region, which also includes the European

Neighbourhood Policy region, which also contents some other Arab countries. In this part of the Dissertation the EU extended with Croatia to 28 member states.

4. 2. Employment conditions of the EU

Introduction

The chapter analyses the main economic conditions of the EU from points of view of emphasizing employment issues, GDP per capita and AIC (Actual Individual Consumption) per capita. The world economic crisis presses mostly Mediterranean member states of EU-27, for example Italy, Greek, Spain and Portugal, where the unemployment rate was 22,3% in Spain, 21% in Greek, 22-23% in Portugal, 8,6% in Italy, but mainly in south part of Italy the unemployment rate was 20-21% in the first half of 2012 (EUROSTAT, 2012a).

In EU-27 the unemployment rate has sharply increased from level of 6,1% since the beginning of 2008, beginning of the world economic crisis to 8,8% till the end of 2010, after that this increased to 9,8% by the end of 2011 (ILO, 2011, EUROSTAT, 2012b; IMF, 2010a). The case study analyses the impacts of the world economic crisis on the unemployment rate in EU-27. Some experts emphasized that unemployment rate can be decreased in EU by through of increasing investment activities of foreign direct investments and supports given by foreign corporations and the EU common regional policy.

Employment developing process in EU

The unemployment rate sharply increased even in Mediterranean regions of the EU and other part of the highly developed world, for example USA and Canada, Japan, Australia. The other difficulty on the labour market is extending part-time employment instead of full time employment, which can be resulted in narrowing purchasing power standard (PPS), (IMF, 2010b).

The solution for economic difficulties are to increase the jobs to decrease unemployment rate of EU-27, even decrease the youth unemployment rate, increase level of skill and knowledge for managers and employees. The increasing employment rate impacts for increasing the purchase power standard, which increases the single market demands. The study uses the SWOT analysis based on the employment issue to discover reasons for increasing unemployment rate emphasizing the youth unemployment conditions in EU-27, after the

world economic crisis and the possible solutions by stimulating investment activities. The EU-27 would like to use more private capital of EU and foreign capital from China, US and Middle East Arab countries within Foreign Direct Investment (FDI) scheme.

There are two kinds of indicator figures, namely the GDP per capita and Actual Individual Consumption (AIC) per capita, which can also determine differences among member states from point of view of consumption. The GDP per capita as a general figure concerns the all produced products and services averagely per capita, which is not real consumption in fact. But the other one, namely AIC is exact data to determine the real consumption per capita and also to reflect the real economic conditions of inhabitant based on the purchasing power standard (PPS) – (see Table-4-2-1).

Since the beginning of 2008 the AIC has moderately decreased in some less developed member states of the EU-27 in consequence of the world economic crisis, when the consumption of population decreased based on their declining PPS. These member states are for example Baltic countries, as Estonia, Lithuania, Latvia and Balkan countries, as Romania, Bulgaria, Mediterranean countries, as Spain, Cyprus, which can be mentioned, but additionally to these countries Poland had some increasing AIC, but under the average level of EU-27 after the world economic crisis, 2008. Almost in highly developed member states of the EU-27 the AIC per capita has little increased for three year –period, for example in Germany, France, Finland and Austria (see Table-4-2-1), because their economies were less influenced by the world economic crisis.

Their employees are more efficient human resources in these countries and in consequence of these economic conditions they as consumers have also higher level of PPS than the other member states of the EU. Luxembourg has highest level of AIC per capita resulted by visiting workers of Luxembourg in neighbouring EU member states, who can send considerable part of their salary to their home member state. Almost member states can be influenced by the economic crisis, but these measures are very different as it can be experienced for example in data of AIC per capita in EU-27 (see Table-4-2-1).

The *unemployment rate* can show how the economic activities can fluctuate in EU-27, which can consequently lead to decrease output of firms and decreasing consumption trend of consumers based on decreasing the AIC per capita. Naturally the decreasing output of firms

can decrease the export volume and by through decreasing export they can decrease the positive balance of EU-27 current account. According to the Table-4-2-2 the data base show the *first best six member states in field of less unemployment rate* than the other member sates by the end of November in 2011. These member states, as Austria, where the unemployment rate was 4,0%, in Netherlands 4,9%, in Luxemburg 4,9%, in Germany 5,5%, in Malta 6,4% and in Czech Republic 6,7%. The except was Luxemburg, where the unemployment rate increased by 0,2% between November, 2010 and November, 2011.

The unemployment rate of Luxemburg is very sensitivity from the economic fluctuation of neighbouring economies, because many of national employees of Luxemburg go abroad for obtaining jobs. These employees frequently send considerable part of their salary to their homeland, which contribute to the annual GDP of Luxemburg. In Luxemburg the economic and geographic conditions are not so favourably, which stimulate the intensive flow of national employees abroad to obtain jobs. These six member states have very strong economic cooperation among themselves and their economies are neighbours except Malta. These member states have intensive economic growth with well managed economic conditions at levels of national economics and firms accompanying with export oriented economic strategy to make a positive balance of foreign trade and currant account balance, also stronger Euro exchange rate.

Germany can keep the moderate fast economic growth and consequently decreasing level of unemployment. Also the innovation developing process is more ambition and attractive here than other EU member states. Also the German economy has considerable positive influences on the other four neighbouring economies including Czech Republic. Czech Republic is only one of five member states, which are in the Central East European, and also the new EU member state. Manly these neighbouring member states have a strong work separation and mostly their intensive economic depend on the national conditions of Germany.

Table 4-2-1. Actual Individual Consumption (AIC) in PPS, in several EU member states in 2008-2010 in %

Member States	**AIC per capita**		
	2008	*2009*	*2010*
EU-27	***100%***		
Luxembourg	151	153	150
Austria	113	115	116
Germany	**113**	**116**	**117**
Finland	110	110	111
France	111	113	113
Spain	**99**	**95**	**95**
Cyprus	108	101	103
Estonia	64	58	57
Poland	**61**	**64**	**66**
Lithuania	70	63	61
Latvia	59	50	50
Romania	**49**	**46**	**45**
Bulgaria	45	43	42

Source: EUROSTAT, 2011 December, Brussels

Table 4-2-2. Seasonally adjusted unemployment rates (%) Totals in Nov/2010-Nov/2011 in EU-27 in %

	Nov 2010	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011
EA-17	**10.0**	**10.0**	**10.0**	**10.1**	**10.1**	**10.2**	**10.3**	**10.3**
EU-27	**9.6**	**9.5**	**9.5**	**9.6**	**9.7**	**9.8**	**9.8**	**9.8**
BE	7.9	7.1	7.2	7.3	7.4	7.4	7.3	**7.2**
BG	11.5	11.2	11.2	11.1	11.0	10.9	10.8	**10.9**
CZ	6.9	6.9	6.8	6.7	6.6	6.5	6.6	**6.7**
DK	7.7	7.5	7.5	7.4	7.5	7.6	7.7	**7.8**
DE	6.7	6.0	5.9	5.9	5.8	5.7	5.6	**5.5**
EE	14.6	12.7	12.7	11.3	11.3	11.3	:	**:**
IE	14.3	14.2	14.4	14.7	14.7	14.6	14.6	**14.6**
EL	14.0	16.9	17.3	17.9	18.4	18.8	:	**:**
ES	20.4	21.0	21.4	21.8	22.1	22.5	22.7	**22.9**
FR	9.7	9.6	9.7	9.7	9.6	9.6	9.7	**9.8**
IT	8.1	8.2	8.0	8.0	7.9	8.3	8.5	**8.6**
CY	6.0	7.3	7.4	7.7	8.0	8.4	8.8	**9.1**
LV	17.0	16.1	16.1	14.8	14.8	14.8	:	**:**
LT	17.3	15.6	15.6	15.3	15.3	15.3	:	**:**
LU	4.7	4.8	4.8	4.9	4.9	5.0	4.8	**4.9**
HU	11.0	10.9	11.0	10.9	10.9	10.8	10.8	**10.7**
MT	6.8	6.6	6.5	6.4	6.3	6.3	6.4	**6.4**
NL	4.4	4.2	4.1	4.3	4.4	4.5	4.8	**4.9**
AT	4.2	4.2	3.9	3.7	3.7	3.9	4.1	**4.0**
PL	9.6	9.6	9.6	9.7	9.7	9.8	9.9	**10.0**
PT	12.3e	12.6	12.5	12.6	12.6	12.8	13.0	**13.2**
RO	7.4	7.3	7.3	7.5	7.5	7.7	7.3	**7.3**
SI	7.7	7.9	8.0	8.1	8.0	8.2	8.2	**8.2**
SK	14.0	13.3	13.3	13.3	13.4	13.4	13.5	**13.5**
FI	8.1	7.8	7.8	7.7	7.7	7.6	7.5	**7.4**
SE	7.8	7.7	7.4	7.4	7.4	7.3	7.5	**7.4**
UK	7.7	7.9	8.0	8.1	8.3	8.3	:	**:**

Source: EUROSTAT, 5/2012 – 6th January 2012, Brussels
Note: The euro area (EA-17) consists of Belgium, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland.

The EU-27 includes Belgium (BE), Bulgaria (BG), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), the Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and the United Kingdom (UK).
Eurostat defines unemployed persons as persons aged 15 to 74 who:
- are without work;
- are available to start work within the next two weeks;
- and have actively sought employment at some time during the previous four weeks.

The unemployment rate is the number of people unemployed as a percentage of the labour force. The labour force is the total number of people employed plus unemployed.
Monthly unemployment and employment series are calculated first at the level of four categories for each Member State (males and females 15-24 years, males and females 25-74 years). These series are then seasonally adjusted and all the national and European aggregates are calculated.

The worst conditions of other five member states in field of unemployment issue, namely Greek, where the unemployment was about estimated 22-23%, in Spain 22,9%, in Ireland 14,6%, in Slovakia 13,5% and in Portugal 13,2%. In general the Mediterranean member states have the worst positions in field of unemployment rate in all EU-27. Unfortunately sometimes in South Italy the unemployment was one of the highest one in this region, and these member states, as it was equally with one of Spain. Also Italy has problem that density in Sicilian is at the middle average level of density in EU-27, which can be declared as quite high with very high unemployment level. Naturally the density became as middle average level of one, because of intensive migration from here to other parts of EU. Almost these four member states, except Slovakia, are according to the periphery regions of the EU-27.

The human resource management has several problems in EU-27, for example the high level of unemployment, less skilled level of employees, the unemployment rate is very high. In almost the entire youth unemployment under 25 year was between 21,0 in 2010 and 22,3% in 2011. The unemployment rate of females was usually at higher level than in the case of males. Youth male were between 9,5-9,7% and females were higher between 9,7-10,0% in 2010-2011. In member states of the Mediterranean region the unemployment rate was higher than in general in other parts of the EU-27 (see Table-4-2-2, Table-4-2-3). In case of Greek the unemployment rate in youth under 25 year was 58,4% almost 60%; this was 55,7% in Spain, 38,2% in Portugal, 37,8% in Italy, also the average level of EU-27 was 23,5% by the end of February, 2013 (EUROSTAT, 2013).

Table 4-2-3. Seasonally adjusted youth unemployment rates in Males-Females in Nov/2010-Nov/2011 in EU-27 (%)

	Youth (under 25's)				Males				Females			
	Nov-2010	**Sep-2011**	**Oct-2011**	**Nov-2011**	**Nov-2010**	**Sep-2011**	**Oct-2011**	**Nov-2011**	**Nov-2010**	**Sep-2011**	**Oct-2011**	**Nov-2011**
EA17	*20.6*	*21.1*	*21.4*	***21.7***	*9.8*	*9.9*	*10.1*	***10.0***	*10.3*	*10.6*	*10.6*	***10.7***
EU27	*21.0*	*21.8*	*22.0*	***22.3***	*9.5*	*9.6*	*9.7*	***9.7***	*9.7*	*9.9*	*9.9*	***10.0***
BE	21.4	21.0	21.1	**21.1**	7.8	7.3	7.3	**7.2**	8.1	7.4	7.3	**7.3**
BG	25.8	24.7	24.8	**25.6**	12.3	11.9	11.8	**11.9**	10.6	9.7	9.8	**9.9**
CZ	17.1	18.1	18.6	**19.0**	6.0	5.7	5.8	**5.9**	8.2	7.6	7.7	**7.7**
DK	14.0	15.0	14.9	**14.9**	7.9	7.5	7.6	**7.7**	7.5	7.8	7.9	**7.9**
DE	9.1	8.5	8.3	**8.1**	7.0	5.8	5.7	**5.5**	6.3	5.7	5.6	**5.5**
EE	25.7	21.8	:	**:**	15.7	11.4	:	**:**	13.3	11.1	:	**:**
IE	29.1	29.2	29.2	**29.3**	17.5	17.3	17.3	**17.2**	10.3	11.1	11.2	**11.4**
EL	36.3	46.6	:	**:**	11.4	16.3	:	**:**	17.7	22.3	:	**:**
ES	43.0	48.3	49.0	**49.6**	20.1	22.1	22.5	**22.8**	20.8	22.9	23.0	**23.0**
FR	23.0	22.8	23.3	**23.8**	9.0	9.1	9.2	**9.3**	10.3	10.2	10.3	**10.3**
IT	28.4	29.2	29.2	**30.1**	7.2	7.4	7.9	**7.6**	9.4	9.6	9.3	**9.9**
CY	15.3	23.1	:	**:**	5.7	8.4	8.8	**9.2**	6.4	8.5	8.8	**9.1**
LV	30.8	29.9	:	**:**	18.7	16.8	:	**:**	15.2	12.7	:	**:**
LT	33.9	31.1	:	**:**	20.0	17.5	:	**:**	14.7	13.1	:	**:**
LU	14.9	15.3	14.4	**14.7**	3.6	3.7	3.7	**3.7**	6.1	6.5	6.3	**6.4**
HU	25.4	26.1	26.1	**25.9**	11.3	10.9	10.9	**10.7**	10.7	10.7	10.7	**10.7**
MT	13.5	13.9	14.1	**14.3**	6.8	6.0	6.0	**6.1**	6.8	7.0	7.0	**7.1**
NL	8.4	8.0	8.2	**8.6**	4.3	4.5	4.7	**4.9**	4.5	4.6	4.8	**5.0**
AT	8.1	7.5	8.7	**8.3**	4.2	3.8	4.0	**3.8**	4.3	4.0	4.1	**4.2**
PL	23.8	26.4	27.2	**27.8**	9.2	8.9	9.0	**9.1**	10.0	10.9	11.0	**11.0**
PT	27.2e	30.1	30.4	**30.7**	12.1e	12.5	12.6	**12.9**	12.6e	13.1	13.3	**13.5**
RO	23.3	23.4	:	**:**	8.0	8.2	8.1	**7.7**	6.5	7.0	6.4	**6.7**
SI	14.5	15.2	:	**:**	7.9	8.2	8.3	**8.4**	7.4	8.1	8.0	**8.0**
SK	33.3	33.9	34.5	**35.1**	14.0	13.4	13.5	**13.6**	14.1	13.4	13.4	**13.3**
FI	20.8	19.9	19.7	**19.6**	8.6	8.3	8.2	**8.1**	7.5	6.9	6.8	**6.7**
SE	22.6	22.2	22.3	**23.2**	7.9	7.3	7.6	**7.5**	7.7	7.2	7.3	**7.4**
UK	20.2	22.0	:	**:**	8.4	9.0	:	**:**	7.0	7.5	:	**:**

Source: EUROSTAT, 5/2012 – 6th January 2012, Brussels

The world market demands have been less and narrow since 2008, when the world economic crisis started, which stimulated the continuous increasing trends of the youth unemployment rate in the EU-27 (see Table-4-2-3). In highly developed economies including EU-27, the youth unemployment trend has increased since 2000 from 13,5% to 18,2% in 2010, because labour force market demands decreased and in general the youth human resources are less skilled and educated for jobs offered by companies. (ILO, 2010a; ILO, 2010b). The economic growth is estimated only at the end of 2013 or at the beginning of 2014, when probably the youth unemployment rate can decrease. There are strong correlations among the unemployment rates, GDP per capita and AIC per capita, foreign trade, balance of EU-27 current account with employment conditions, which can be described based on the SWOT analysis, which are as follows:

The employment based on SWOT analysis in EU-27

Strengthen

.- Mostly before the world economic crisis the increasing trend of employment strengthens the *purchase power standard of consumers* based on the extending investments and creating jobs.
.- The *export oriented economic policy* helps to extend market positions of EU-27 on the world market, to which foreign economic cooperation of Hungary with South Korea and India can contribute, as successful examples (see in detailed in Neszmélyi, 2001; Neszmélyi, et al, 2007).
.- The human resource national policy stimulates transnational corporations and large companies to use *educational activity* for improving and *increasing efficiency* and skill level of employees.
.- *Decrease the poverty* at social level.

Weakness

.- The wholly employment *decreases the efficiency of human resources*.
.- *Under educated and skilled workers* in employment are unfavourable for EU-27 to obtain competitiveness on the market.

.- The highly level employment conditions make effects on *increasing the inflation rate* and decreasing PPS per capita.

Opportunity

.- Influences of the *trans-national corporations (TNCs)* on increasing and fixing *favourable employment conditions*.
.- *TNCs have positive* influences on the creating *diversification* of the economic structure and labour force in EU member states to become more flexible demands of the world economy and the world market. Also the TNCs realise the FDI (foreign direct investment) to increase the employment level in EU member states. The FDI has important role in strengthening the employment conditions by setting up the vertically integrated product channel to use high-tech and supply single market of the EU (see in detailed in Zbida Adel et al., 2011; Zsarnóczai, 2003 in case of Denmark; Zéman, et al, 2014).

Threaten

.- Negative influence of the world economy, sharply energy increase on activities of firm in field of human resource management *less market demands for labour forces*.
.- From point of view of input: *cheaper foreign labour force* can also press the EU-27 domestic labour force market out of the labour market and employment possibilities. The *cheaper foreign labour force* can inflow from out of the EU, but also the free labour force flow among EU member states can result restructure of employees in each member state.
.- As World Economic Forum declared that the foreign direct investment (FDI) can be favourable for the domestic economic growth in EU-27, but sometimes this FDI can focus on the increasing foreign human resources instead of domestic-national workers-employees (see in detailed in WEF = World Economic Forum, 2010).
.- The global warming resulted by the *gas emission* of human activities extends *dessert areas* with considerable low level of density in EU-27, mostly in Mediterranean member states. This strengthens and results in unfavourable separation of human resources. Also this global warming resulted in increasing illness and considerable damages for human resources form point of view of *health care*.

Also the decreasing trends of population in whole EU will lead to restructure the employment conditions, because the foreign workers will increase and can be dominate on labour force market of EU either in their number or their skilled level even for the near future.

Finally it can be declared that the high level of unemployment rate can contribute to increasing the labour efficiency at the trans-national corporation (TNC) level, but this cannot solve the economic and social difficulties concerning the narrowing market positions for companies and decreasing life standard for wider social groups and the poverty (Laskai - Zéman, 2013).

There is a considerable world-wide side competition among new emerging economies and former developed economies to obtain more share of the world market. Also the competition became stronger among economies and firms, transnational corporations and small and medium scale enterprises in field of developing and obtaining innovation and R&D (Research&Development) process. *The cheaper labour force cannot ensure long-term competition on the world market*. *Increasing population of the world economy* can grow the labour force demands and unemployment rate on the world market, finally the poorness.

Also this increasing population results the increasing energy consumption and price level of energy, therefore the consumption structure changes at house hold or family units from dominant food consumption to dominant energy consumption, also less highly value added and developed product-consumption. In this case the narrow world market provides less market positions for the EU-exporters resulting in decreasing employment, first youth employment in EU-27. The higher level of youth unemployment rate resulted in less number of weddings and born of children in EU-27, which leads to more pension difficulty in the future. Also in spite that the high level of unemployment can decrease the *inflation growing trends*, the less level of employment decreases PPS per capita finally selling products on the market.

In consequence of the increasing population of the world economy, the consumption increases at level of national economics, firms and households or family units, which can leads to increasing state debt based on the emerging spiral later on with decreasing consumption of population. Also the increasing state debt results heavy personal and profit tax burdens on tax payers, as named consumers, therefore the production and consumption decrease and the

producers should decrease the export of the EU-27. The regional development can be implemented by through of decreasing gap among developed levels of different regions based on the increasing employment level. The governments should also help the small and medium enterprises (SMEs) to create better and more favourable work separation among the SMEs and corporations owning and using high-tech and research-development (R&D) based on education and financial supports.

According to the sustainable employment the economic conditions of EU need for increasing investment activities to meet market demand, to increase highly value added products and to increase the AIC of population and strengthening the PPS of population of the EU-27 based on the extending employment rate. The best way is to increase the highly value added products. The successful economic growth can contribute to increasing the employment and in the same time to decreasing the poverty.

4. 3 Labour productivity growth for the economic development

Introduction

The object of the case-study focuses on the RLP (*real labour productivity*) per hour worked in EU-27 for the period of 2000- 2010. Generally the real labour productivity affects the changing of the economic structure relevant to market conditions. The real labour productivity growth per hour worked can provide the marginal competitiveness either for any economy or for any firm, or transnational corporation. The study analyses the *correlations* between the real labour productivity conditions and GDP or general growth of economies based on the *statistical analysing methods* from point of view of *macro-economic level*. The study makes analyses among member states in EU-27 in field of comparing the real labour productivity growth per hour worked based on using statistical data coming from *IMF (International Monetary Fund)* and Eurostat.

In case of *Germany* it can be seen that the highest developed economy could also realise less GDP growth in spite of higher growth of RLP, for example 2% of RLP growth, 0,8% GDP growth in 1996, 2,3% of RLP growth, 1,7% GDP growth in 1997, 2,5% of RLP growth, 1,5% GDP growth in 2001, 0,9% of RLP growth, -0,4% GDP growth in 2003. The reason of this contradiction was resulted by decreasing trend and fall of US economy. Even less *RLP growth rate can result considerable competitiveness on the world market for highly developed member states of EU,* which leads to increase large significant *export value* for member states. The *export oriented strategy* of companies is very useful to increase the *price incomes* also by through of *export increase* to create higher level of real labour productivity growth.

The world economic crisis affected the economic development of the highest developed economies of EU-27 and by through of these strongest EU member states also affected other less developed member states of EU. The EU-27 could not avoid of the world economic crisis, because this was started by US, as the first foreign economic partner of EU-27. *The RLP growth can not affect automatically on the real GDP growth rate volume, because influences of RLP are determined by the foreign economic contacts and foreign trade of the EU-27,* which can consequently realise results of the RLP growth for GDP growth. The spirit of the RLP growth is the *development of innovation.*

The object of the case-study focuses on the RLP (real labour productivity) per hour worked in EU-27 for the period of 2000- 2010/2011. Generally the real labour productivity affects the changing of the economic structure relevant to market conditions. Therefore the labour productivity can became basis for the economic development within the free market system. The study has importance to analyse correlations between the labour productivity and economic development. The labour productivity growing rate determines the development trends of the economy and affects the employment conditions based on the different economic sectors.

The real labour productivity rate connects with the economic increase, which can be different in regions of the world based on the country-groups. The large gap among differences of the labour productivity is very wide at level of regions, which emphasizes that each country can have favourable possibilities in field of labour productivity conditions, which can be titled as the important social approach of the economic growth. The real labour productivity growth per hour worked can provide the marginal competitiveness either for any economy or for any firm, or transnational corporation. Naturally the real labour productivity and the competitiveness based on either comparative or competitive advantages need for continuous education for employees.

Labour productivity

The study analyses the *correlations* between the real labour productivity conditions and GDP or general growth of economies based on the *statistical analysing methods* from point of view of *macro-economic level*. Naturally the macro-economic process can include some main influences on the economic background of firms or mostly transnational corporations, which can develop more the innovation concerning special economic conditions of each country or region and market conditions. The *transnational corporations* have important role in flow of goods, labour force, capital and services. Therefore the transnational corporations emphasize the using the skilled worker in the production works and service activities.

The real labour productivity conditions can be overviewed either at firm level as human resources management or at national level as labour force market conditions. From point of view of macro economic level the study makes analyses among member states in EU-27 in

field of comparing the real labour productivity growth per hour worked based on using statistical data coming from *IMF (International Monetary Fund)* and Eurostat. The international analyses emphasized the differences among the wage and salary costs, and also non-wage costs. This study uses analysis based on per unit of labour input, measured by total number of hours worked.

The RLP (real labour productivity) growth per hour worked in % can successfully increase based on the innovation development concerning the competitiveness on the world market and not based on the lower cost of labour force, in spite that this labour cost can also decrease. The RLP sharply fluctuated in Poland, where this was -47,5% in 2000, than it increased by 4,8% in 2003, 3,6% in 2009; in Bulgaria -11,7% in 1996, 10,2% in 2000; in Romania 16,0% in 2002 and -5,1% in 2009 (Table 4-3-3; Figure 4-3-2).

Table 4-3-1. Real GDP growth rate volume, percentage change on previous year in 1996-2013 in EU-27

geo\time	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EU (27 countries)	1,8	2,7	3	3	3,9	2,2	1,3	1,4	2,5	2	3,3	3,2	0,3	-4,3	2	1,6	0,6	1,5
EU (25 countries)	1,8	2,8	3	3,1	3,9	2,1	1,3	1,4	2,5	1,9	3,3	3,2	0,2	-4,2	2	1,6	0,6	1,5
EU (15 countries)	1,7	2,7	3	3	3,9	2,1	1,2	1,2	2,4	1,8	3,1	3	0	-4,3	2	1,5	0,5	1,4
Belgium	1,4	3,7	1,9	3,5	3,7	0,8	1,4	0,8	3,3	1,7	2,7	2,9	1	-2,8	2,3	2,2	0,9	1,5
Bulgaria	-9,4	-5,6	4	4,4	5,7	4,2	4,7	5,5	6,7	6,4	6,5	6,4	6,2	-5,5	0,2	2,2	2,3	3
Czech Republic	4,5	-0,9	-0,2	1,7	4,2	3,1	2,1	3,8	4,7	6,8	7	5,7	3,1	-4,7	2,7	1,8	0,7	1,7
Denmark	2,8	3,2	2,2	2,6	3,5	0,7	0,5	0,4	2,3	2,4	3,4	1,6	-0,8	-5,8	1,3	1,2	1,4	1,7
Germany	0,8	1,7	1,9	1,9	3,1	1,5	0	-0,4	1,2	0,7	3,7	3,3	1,1	-5,1	3,7	3	0,8	1,5
Greece	2,4	3,6	3,4	3,4	3,5	4,2	3,4	5,9	4,4	2,3	5,5	3	-0,2	-3,3	-3,5	-5,5	-2,8	0,7
Spain	2,5	3,9	4,5	4,7	5	3,7	2,7	3,1	3,3	3,6	4,1	3,5	0,9	-3,7	-0,1	0,7	0,7	1,4
France	1,1	2,2	3,4	3,3	3,7	1,8	0,9	0,9	2,5	1,8	2,5	2,3	-0,1	-2,7	1,5	1,6	0,6	1,4
Italy	1,1	1,9	1,4	1,5	3,7	1,9	0,5	0	1,7	0,9	2,2	1,7	-1,2	-5,1	1,5	0,5	0,1	0,7
Hungary	0,2	3,1	4,1	3,2	4,2	3,7	4,5	3,9	4,8	4	3,9	0,1	0,9	-6,8	1,3	1,4	0,5	1,4
Netherlands	3,4	4,3	3,9	4,7	3,9	1,9	0,1	0,3	2,2	2	3,4	3,9	1,8	-3,5	1,7	1,8	0,5	1,3
Austria	2,5	2,3	3,8	3,5	3,7	0,9	1,7	0,9	2,6	2,4	3,7	3,7	1,4	-3,8	2,3	2,9	0,9	1,9
Finland	3,6	6,2	5	3,9	5,3	2,3	1,8	2	4,1	2,9	4,4	5,3	1	-8,2	3,6	3,1	1,4	1,7
Sweden	1,6	2,7	4,2	4,7	4,5	1,3	2,5	2,3	4,2	3,2	4,3	3,3	-0,6	-5,2	5,6	4	1,4	2,1
United Kingdom	**2,9**	**3,4**	**3,8**	**3,7**	**4,5**	**3,1**	**2,7**	**3,5**	**3**	**2,1**	**2,6**	**3,5**	**-1,1**	**-4,4**	**2,1**	**0,7**	**0,6**	**1,5**

Eurostat
Hyperlink to the table: http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb020
General Disclaimer of the EC: http://europa.eu/geninfo/legal_notices_en.htm
Short Description: Gross domestic product (GDP) is a measure of the economic activity, defined as the value of all goods and services produced less the value of any goods or services used in their creation. The calculation of the annual growth rate of GDP volume is intended to allow comparisons of the dynamics of economic development both over time and between economies of different sizes. For measuring the growth rate of GDP in terms of volumes, the GDP at current prices are valued in the prices of the previous year and the thus computed volume changes are imposed on the level of a reference year; this is called a chain-linked series. Accordingly, price movements will not inflate the growth rate.

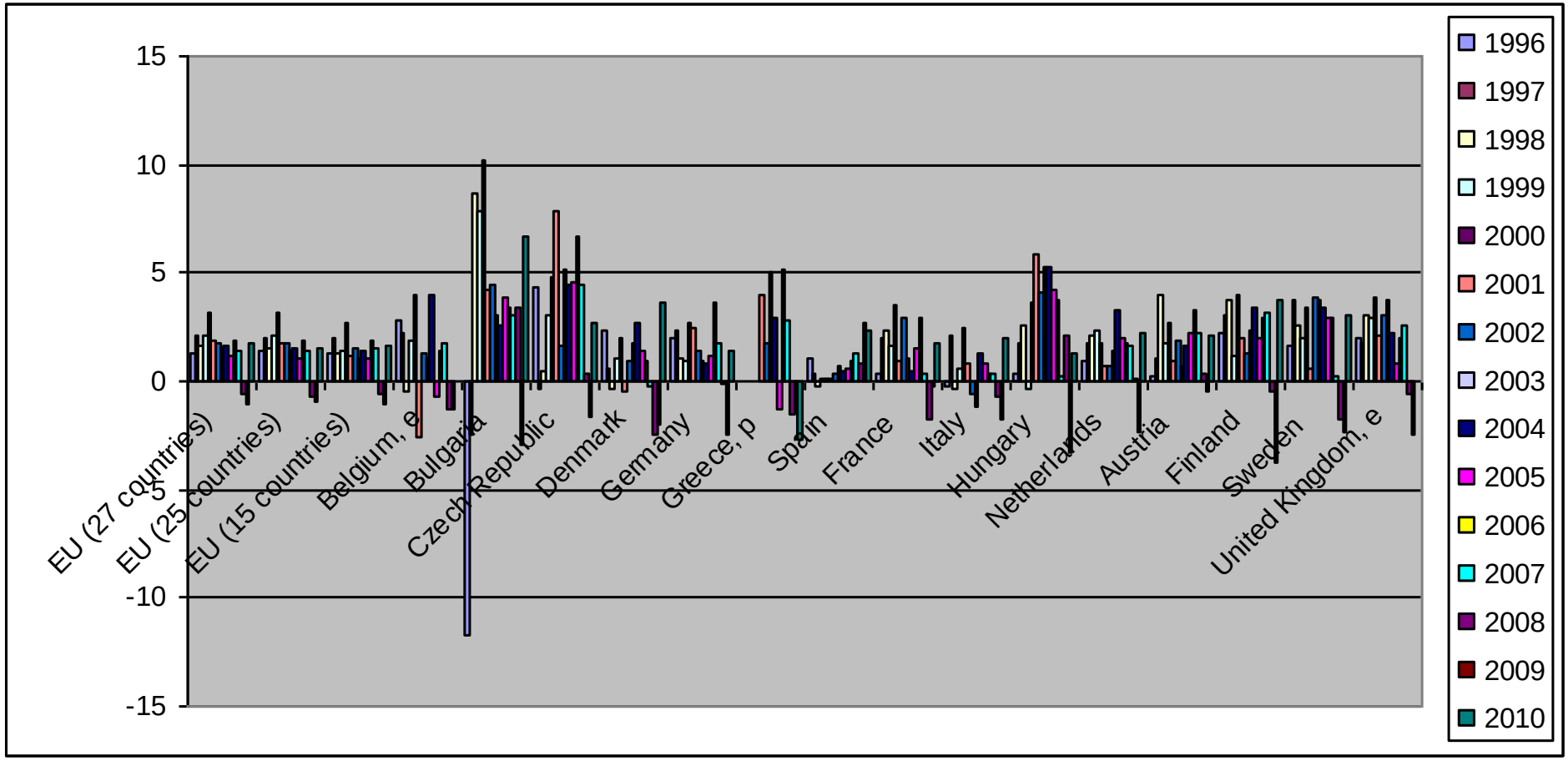
Table 4-3-2. Unemployment rate by sex, world and regions (%), Both sex/Regions/year in 2000-2010

	2000	2004	2005	2006	2007	2008	2009	2010
World	**6,3**	**6,4**	**6,2**	**5,9**	**5,6**	**5,7**	**6,3**	**6,2**
Developed Economies and European Union	6,7	7,2	6,9	6,3	5,8	6,1	8,4	8,8
Central and South-Eastern Europe (non-EU) and CIS	10,9	9,9	9,4	9,3	8,6	8,6	10,4	9,6
Middle East	10,6	11,2	11,2	10,7	10,5	10,2	10,3	10,3
North Africa	**14,1**	**11,9**	**11,6**	**10,5**	**10,2**	**9,6**	**9,9**	**9,8**

2010 are preliminary estimates; 2011 are projections.

Source: IMF, WORLD ECONOMIC OUTLOOK, OCTOBER 2010.

Figure 4-3-1. Real labour productivity growth per hour worked, % change over previous year, index 2000 = 100, Percentage change on previous period in EU-27 in 1996-2010.



Source: :=Not available e=Estimated value b=Break in series p=Provisional value (2010)
Footnote: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/nama_esms_an2.htm
Source of Data: Eurostat, Hyperlink to the table:
http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdec310
General Disclaimer of the EC: http://europa.eu/geninfo/legal_notices_en.htm

Table 4-3-3. Real labour productivity growth per hour worked% change over previous year, index 2000 = 100, Percentage change on previous period geo\time in EU-27 in 1996-2010.

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EU (27 countries)	1,3	2,1	1,6	2,1	3,2	1,9	1,8	1,5	1,6	1,2	1,9	1,4	-0,6	-1	1,7
EU (25 countries)	1,4	2	1,5	2,1	3,2	1,8	1,8	1,4	1,5	1,1	1,9	1,4	-0,7	-0,9	1,5
EU (15 countries)	1,3	2	1,3	1,4	2,7	1,2	1,5	1,1	1,4	1,1	1,9	1,5	-0,6	-1,1	1,6
Belgium, e	2,8	2,2	-0,5	1,9	4	-2,6	1,3	1,1	4	-0,7	1,4	1,7	-1,3	-1,3	:
Bulgaria	-11,7	-2,5	8,7	7,9	10,2	4,2	4,4	3,1	2,6	3,9	3,4	3,1	3,4	-2,9	6,7
Czech Republic	4,3	-0,4	0,5	3,1	4,8	7,8	1,6	5,2	4,4	4,6	6,7	4,4	0,4	-1,6	2,7
Denmark	2,3	0,6	-0,4	1	2	-0,5	0,9	1,7	2,7	1,4	0,9	-0,2	-2,5	-2	3,6
Germany	2	2,3	1,1	0,9	2,7	2,5	1,4	0,9	0,8	1,2	3,6	1,7	-0,1	-2,5	1,4
Greece, p	:	:	:	:	:	4	1,7	5	2,9	-1,3	5,1	2,8	-1,5	-0,3	-2,7
Spain	1,1	0,3	-0,2	0,1	0,1	0,1	0,4	0,7	0,5	0,6	0,9	1,3	0,8	2,7	2,3
France	0,4	2	2,4	1,6	3,5	0,9	2,9	1	0,5	1,5	2,9	0,3	-1,7	-0,2	1,7
Italy	-0,2	2,1	-0,4	0,6	2,5	0,8	-0,6	-1,2	1,3	0,8	0,4	0,3	-0,7	-1,8	2
Hungary	0,3	1,8	2,6	-0,4	3,6	5,9	4,1	5,3	5,3	4,2	3,7	0,2	2,1	-3,3	1,3
Netherlands	0,9	1,8	2,1	2,3	1,8	0,7	0,7	1,4	3,3	2	1,8	1,6	0,1	-2,3	2,2
Austria	0,2	1,1	4	1,7	2,7	0,9	1,9	0,7	1,6	2,2	3,3	2,2	0,4	-0,5	2,1
Finland	2,2	3	3,7	1,2	4	2	1,3	2,4	3,4	2	2,9	3,2	-0,5	-3,8	3,8
Sweden	1,6	3,7	2,6	2	3,4	0,6	3,9	3,8	3,4	2,9	2,9	0,2	-1,8	-2,3	3
United Kingdom, e	**2**	**1,7**	**3,1**	**2,9**	**3,9**	**2,1**	**3**	**3,7**	**2,2**	**0,8**	**2**	**2,6**	**-0,6**	**-2,5**	**:**

Source: :=Not available e=Estimated value b=Break in series p=Provisional value
Footnote: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/nama_esms_an2.htm
Source of Data: Eurostat

Hyperlink to the table: http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdec310
General Disclaimer of the EC: http://europa.eu/geninfo/legal_notices_en.htm
Short Description: Real labour productivity per hour worked is calculated as real output (deflated GDP measured in chain-linked volumes, reference year 2000) per unit of labour input (measured by the total number of hours worked).
Measuring labour productivity per hour worked provides a better picture of productivity developments in the economy than labour productivity per person employed, as it eliminates differences in the full time/part time composition of the workforce across countries and years.
Code: tsdec310

According to the Table 4-3-3, Total Labour Costs (TOT) cover wage and non-wage costs less subsidies. It does not include vocational training costs or other expenditures such as recruitment costs, spending on working clothes, etc.
Wage and salary costs (WAG) include direct remunerations, bonuses, and allowances paid by an employer in cash or in kind to an employee in return for work done, payments to employees saving schemes, payments for days not worked and remunerations in kind such as food, drink, fuel, company cars, etc.
Labour costs other than wages and salaries (OTH - non-wage costs) include the employers' social contributions plus employment taxes regarded as labour costs less subsidies intended to refund part or all of the employer's cost of direct remuneration. The labour cost index covers the following economic activities: - Industry (NACE Rev. 2 sectors B to E); B Mining and quarrying, C Manufacturing, D Electricity, gas, steam and air conditioning supply, E Water supply; sewerage, waste management and remediation activities. - Construction (NACE Rev. 2 sector F). - Services (NACE Rev. 2 sectors G to N)

In general the less developed EU member states, for example Romania, were strongly influenced by the world economic conditions. Also the FDI (foreign direct investment) has wide side connections with *Romania, Poland and Bulgaria*, but *FDI* also decreased its investment activities based on the unfavourable world economic changes, which created decreasing trend of RLP in these countries. In spite that centres of transnational corporations are mainly in *Germany, U.K. (United Kingdom) and France*; these member states are not so depend on the direct influences of FDI, their real GDP growth volume has considerably decreased for periods of the world economic crisis in 2008-2009 (Table-4-3-1). Naturally the RLP growth is strongly depends on the export and by through of its export incomes and price incomes of the companies. The price income fall can decrease the productivity in fields of RLP and generally production.

In case of *Germany* it can be seen that the highest developed economy could also realise less GDP growth in spite of higher growth of RLP, for example 2% of RLP growth, 0,8% GDP growth in 1996, 2,3% of RLP growth, 1,7% GDP growth in 1997, 2,5% of RLP growth, 1,5% GDP growth in 2001, 0,9% of RLP growth, -0,4% GDP growth in 2003. The reason of this contradiction was resulted by decreasing trend and fall of US economy. In general, the RLP growth per hour worked results more growing rate of the real GDP growth volume than the RLP's growth rate in member states of EU-27 (Table-4-31; Table-4-3-2). But even the less decreasing RLP growth rate can stimulate considerable GDP fall in EU. Also less strong economy, for example *Bulgaria*, in spite that the considerable RLP growth rate the GDP implements poorly increasing rate, in 2000 the RLP was 10,2% and the GDP growth was 5,7%. In case of other highly developed economies this difference of the RLP and GDP growth rates can happen, but almost after the economic crisis or recession process.

On the one hand this difference of the RLP and GDP growth rates can be explained that the RLP growth rate can be more difficultly calculated in service sector, than in industry. On the other hand even less *RLP growth rate can result considerable competitiveness on the world market for highly developed member states of EU*, which leads to increase large significant *export value* for member states. The *export oriented strategy* of companies is very useful to increase the *price incomes* also by through of *export increase* to create higher level of real labour productivity growth. In general in *Czech Republic* considerable fall has been implemented for two year period, in 1997-1998 in field of RLP, therefore the RLP change

could not successfully effect on the GDP growth rate volume. In fact the favourable growth of RLP accompanying with GDP growth has occurred for almost one decade from 1999 to the end of 2007.

In general it can be declared that the *world economic crisis of 2008-2009 caused significant economic decrease of EU-27 in fields of RLP and GDP growth*. The world economic crisis affected the economic development of the highest developed economies of EU-27 and by through of these strongest EU member states also affected other less developed member states of EU. The EU-27 could not avoid the world economic crisis, because this was started by US, as the first foreign economic partner of EU-27. This world economic crisis was first bank-financial crisis, which extended to other economic sectors and the employment conditions.

The RLP growth can not affect automatically on the real GDP growth rate volume, because influences of RLP are determined by the foreign economic contacts and foreign trade of the EU-27, which can consequently realise results of the RLP growth for GDP growth. The spirit of the RLP growth is the *development of innovation*, as the final basic element for the competitiveness of EU member states on the world market. In spite that increasing unemployment rate in EU also after the world economic crisis, the EU can remain its competitiveness because of increasing of its RLP growth (Table-4-3-2).

This was resulted by favourable world market conditions and consolidated economic growth of Germany, which had considerable economic effects on Czech Republic. Hourly labour costs in the *euro area* (EA-17) rose by 2.7% in the year up to the third quarter of 2011, compared with 3.3% for the previous quarter. In the *EU-27*, the annual rise was 2.6% up to the third quarter of 2011, compared with 3.2% for the previous quarter. Compared with News Release 134/2011 of 16 September 2011, data for the second quarter of 2011 have been revised from +3.6% to +3.3% for the euro area (EA-17) and from +3.4% to +3.2% for the EU-27. (Eurostat, 191/2011 – 16. December, 2011). RLP should be developed more in Hungary, even after 2010 and also in agricultural sector (see in detailed in Szabó - Zsarnóczai, 2004).

4.4 THE ECONOMIC CONDITIONS AND THE CORRELATION ISSUES FROM STATISTICAL APPROACH IN EU-28 AND MENA-4 COUNTRIES

Introduction

In this chapter the Dissertation overviews the correlations by SPSS (Special Program for Social Sciences) analyse among the EU-28 and some economies in European Neighbourhood Policy region in main 8 different statistical fields, as components between 2005-2014, as these were mentioned in earlier part of the Dissertation: namely Total unemployment rate in % (UnEmploy2014); GDP and main components – volumes (GDPVol2014); HICP - inflation rate (HICP: Harmonised index of consumer prices, HICPan2014); General government gross debt (GovDebt2014); Expenditure on social protection (SocProt2014); Lifelong learning in %, Total (LLearn2014)); People at risk of poverty or social exclusion by age and sex (RiskPov2014); Real GDP per capita, growth rate and totals (GDPCap2014).

In this chapter the analyses focus on the some correlation compares among EU-28 member states and some other countries out of the EU, for example Turkey, Saudi Arabia, Egypt and Algeria, but this two last one are included in European Neighbourhood Policy region, which contents some other Arab countries surrounding area belonging to the EU-28.

Also in this chapter the analyses focus on the wide side overview for the EU-28 member states and MENA region with using eight variances of three principal components based on the factor analyses and cluster analyses with using dendrogram overviews for EU-28 and their neighbour countries in MENE region. The economic growing rate of EU-28 member states concerning some economic issues as GDP growing rate, employment, unemployment accompanying with social protection and government debt, price fluctuating, purchase power parity of consumers and also probably lifelong learning. These analyses can clear some developing trends of EU-28 member states and other international compares within EU-28 and with performance of the other economies out of the EU.

Principle analyses

The eight numbers according to each variance give the average value of KMO value, which shows in the first line of Table-4-4-1: KMO and Bartlett's Test, namely ,628. Number of each variance shows how the given variance correlates with the other variances in percent, which should be more than ,500 or it is given in percent, which is ,628 (62,8 percent) in this example, therefore because this value is more than 50%, the correlation among variances are strong. The Table-4-4-1: ***KMO and Bartlett's Test*** shows that the significance is very strong as ,000 for 28 EU member states and the significance explained by 82,330% under title of Approx. Chi-Square in the second line of the Table-4-4-1, by the other words this is the component matrix, which should be closed to about 85-90%, in order that the variances can be closed to each other to determine the correlations among themselves, as these are written in table of Correlation Matrix. The correlation measure of 28 EU member states based on the 8 variances is ,628 Tabel-4-4-1: titled as Kaiser-Meyer-Okin Measure of Sampling Adequacy. Finally it can be declared that the significance should be ,000, in order that the connection can be strong among the variances in case of EU-28 member states. Otherwise if the significance is far from ,000 and closed to 0,9 and 1 value, this means that the significance is not strong.

Table-4-4-1: KMO and Bartlett's Test in EU-28, in 2005-2014 in %

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,628
Bartlett's Test of Sphericity	Approx. Chi-Square	82,330
	df	28
	Sig.	,000

Source: Data are owned calculated based on the SPSS

The *Table-4-4-2*: ***Anti-image Matrices for Anti-image Correlation Matrix*** shows how the each variance from eight variants is depending on the other one and how the correlations are going on among themselves. The diagonal line starts by number ,497[a] according to the UnEmploy2005-2014 to the number ,706[a] according to GDPcap2014. The *Table-4-4-2*: ***Anti-image Matrices for Anti-image Correlation Matrix*** the number of UnEmploy2005-2014 is ,497, which is in 49,7 percent. If this value is less than 50%, this shows that this variable is weakly correlate with the other variances, if it is about 50%, this can enough be correlating

with other variances. If the value of variance is higher than 50% as ,500, this means strong correlation of one variance with others.

Table-4-4-2: Anti-image Matrices in EU-28, in 2005-2014 in %

		UnEmploy 2005-2014	GDPVol2014	HICPan2014	GovDebt2014	SocProt2014	LLeran 2014	RiskPov2014	GDP cap2014
Anti-image Covariance	UnEmploy 2005-2014	,467	,287	,036	-,131	,037	-,011	-,231	-,115
	GDPVol 2014	,287	,452	-,062	-,040	,033	,007	-,196	-,122
	HICPan2014	,036	-,062	,436	-,021	,206	-,008	-,154	-,095
	GovDebt 2014	-,131	-,040	-,021	,601	-,198	-,015	,094	,054
	SocProt2014	,037	,033	,206	-,198	,337	,107	-,196	-,015
	LLeran2014	-,011	,007	-,008	-,015	,107	,628	,017	-,256
	RiskPov2014	-,231	-,196	-,154	,094	-,196	,017	,591	,001
	GDPcap2014	-,115	-,122	-,095	,054	-,015	-,256	,001	,597
Anti-image Correlation	UnEmploy2005-2014	**,497**[a]	,625	,080	-,247	,092	-,021	-,439	-,218
	GDPVol 2014	,625	**,587**[a]	-,141	-,076	,085	,013	-,379	-,234
	HICPan2014	,080	-,141	**,731**[a]	-,042	,539	-,015	-,303	-,186
	GovDebt 2014	-,247	-,076	-,042	**,744**[a]	-,439	-,025	,158	,090
	SocProt2014	,092	,085	,539	-,439	**,646**[a]	,233	-,439	-,035
	LLeran2014	-,021	,013	-,015	-,025	,233	**,767**[a]	,029	-,419
	RiskPov2014	-,439	-,379	-,303	,158	-,439	,029	**,268**[a]	,002
	GDPcap2014	-,218	-,234	-,186	,090	-,035	-,419	,002	**,706**[a]

a. Measures of Sampling Adequacy (MSA)

b. *Source:* Data are owned calculated based on the SPSS

Table-4-4-3: Communalities in EU-28, in 2005-2014 in %

	Initial	Extraction
UnEmploy 2005-2014	1,000	,829
GDPVol2014	1,000	,832
HICPan2014	1,000	,665
GovDebt2014	1,000	,514
SocProt2014	1,000	,786
LLeran2014	1,000	,658
RiskPov2014	1,000	,839
GDPcap2014	1,000	,680

Extraction Method: Principal Component Analysis.
Source: Data are own calculated based on the SPSS

Table-4-4-4: Total Variance Explained in EU-28, in 2005-2014 in %

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,193	39,918	39,918	3,193	39,918	39,918
2	1,415	17,690	57,607	1,415	17,690	57,607
3	1,195	14,943	**72,550**	1,195	14,943	72,550
4	,752	9,402	81,952			
5	,542	6,769	88,721			
6	,439	5,493	94,214			
7	,273	3,417	97,631			
8	,190	2,369	100,000			

Extraction Method: Principal Component Analysis.
Source: Data are own calculated based on the SPSS

Table-4-4-5: Component Matrix[a] in EU-28, in 2005-2014 in %

	Component		
	1	2	3
UnEmploy 2005-2014	-,524	,605	-,434
GDPVol2014	,641	,005	,649
HICPan2014	**,787**	,198	,077
GovDebt2014	**-,681**	,214	,071
SocProt2014	**-,815**	,172	,303
LLeran2014	,619	,321	-,415
RiskPov2014	-,110	**,735**	,536
GDPcap2014	,604	,539	-,156

Extraction Method: Principal Component Analysis. a. 3 components extracted.
Source: Data are own calculated based on the SPSS

In this case all of other variances expect RisPov2014 have strong correlations with themselves. The LLearn2014 has the strongest correlations by value of ,767 (76%), also the GovDebt2014 has strong one, by ,744 (74%), HICPan2014 has ,731 (73%), the GDPcap2014 has value of ,706 (70,6%), SocProt2014 has value of ,646 (64,6%) and the GDPVol2014 has enough strong correlation with others by value of ,587 (58%). The RisPov2014 has the most weakness correlation with to the variances by ,261 (26%). This means that if the UnEmploy2014, as unemployment decreases can be resulted by the growth of GDP volume and GDP per capita and in the same time the consuming price level (HICPan2014), the social protection (SocProt2014), life-length learning (LLearn2014) increase. Naturally the governmental debt (GovDebt2014) can increase if the unemployment is considerable. In this case only the RisPov2014 has weak correlations with other, namely by value of ,261 as 26,1%.

In case of the EU-28 between 2005 and 2014 when the GDPcap2014 (Real GDP per capita, growth rate and totals) and GDPVol2014 increase based on the moderate low level of unemployment, the price level and the social protection also increase, which also provides favourable conditions for continuing the study, as LLearn2014 for the population. The GovDebt2014 can increase because the governments can decrease the taxes in order that the companies will not be pressed by taxes and they can be stimulated to increase their investments to increase the performance growth, as GDP growth finally for the EU-28. The People at risk of poverty or social exclusion by age and sex (RiskPov2014) can be fixed at the earlier same level, because this trend is going on for the longer time length for the considerable fragment of the population and therefore this one is not strongly depending on the moment prosperity economic growth rate. The strongest correlation can be seen between Unemployment rate (UnEmploy2014) and GDP Volume (GDPVol2014) between 2005 and 2014 in the EU. This is the strongest correlation means that when the GDP Volume growth rate increases within the economic prosperity with increasing investment growth in performance of the EU, the Unemployment rate decreases. Also the strong correlation can be explained by mutual connection between for example the SocProt2014, namely Expenditure on social protection (SocProt2014) and HICP - inflation rate (HICP: Harmonised index of consumer prices, HICPan2014), which means that if the expenditure on social protection is growing, this last one also stimulates the consumer prices to increase. From this point of view

the purchasing power of population increases therefore the sellers and traders increase the consuming prices. Also there the strong correlation can be proofed for example between the Expenditure on social protection (SocProt2014) and the Total unemployment rate in % (UnEmploy2014) because naturally if the unemployment rate is growing up the social protection naturally increases. The social protection can provide more financial support to increase the study program and post-graduating courses for more and wider pert of the population of the society and increase the time-length of the studies (see Table-4-4-2).

The Table-4-4-3: ***Communalities*** shows the difference of each variance from the initial values, as 1,000 and show how the measure of each different variance is explained by the main principal components, in this case of EU-28 three components. If the difference is not too much from the 1,000, this shows the measure of the variance is considerably explained by three principal components. If the measure of each variance is far from 1,000, for example less than half this shows how the measure of variance is not explained strongly by three principal components.

Based on this example of the Table-4-4-3: Communalities the first variance titled as RiskPov2014 was explained by three principle components by ,839 in case of the EU-28. GDPVol2014 is the second variance titled as (GDP and main components - volumes [nama_gdp_k], 2006-2013) which has measure explained by three principle components by, 832 value. The third variance, namely the UnEmploy2014 has the considerable measures explained by the principle components by value of ,829, from owned calculated based on the data base of Eurostat. Probably the fourth variance as SocProt2014 (Expenditure on social protection in % of GDP between 2005-2013) has measure explained by value of three components as ,786 can be seen that it has strong correlations in case of EU-28 member states.

The *other four variances* have also considerable measure explained by three principle components in case of the EU-28 member states, namely GDPcap2014 (Real GDP per capita, growth rate and totals Percentage change on previous year, Euro per inhabitant, Percentage change on previous period between 2005 and 2014) by ,680; and HICPan2014 (HICP - inflation rate (HICP: Harmonised index of consumer prices, in Annual average rate of change %) explained by three principles components by ,665; the LLearn2014 (Lifelong learning in %, Total in % of GDP) has importance and measure explained by three principle components

by ,658; and GovDebt2014 has measure explained by three principle components by ,514. This last one has the weaker measure explained by the EU-28 member states against the other variances during this period of 2005-2014. Mostly all of the variances have measure explained by the principle components over the half of the 100% measure for their importance. This Table-3 shows that these variances have heavy importance explained by three principle components for the economic performance of the EU-28.

Table-4-4-4 of ***Total Variance Explained*** show that these three main components provide 72,550 % of Cumulative Initial Eigenvalues of which the first THREE components. The first component has 39,918%, mostly 40,0%, the second component has 17,689% and the third components has 14,943% of Cumulative from Extraction Sums of Squared Loadings. The first three components have very considerable importance to analyse performance of EU-28 by closed to three-fourth of total variance explained in percent. The other components have less considerable measure in total variance explained in percent over first three components.

In the Table-4-4-5 of ***Component Matrix*** in case of the *first variance* the SocPot2014 is the first variance by -,815; the second variance the HICPan2014 by ,787; the third variance GovDebt2014 by -,681. *In the second component* the first variance RisPov2014 by ,735; the second variance UnEmploy2014 by ,605; the third variance GDPcap2014 by ,539; in the *third component* the first variance GDPVol2014 by ,649; the second variance RisPov2014 by ,536; third variance UnEmploy2014 by -,434.

Within the component matrix the each component is set up by the general average of values according to eight variances by their different values in each component. In the first component first three variances, namely the SocPot2014, the second variance the HICPan2014 and the third variance GovDebt2014 have importance. But in the second component the other first three variances have importance, as RisPov2014, UnEmploy201 and GDPcap2014. In the third component GDPVol2014, RisPov2014 and UnEmploy2014 variances have more importance than the other five variances. In case of the Component Matrix the first component has the first three most important variances, of which is one is *GovDebt2014*. Also the *UnEmploy2014* variance has important role in the second and third components, because this is one of the first important variance of the second and third components. Therefore the factor analyses are based on two figures, namely first Factor analyse is based on the UnEmploy2014 and *GDPVol2014*; the second Factor analyse is based

on the UnEmploy2014 and GovDebt2014. The GDPVol2014 also has importance in the third component and this variance is one of the first three variances. The GDPVol2014 is the fourth variance of the first component by ,641 and the first variance of the third component by ,649. Therefore the UnEmploy2014, GDPVol2014 and GovDebt2014 variances have important role either in this Factor analyses or in the real economic performance of the EU-28 and MENA-4 included Turkey and the Arab countries: Saudi Arabia, Algeria and Egypt. Now these data don't include data of MENA-4 countries

In the Table-4-4-6***: Component Score Coefficient Matrix*** in case of the *first component* SocProt2014 is by value of -,255; HICPon2014 by ,247. In case of the *second component* RisPov2014 by value of ,519; UnEmploy2014 by ,428 and in case of the *third component* GDPVol2014 has value of ,543, RiskPov2014 by ,448, UnEmploy2014 by -,363 and LLearn2014 by -347.

It is well known that there are strong connections among three tables, namely Table-4-4-4: ***Total Variance Explained,*** the Table-4-4-5: ***Component Matrix*** and Table-6: ***Component Score Coefficient Matrix***. The value of first component in the Total of Initial Eigenvalues in the first line of Table-4-4-4 multiplicands with values of 1 component in Table-4-4-6, which gives values of 1 first component of Table-4-4-5, namely:

3,193 X -0,164 = -0,524 in the first line of first component in Table-4-4-5
3,193 X 0,201 = 0,641 in the second line
3,193 X 0,247 = 0,787 in the third
3,193 X -0,213 = - 0,681 in the fourth
3,193 X -0,255 = -0,815 in the fifth
3,193 X 0,194 = 0,619 in the sixth
3,193 X -0,034 = - 0,110 in the seventh
3,193 X 0,189 = 0,604 in the eighth

The same calculation methods can be seen in case of the second and third components of Table-4-4-5, which are follows:
1,415 X 0,428 = 0,605 in the first line of second component in Table-4-4-5
1,195 X -0,363 = - 0,434 in the first line of third component in Table-4-4-5

Finally the values of second and third components in Table-4-4-5: Component Matrix are given by multiplicand for the values of second component total of Initial Eigenvalues in Table-4-4-4 with values of second component in Table-4-4-6, for third component total of Initial Eigenvalues in Table-4-4-4 with values of third component in Table-4-4-6.

Table-4-4-6: Component Score Coefficient Matrix in EU-28, in 2005-2014 in %

	Component		
	1	2	3
UnEmploy2014	-,164	,428	**-,363**
GDPVol2014	,201	,004	**,543**
HICPan2014	,247	,140	,065
GovDebt2014	-,213	,151	,059
SocProt2014	-,255	,122	,253
LLeran2014	,194	,227	-,347
RiskPov2014	-,034	,519	**,448**
GDPcap2014	,189	,381	-,130

Extraction Method: Principal Component Analysis.
Source: Data are own calculated based on the SPSS

Table-4-4-7: Rotated Component Matrix[a] in EU-28, in 2005-2014 in %

	Component		
	1	2	3
GDPVol2014	**-,907**	,083	,078
Unemploy2014	**,838**	,388	,073
RiskPov2014	**,561**	,352	,194
GovDebt2014	,023	**,902**	-,029
SocProt2014	,341	**,800**	,032
LLeran2014	,002	-,162	**,779**
GDPcap2014	-,032	,052	**,737**
HICPan2014	-,224	-,273	**-,449**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Source: Data are own calculated based on the SPSS

Also there is a difficulty in case of Table-4-4-5: Component matrix, that the values of the UnEmploy2014 are very high in three components, namely -,524, ,605 and -,434, where the minus or plus values are not considerable difference, because in this case the absolute number or value is important. Also the values of GDPVol2014 are very high, namely ,641 in first and ,649 in the third components, the values of GDPcap2014 are very high as ,604 in first and ,539 in the second components. Also the RisPov2014 has high values as ,735 and ,536 in the

first and second components. Therefore the considerable similarly is among values in the same variances in case of different components, which makes difficulty for comparison.

This calculation needs for creating the other calculation under the rotation system, which can be seen in the Table –4-4-7: ***Rotated Component Matrix***. In this Table the GDPVol2014 is -,907 in the first component while in other components the GDPVol2014 has less considerable values. Also it is the same in cases of UnEmploy2014 has value ,838 and the RisPov2014 has value ,561 in the first component more than one in the other components. The GovDebt2014 has ,902 and SocProt2014 has ,800 value in the second component more than in the others one. Also the LLearn2014 has ,779 value and GDPcap2014 has ,737 values in the third component more than in the other one. The rotated component structure makes possibility for comparing among variances of different components. It is very important that the values of variances should be different in the different other components (See Table-4-4-7).

Factor analyses

The following step of the research is that the factor analyses, when in case of the first FACT1 three variances of the first component, namely GDPVol2014, UnEmploy2014 and RisPov2014 are compared with two variances of the second component, namely GovDebt2014 and SocProt2014. In the second FACT2 analyse three variances of the first component, namely GDPVol2014, UnEmploy2014 and RisPov2014 are compared with two variances of the third component, namely LLearn2014 and GDPcap2014.
Those countries from EU-28 are under "X" line and PLUS side, the GDPVol2014 is at high level, and the RisPov2014 and UnEmploy2014 are at low level.

FACT1 ("X") and FACT2 ("Y")

The first FACT1 analyse can be seen in the **Figure-4-4-1:** Factor-1 and Factor-2 Analysis for EU-28. In the Figure-1 the average value of the two, First and Second principle components is equal with zero, 0. The "X" and "Y" lines are the reference lines, which are average values of the countries, as EU-28 member states. In the "X" line concerning the FACT1 including three variances, namely GDPVol2014, UnEmploy2014 and RisPov2014, from the "0" to the right side is PLUS and from the left side is MINUS. From these approach the -,907 value of

GDPVol2014 is in this MINUS left side of "X" line. In case of those countries, which are under the "X" line in MINUS sector - they have highly level increase of GDPVol2014, and because the value of Unemploy2014 and RisPov2014 are plus, therefore these countries have low level in RisPov2014 and UnEmploy2014 in this same sector. (Also see the Table-4-4-8: Case Processing Summary[a] for Figure-4-4-1).

In the "Y" line concerning the FACT2 including two variances, namely GovDebt2014 and SocProt2014, from the "0" to the upper side is PLUS and from the down side is MINUS. From these approach the ,902 value of GovDebt2014 and ,800 value of SocProt2014 are in this PLUS upper side of "Y" line. In **Left-Upper-Side Sector** in case of those countries, which are upper side of "Y" line in PLUS sector - they have highly level increase of GovDebt2014 and SocProt2014. Also from the earlier analysed conditions the GDPvol2014 is also high. But the UnEmploy2014 and the RiskPov2014 are at low level.

In the **Left-Down-Side Sector** the GovDebt2014 and the SocProt2014 are at low level, the GDPVol2014 is high, the UnEmploy2014 is low, because of the consequence of high GDPVol2014, also the RisPov2014 is low.
In the **Right-Down Side Sector** the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. But the GovDebt2014 and SocProt2014 are at low level.
In the **Right-Up-Side Sector** the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. But the GovDebt2014 and SocProt2014 are at high level.

FACT1 ("X") and FACT3 ("Y")

Starting from the first FACT1 analyse can be seen in the **Figure-4-4-2:** Factor-1 and Factor-3 Analysis for EU-28. In the Figure-4-4-2 also the average value of the two, First and Second principle components is equal with zero, 0. The "X" and "Y" lines are the reference lines, which are average values of the countries, as EU-28 member states. In the "X" line concerning the FACT1 including three variances, namely GDPVol2014, UnEmploy2014 and RisPov2014, from the "0" to the right side is PLUS and from the left side is MINUS.

In the "Y" line concerning the FACT3 including two variances, namely LLearn2014 and GDPcap2014, from the "0" to the upper side is PLUS and from the down side is MINUS.

From these approach the ,779 value of LLearn2014 and ,737 value of GDPcap2014 are in this PLUS upper side of "Y" line.

In **Left-Upper-Side Sector** in case of those countries, which are upper side of "Y" line in PLUS sector - they have highly level increase of LLearn2014 and GDPcap2014. Also from the earlier analysed conditions the GDPvol2014 is also at high level. But the UnEmploy2014 and the RiskPov2014 are at low level.

In the **Left-Down-Side Sector** the GovDebt2014 and the SocProt2014 are at low level, the GDPVol2014 is high, the UnEmploy2014 is low, because of the consequence of high GDPVol2014, also the RisPov2014 is low. But the LLearn2014 and GDPcap2014 are at low level.

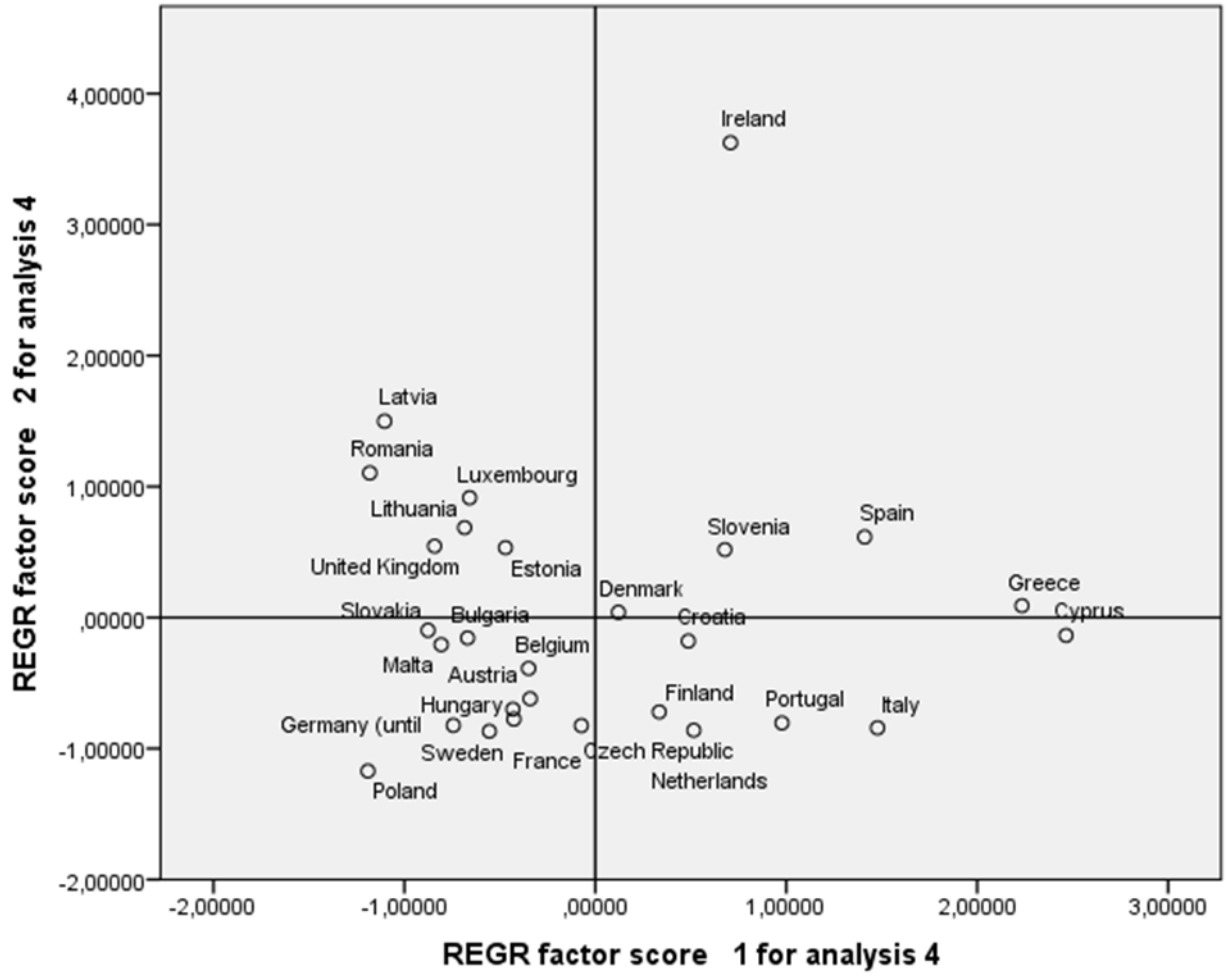
In the **Right-Down Side Sector** the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. But the GovDebt2014 and SocProt2014 are at low level. . But the LLearn2014 and GDPcap2014 are at low level.

In the **Right-Up-Side Sector** the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. But the GovDebt2014 and SocProt2014 are at high level. Also the LLearn2014 and GDPcap2014 are at highly level.

See in detailed in Figure-4-4-1 and Figure-4-4-2:

```
DATA: FAC1_4=col(source(s), name("FAC1_4"))
  DATA: FAC2_4=col(source(s), name("FAC2_4"))
  DATA: Countries=col(source(s), name("Countries"), unit.category())
  GUIDE: axis(dim(1), label("REGR factor score   1 for analysis 4"))
  GUIDE: axis(dim(2), label("REGR factor score   2 for analysis 4"))
  ELEMENT: point(position(FAC1_4*FAC2_4), label(Countries))
```

GGraph



* Chart Builder

Figure-4-4-1: Factor-1 and Factor-2 Analysis for EU-28 in 2005-2014 in %
Source: Data are own calculated based on the SPSS

```
/GRAPHDATASET NAME="graphdataset" VARIABLES=FAC1_4 FAC3_4 Countries MISSING=LISTW
  /GRAPHSPEC SOURCE=INLINE.
BEGIN GPL
  SOURCE: s=userSource(id("graphdataset"))
  DATA: FAC1_4=col(source(s), name("FAC1_4"))
  DATA: FAC3_4=col(source(s), name("FAC3_4"))
  DATA: Countries=col(source(s), name("Countries"), unit.category())
  GUIDE: axis(dim(1), label("REGR factor score   1 for analysis 4"))
```

GUIDE: axis(dim(2), label("REGR factor score 3 for analysis 4"))
ELEMENT: point(position(FAC1_4*FAC3_4), label(Countries)) END GPL

Table-4-4-8: Case Processing Summary[a for] **Figure-4-4-1** in EU-28, in 2005-2014 in %

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
28	100,0%	0	0,0%	28	100,0%

a. Squared Euclidean Distance used

Source: Data are own calculated based on the SPSS

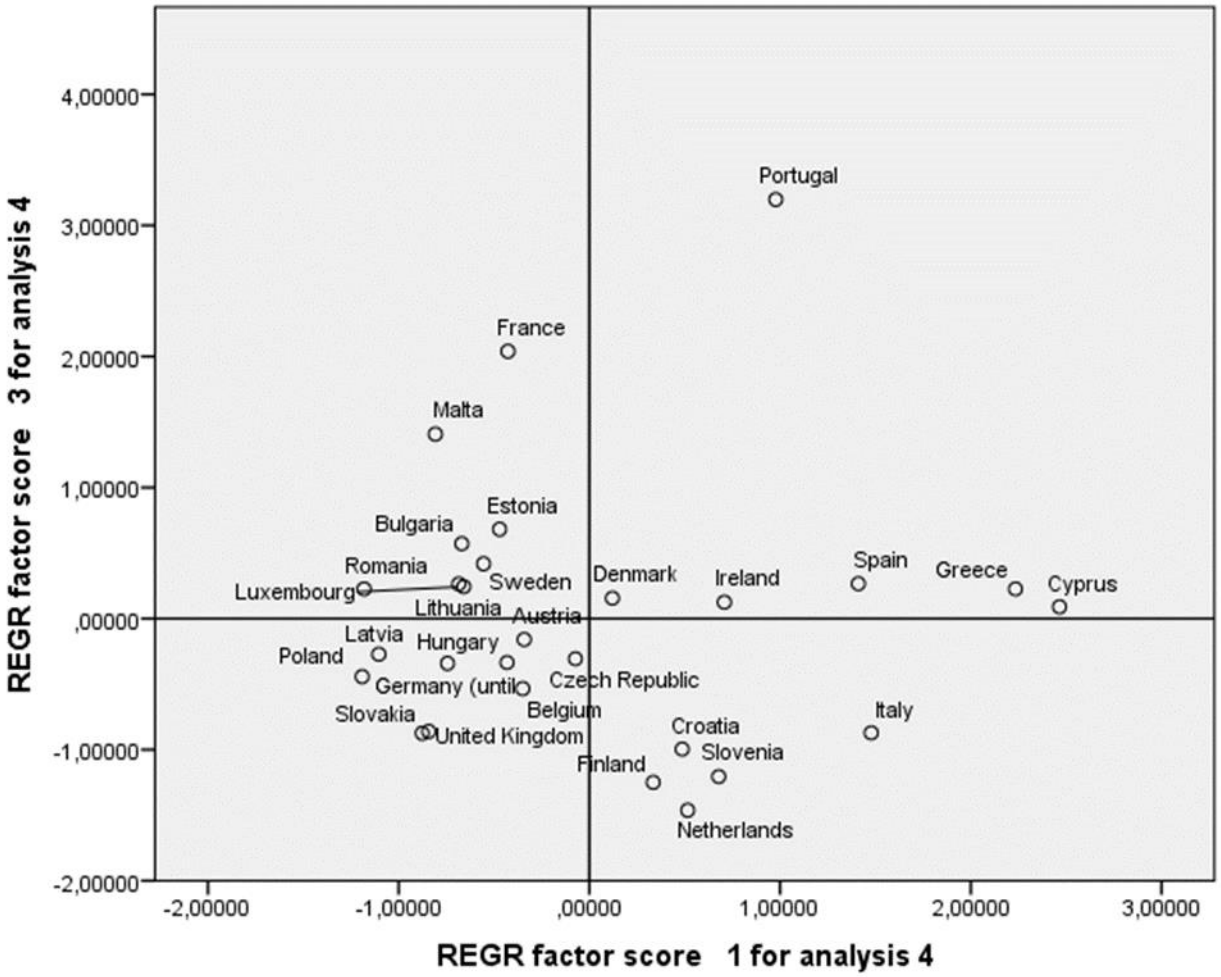


Figure-4-4-2: Factor-1 and Factor-3 Analysis in EU-28, in 2005-2014 in %
Source: Data are own calculated based on the SPSS
DATASET DECLARE D0.7638405787722926.

Cluster analyses for EU-28 and MENA-4

The cluster analyses show the separation of the EU-28 member states based on their economic capacity and growing rate according to the eight variances within three components and factor analyses, how three components are within two comparing the FACT1 with FACT2 and FACT1 with FACT3.

The cluster analyse system separates the EU-28 member states and shows how these countries are closed by their special performance. In a group those EU member states can be selected, which have the smallest distance from each other. From point of view the Figure-4-4-3: Dendrogram for EU-28 shows very clearly the structure system for the different groups of the EU-28 member states. Based on the Figure-4-4-3 and the Table-4-4-10: Agglomeration Schedule for EU-28 for Figure-4-4-3, the dendrogram structure can be cut between 10 and 15 value of the Figure-4-4-3, by which three main country-groups can be created. Also the Table-4-4-11: Case Processing Summary[a] for EU-28 for Figure-4-4-3 in according to the Figure-4-4-3.

The biggest group includes 22 member states closed to each other in field of their economic performance. The biggest country group originally also can be separated into 10 smaller country-group. The explain is for the large number of the biggest country group within EU-28 that the economic growing rate of this EU-member state group closed to different developed EU member states. The highly developed economies have decreasing growing rate and less developed economies have higher growing rate for their GDP volume and GDP per capita. Two contradicting growing rates within this group of 22 EU-member states became closed to each other. Therefore for example Germany, Belgium, Austria, Hungary, Sweden, Denmark, United Kingdom, Netherlands and Italy with Bulgaria, Romania, Poland, Croatia and Lithuania became members of this country group. Naturally the world economic crisis of 2006 made a large brake for the economic growth of the EU-member states, but this was for the shorter period than in case of developing countries.

The second country-group was consisting of two member states, namely France and Portugal, which countries were connected by mostly similarly economic growth rate with different economic developed levels

The third country –group included Spain, Cyprus, Greece and Ireland, where the low economic growth and low level of GDP volume growth were closed in case of Spain and Cyprus, but in Greece the unemployment rate was so highly and Ireland realised highly strong GovDebt2014 and SocProt2014 in its economic performance with low level for GDPVol2014 and GDPcap2014, in spite that the financial support given by the EU per capita for Ireland has been the highest level for several years in 2010s. The GovDebt2014 and SocProt2014 of Ireland could be kept at highly level, because of highly level of the social protection, like pension system and health care were strengthened by EU support (see Figure-4-4-1 and Figure-4-4-3).

The Table-4-4-9: ***Squared Euclidean Distance-1-3*** for EU-28 shows the distance among the EU member states in fields of economic growth rate, namely GDPVol2014 and GDPcap2014 also with other variances of the factor analyses. The largest distance is between Ireland from Poland by 71,260; from France by 54,691; from Hungary by 52,408 and from Germany by 54,314. Also the distance is very large between growing rate level of Ireland, Greece and Spain of the third country group and the growing rate level of the other EU-member states.

The Figure-4-4-4: ***Dendrogram for EU-28 and MENA-4*** can easier understood with the other tables as Table-4-4-13: Agglomeration Schedule for EU-28 and MENA-4; Table-4-4-14: Case Processing Summary[a] for EU-28 and MENA-4; Table-4-4-15: Case Summaries[a] for EU-28 and MENA-4.

When we cut the Dendrogram at 10 value of this figure, the Figure-4-4-4 shows clearly the four country-groups including EU-28 member states and MENA-4, namely Middle East and North Africa, Algeria, Egypt, Saudi Arabia and Turkey with 220 million inhabitants, which is equally with 44% as share of all EU-28 population. Therefore this population of MENA-4 is very considerable even in case of compare.
If the compare is realised between two dendrogram structures, it can declared that the differences is not considerable exactly for case of EU-28, because mostly the same clusters are for EU-28. the biggest country-group includes 21 EU member states, and only Malta

changed to the other third country-group with MENA-3 countries, France and Portugal, which last two EU member states were together in the first Dendrogram structure (see Figure-4-4-3). In the second country-group the same EU member states are included as Spain, Cyprus, Greece and Ireland, as these were in the Figure-3 (also see Figure-4-4-1 and Figure-4-4-2). Only Saudi Arabia is alone meaning as an independent country-group.

This Dendrogram structure shows that the difference does not change for EU-28 and the MENA-3 countries with those three EU member states Portugal, France and Malta, which have low level growing rate for their GDPVol2014 and GDPper2014 (see Figure-4-4-1 and Figure-4-4-2). The Saudi Arabia has a special economic conditions, because in spite that this country has considerable GDPVol2014 growing rate with mostly fixed national unemployment rate, which is not depending on the fluctual number of the foreign guest employees, but the number of foreign employees is changing as the prosperity of the world economy, but in Saudi Arabia the social protection and government debt are highly increasing. Social protection is increasing because the infrastructure for service of population as education and health care and social support system for considerable unemployed share of the population.

Distance is well shown in the Table-4-4-12: Squared Euclidean Distance EU-28 and MENA-4, Countries 1-8. The Table-4-4-12 shows the distance among the EU-28 member states and MENA-4 countries in fields of economic growth rate, namely GDPVol2014 and GDPcap2014 also with other variances of principle components and the factor analyses. The largest distance is between Saudi Arabia and Ireland by 130,140; Saudi Arabia and Greece by 110,674; Saudi Arabia and Cyprus by 93,824 and between Saudi Arabia and Egypt by 67,393; the distance is 84,572 with Spain. Mostly the distance is the biggest between Saudi Arabia and different EU-28 member states. The distance between Saudi Arabia and UK is also quite considerable by 71,853.

Also the distance between Egypt and Portugal is considerable as 40,066. Generally the distance between Egypt and EU-28 member states is mostly between 20,000 and 40,000, while the distance between Spain and other countries is 15,000 – 20,000. Also it can be mentioned that the distance is quite high between Ireland and Poland by 45,000. This is also an example how the Ireland has large distance with other EU-28 member states.

The reason for the large distance among Saudi Arabia is based on the considerable developing growth rate mostly after the world economic crisis of 2006. When the prosperity of the world economy started the crude oil export sharply increased from Saudi Arabia to the highly developed economies, mostly to EU-28 member states. The increased demand for the crude oil stimulated the Saudi oil export, which led to increase crude oil revenues and the quick GDP growth rate in volume and per GDP in this Arab country. Therefore Saudi Arabia could implement more prosperity economic growth than the EU-28, which is shown by data of distance among Saudi Arabia and EU-28 in Tables-4-4-12-15. (Also see the Figure-4-4-4).

Table-4-4-9: Squared Euclidean Distance-1 in EU-28, in 2005-2014 in %

Case	1:Belgium	2:Bulgaria	3:Czech Republic	4:Denmark	5:Germany (until	6:Estonia	7:Ireland	8:Greece	9:Spain	10:France
1:Belgium	0,000	4,902	7,111	2,393	1,593	7,613	43,297	25,411	15,062	15,559
2:Bulgaria	4,902	0,000	7,161	6,292	6,981	9,164	42,179	27,885	17,158	12,034
3:Czech Republic	7,111	7,161	0,000	11,693	7,576	8,330	49,736	27,092	22,550	10,293
4:Denmark	2,393	6,292	11,693	0,000	5,949	5,565	32,295	17,820	7,484	14,016
5:Germany (until	1,593	6,981	7,576	5,949	0,000	9,229	54,314	36,394	21,169	14,255
6:Estonia	7,613	9,164	8,330	5,565	9,229	0,000	30,038	24,504	13,028	5,944
7:Ireland	43,297	42,179	49,736	32,295	54,314	30,038	0,000	36,656	18,734	54,691
8:Greece	25,411	27,885	27,092	17,820	36,394	24,504	36,656	0,000	16,422	32,787
9:Spain	15,062	17,158	22,550	7,484	21,169	13,028	18,734	16,422	0,000	24,708
10:France	15,559	12,034	10,293	14,016	14,255	5,944	54,691	32,787	24,708	0,000
11:Croatia	3,922	9,860	5,660	5,202	6,579	7,774	35,122	18,948	9,839	17,708
12:Italy	6,432	13,562	8,971	6,013	10,286	11,709	37,576	14,362	8,575	20,521
13:Cyprus	21,679	22,203	26,669	13,832	29,514	23,078	27,058	14,389	2,954	32,770
14:Latvia	11,841	11,258	15,934	11,590	15,041	12,185	33,199	29,015	16,127	23,369
15:Lithuania	5,992	2,463	9,740	5,151	9,282	6,700	31,070	25,798	11,055	13,846
16:Luxembourg	9,479	13,986	11,662	7,475	11,328	2,346	32,588	23,900	14,619	10,698
17:Hungary	1,308	7,431	11,176	3,533	1,691	10,992	52,408	28,863	17,135	17,231
18:Malta	8,502	12,242	22,079	5,787	8,023	9,901	48,246	36,818	19,045	13,739
19:Netherlands	11,672	20,243	12,001	15,082	10,744	14,169	48,499	43,498	19,292	23,545
20:Austria	2,678	8,832	10,795	4,075	1,686	7,428	46,111	35,130	14,474	13,914
21:Poland	6,752	6,569	9,608	14,181	4,665	19,261	71,260	45,809	31,467	20,400
22:Portugal	30,682	23,657	30,260	23,353	29,705	22,402	48,518	40,527	19,258	17,075
23:Romania	6,568	7,056	9,576	6,580	7,837	3,428	30,007	29,658	14,535	12,366
24:Slovenia	9,428	19,890	15,068	8,056	12,987	10,668	29,204	19,821	8,906	25,718
25:Slovakia	2,940	3,734	6,941	7,888	4,592	12,833	47,899	31,572	20,862	20,739
26:Finland	6,360	12,735	5,976	10,344	6,262	10,354	43,504	34,769	16,614	19,133
27:Sweden	2,826	3,973	5,836	4,862	3,074	7,143	54,434	26,154	19,613	7,746
28:United Kingdom	3,150	9,357	13,941	4,630	4,407	8,616	35,429	35,934	14,145	21,953

This is a dissimilarity matrix, *Source*: Data are own calculated based on the SPSS

Table-4-4-9: continued: Squared Euclidean Distance-2 in EU-28, in 2005-2014 in %

Case	11:Croatia	12:Italy	13:Cyprus	14:Latvia	15:Lithuania	16:Luxembourg	17:Hungary	18:Malta	19:Netherlands	20:Austria
1:Belgium	3,922	6,432	21,679	11,841	5,992	9,479	1,308	8,502	11,672	2,678
2:Bulgaria	9,860	13,562	22,203	11,258	2,463	13,986	7,431	12,242	20,243	8,832
3:Czech Republic	5,660	8,971	26,669	15,934	9,740	11,662	11,176	22,079	12,001	10,795
4:Denmark	5,202	6,013	13,832	11,590	5,151	7,475	3,533	5,787	15,082	4,075
5:Germany (until	6,579	10,286	29,514	15,041	9,282	11,328	1,691	8,023	10,744	1,686
6:Estonia	7,774	11,709	23,078	12,185	6,700	2,346	10,992	9,901	14,169	7,428
7:Ireland	35,122	37,576	27,058	33,199	31,070	32,588	52,408	48,246	48,499	46,111
8:Greece	18,948	14,362	14,389	29,015	25,798	23,900	28,863	36,818	43,498	35,130
9:Spain	9,839	8,575	2,954	16,127	11,055	14,619	17,135	19,045	19,292	14,474
10:France	17,708	20,521	32,770	23,369	13,846	10,698	17,231	13,739	23,545	13,914
11:Croatia	0,000	2,191	14,362	9,513	7,738	7,410	6,189	17,530	8,092	6,415
12:Italy	2,191	0,000	9,598	18,652	12,995	13,371	8,863	19,438	9,637	8,786
13:Cyprus	14,362	9,598	0,000	25,639	17,741	26,204	24,246	30,412	24,834	22,881
14:Latvia	9,513	18,652	25,639	0,000	5,275	7,851	12,636	21,568	26,033	15,948
15:Lithuania	7,738	12,995	17,741	5,275	0,000	8,845	8,522	13,286	17,799	8,716
16:Luxembourg	7,410	13,371	26,204	7,851	8,845	0,000	11,169	13,169	17,738	10,100
17:Hungary	6,189	8,863	24,246	12,636	8,522	11,169	0,000	6,971	15,063	2,772
18:Malta	17,530	19,438	30,412	21,568	13,286	13,169	6,971	0,000	24,852	5,808
19:Netherlands	8,092	9,637	24,834	26,033	17,799	17,738	15,063	24,852	0,000	7,466
20:Austria	6,415	8,786	22,881	15,948	8,716	10,100	2,772	5,808	7,466	0,000
21:Poland	12,800	18,756	37,282	15,952	10,520	21,190	6,113	18,504	19,363	9,373
22:Portugal	29,560	27,938	23,228	35,353	25,265	29,479	30,247	20,961	37,497	24,756
23:Romania	6,991	14,542	25,913	3,811	3,633	3,014	8,737	11,566	17,267	7,973
24:Slovenia	2,873	5,201	15,795	11,379	14,038	7,245	10,972	20,389	12,328	10,572
25:Slovakia	6,194	11,830	26,755	8,216	4,763	13,809	4,714	17,103	16,333	8,090
26:Finland	3,806	5,797	21,652	19,134	12,195	13,735	9,977	20,539	1,589	5,364
27:Sweden	7,569	10,624	26,016	13,018	6,404	9,140	2,929	8,384	16,889	5,161
28:United Kingdom	6,528	11,489	24,307	10,504	6,423	9,568	4,679	9,682	10,175	2,918

This is a dissimilarity matrix, *Source*: Data are own calculated based on the SPSS

Table-4-4-9: Squared Euclidean Distance-3 in EU-28, in 2005-2014 in %

Case	21:Poland	22:Portugal	23:Romania	24:Slovenia	25:Slovakia	26:Finland	27:Sweden	28:United Kingdom
1:Belgium	6,752	30,682	6,568	9,428	2,940	6,360	2,826	3,150
2:Bulgaria	6,569	23,657	7,056	19,890	3,734	12,735	3,973	9,357
3:Czech Republic	9,608	30,260	9,576	15,068	6,941	5,976	5,836	13,941
4:Denmark	14,181	23,353	6,580	8,056	7,888	10,344	4,862	4,630
5:Germany (until	4,665	29,705	7,837	12,987	4,592	6,262	3,074	4,407
6:Estonia	19,261	22,402	3,428	10,668	12,833	10,354	7,143	8,616
7:Ireland	71,260	48,518	30,007	29,204	47,899	43,504	54,434	35,429
8:Greece	45,809	40,527	29,658	19,821	31,572	34,769	26,154	35,934
9:Spain	31,467	19,258	14,535	8,906	20,862	16,614	19,613	14,145
10:France	20,400	17,075	12,366	25,718	20,739	19,133	7,746	21,953
11:Croatia	12,800	29,560	6,991	2,873	6,194	3,806	7,569	6,528
12:Italy	18,756	27,938	14,542	5,201	11,830	5,797	10,624	11,489
13:Cyprus	37,282	23,228	25,913	15,795	26,755	21,652	26,016	24,307
14:Latvia	15,952	35,353	3,811	11,379	8,216	19,134	13,018	10,504
15:Lithuania	10,520	25,265	3,633	14,038	4,763	12,195	6,404	6,423
16:Luxembourg	21,190	29,479	3,014	7,245	13,809	13,735	9,140	9,568
17:Hungary	6,113	30,247	8,737	10,972	4,714	9,977	2,929	4,679
18:Malta	18,504	20,961	11,566	20,389	17,103	20,539	8,384	9,682
19:Netherlands	19,363	37,497	17,267	12,328	16,333	1,589	16,889	10,175
20:Austria	9,373	24,756	7,973	10,572	8,090	5,364	5,161	2,918
21:Poland	0,000	37,928	13,485	24,440	3,320	13,012	5,430	11,597
22:Portugal	37,928	0,000	26,459	34,410	37,594	32,642	26,052	34,951
23:Romania	13,485	26,459	0,000	9,696	7,104	11,638	7,538	5,511
24:Slovenia	24,440	34,410	9,696	0,000	14,458	9,204	15,607	8,941
25:Slovakia	3,320	37,594	7,104	14,458	0,000	9,278	5,144	5,981
26:Finland	13,012	32,642	11,638	9,204	9,278	0,000	11,001	7,248
27:Sweden	5,430	26,052	7,538	15,607	5,144	11,001	0,000	8,995
28:United Kingdom	11,597	34,951	5,511	8,941	5,981	7,248	8,995	0,000

This is a dissimilarity matrix, *Source*: Data are own calculated based on the SPSS

Ward Linkage

Table-4-4-10: Agglomeration Schedule in EU-28, in 2005-2014 in %

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	1	17	,654	0	0	7
2	19	26	1,448	0	0	19
3	5	20	2,291	0	0	7
4	11	12	3,387	0	0	13
5	6	16	4,560	0	0	10
6	2	15	5,791	0	0	15
7	1	5	7,226	1	3	11
8	9	13	8,704	0	0	21
9	21	25	10,364	0	0	15
10	6	23	12,120	5	0	17
11	1	27	14,332	7	0	14
12	4	28	16,647	0	0	14
13	11	24	18,973	4	0	19
14	1	4	22,273	11	12	18
15	2	21	27,224	6	9	16
16	2	3	32,345	15	0	22
17	6	14	37,575	10	0	23
18	1	18	42,874	14	0	22
19	11	19	50,802	13	2	25
20	10	22	59,340	0	0	26
21	8	9	69,118	0	8	24
22	1	2	81,661	18	16	23
23	1	6	97,738	22	17	25
24	7	8	115,536	0	21	27
25	1	11	137,655	23	19	26
26	1	10	163,402	25	20	27
27	1	7	216,000	26	24	0

Source: Data are own calculated based on the SPSS

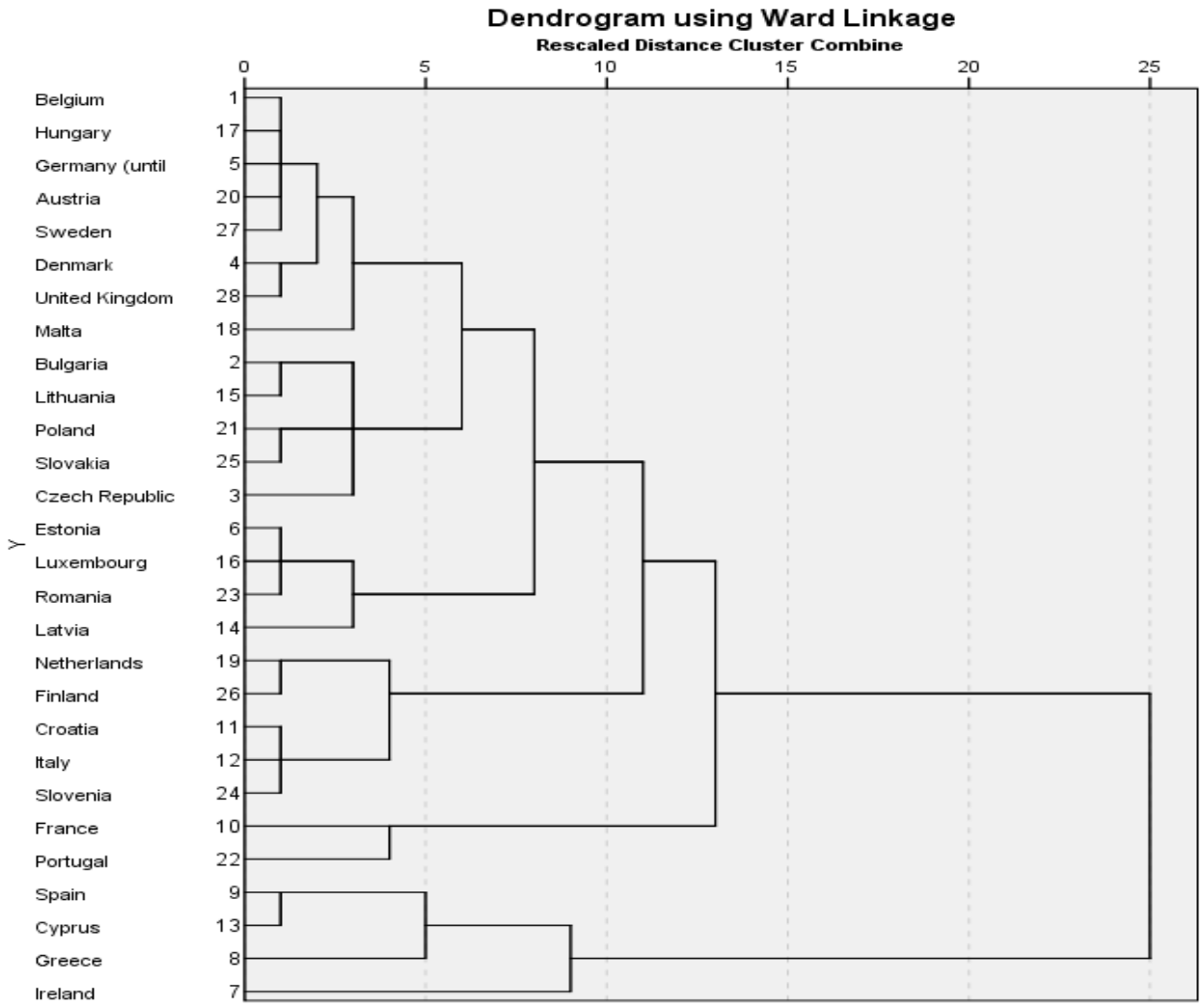


Figure-4-4-3: Dendrogram in EU-28, in 2005-2014 in %
Source: Data are own calculated based on the SPSS

Table-4-4-11: Case Processing Summary[a] for Figure-4-4-3, in EU-28, in 2005-2014 in %

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
28	100,0%	0	0,0%	28	100,0%

a. Squared Euclidean Distance used

Source: Data are own calculated based on the SPSS

Cluster: Squared Euclidean Distance

Table-4-4-12: Squared Euclidean Distance EU-28 and MENA-4, Countries 1-8, in 2005-2014 in %

Case	1:Belgium	2:Bulgaria	3:Czech Republic	4:Denmark	5:Germany (until	6:Estonia	7:Ireland	8:Greece
1:Belgium	0,000	2,988	4,597	1,871	1,069	5,330	29,689	16,540
2:Bulgaria	2,988	0,000	4,611	4,023	4,059	5,828	28,831	18,896
3:Czech Republic	4,597	4,611	0,000	7,931	4,892	5,520	33,812	17,477
4:Denmark	1,871	4,023	7,931	0,000	4,510	3,862	21,328	10,803
5:Germany (until	1,069	4,059	4,892	4,510	0,000	6,540	36,817	24,036
6:Estonia	5,330	5,828	5,520	3,862	6,540	0,000	19,579	14,726
7:Ireland	29,689	28,831	33,812	21,328	36,817	19,579	0,000	22,477
8:Greece	16,540	18,896	17,477	10,803	24,036	14,726	22,477	0,000
9:Spain	13,206	13,399	18,480	6,355	18,531	10,638	10,876	8,832
10:France	10,393	7,553	6,838	9,334	9,708	3,899	35,684	20,953
11:Croatia	3,017	6,308	4,124	3,406	5,397	4,904	21,302	10,412
12:Italy	4,572	8,590	6,552	3,686	7,927	8,011	24,447	7,063
13:Cyprus	18,975	18,214	23,079	11,461	25,817	18,840	17,981	8,154
14:Latvia	10,584	10,003	12,567	9,780	12,933	8,294	17,724	20,518
15:Lithuania	4,846	2,209	7,328	3,513	7,424	4,443	18,847	15,513
16:Luxembourg	7,765	10,125	8,476	6,157	9,333	1,686	18,963	15,198
17:Hungary	,639	4,183	6,924	2,296	1,101	6,931	33,540	18,614
18:Malta	5,686	7,544	14,310	4,390	5,096	6,958	33,026	25,379
19:Netherlands	4,549	8,148	5,423	5,640	5,660	6,811	27,374	17,749
20:Austria	1,293	4,147	6,736	2,019	1,257	4,792	29,511	19,998
21:Poland	4,010	3,613	5,930	9,203	2,744	12,217	45,857	29,814
22:Portugal	21,332	15,749	21,459	15,946	20,753	15,024	30,880	28,173
23:Romania	5,716	5,765	7,130	5,787	6,378	2,486	18,638	20,485
24:Slovenia	7,527	13,464	10,874	5,963	10,673	7,047	16,148	11,086
25:Slovakia	1,909	2,521	4,437	5,381	2,910	8,144	31,300	20,865
26:Finland	2,793	5,781	2,971	4,982	3,623	5,935	27,360	17,177
27:Sweden	1,684	2,252	3,516	3,214	1,957	4,489	35,519	17,126
28:United Kingdom	1,963	5,152	8,948	2,706	3,219	5,545	22,407	20,770
29:Turkey	8,418	5,046	10,174	7,422	7,709	4,711	33,727	26,873
30:Saudi Arabia	71,176	69,243	73,416	71,076	61,945	67,203	130,140	110,674
31:Algeria	9,816	14,659	21,300	8,740	9,493	10,315	32,338	33,986
32:Egypt	20,688	30,453	36,530	16,444	21,966	19,105	38,887	38,597

Source: Data are own calculated based on the SPSS

Table-4-4-12: Squared Euclidean Distance EU-28 and MENA-4, Countries 9-16. in 2005-2014 in % continued

Case	9:Spain	10:France	11:Croatia	12:Italy	13:Cyprus	14:Latvia	15:Lithuania	16:Luxembourg
1:Belgium	13,206	10,393	3,017	4,572	18,975	10,584	4,846	7,765
2:Bulgaria	13,399	7,553	6,308	8,590	18,214	10,003	2,209	10,125
3:Czech Republic	18,480	6,838	4,124	6,552	23,079	12,567	7,328	8,476
4:Denmark	6,355	9,334	3,406	3,686	11,461	9,780	3,513	6,157
5:Germany (until	18,531	9,708	5,397	7,927	25,817	12,933	7,424	9,333
6:Estonia	10,638	3,899	4,904	8,011	18,840	8,294	4,443	1,686
7:Ireland	10,876	35,684	21,302	24,447	17,981	17,724	18,847	18,963
8:Greece	8,832	20,953	10,412	7,063	8,154	20,518	15,513	15,198
9:Spain	0,000	18,701	8,096	7,098	2,299	12,244	7,745	11,762
10:France	18,701	0,000	11,978	13,804	25,448	17,573	9,535	8,187
11:Croatia	8,096	11,978	0,000	1,791	12,590	6,840	4,880	5,070
12:Italy	7,098	13,804	1,791	0,000	8,562	14,262	8,444	10,046
13:Cyprus	2,299	25,448	12,590	8,562	0,000	21,033	13,385	21,411
14:Latvia	12,244	17,573	6,840	14,262	21,033	0,000	4,332	5,042
15:Lithuania	7,745	9,535	4,880	8,444	13,385	4,332	0,000	6,160
16:Luxembourg	11,762	8,187	5,070	10,046	21,411	5,042	6,160	0,000
17:Hungary	13,932	11,327	4,274	5,900	20,068	11,019	5,975	8,669
18:Malta	16,048	9,094	12,228	13,401	24,952	17,439	9,662	10,781
19:Netherlands	11,089	12,349	2,847	3,480	15,184	13,861	7,857	9,431
20:Austria	11,779	8,743	4,435	5,795	18,416	11,895	5,498	7,714
21:Poland	23,997	13,347	8,853	12,631	29,655	13,541	7,731	15,199
22:Portugal	14,415	11,685	20,661	19,848	18,738	25,430	16,732	20,925
23:Romania	12,583	9,141	4,999	11,190	22,535	2,734	3,262	2,059
24:Slovenia	7,324	17,935	2,082	4,498	13,584	6,964	8,894	4,655
25:Slovakia	16,469	13,711	4,047	7,982	22,222	7,398	3,835	9,676
26:Finland	12,308	11,257	1,799	3,083	16,767	11,989	6,719	8,587
27:Sweden	15,525	5,089	5,155	6,887	21,124	11,712	4,847	7,434
28:United Kingdom	11,195	14,201	4,060	7,591	19,257	7,095	3,970	6,544
29:Turkey	18,595	2,963	13,959	16,446	26,858	17,152	7,174	10,236
30:Saudi Arabia	84,572	51,718	79,974	81,511	93,824	88,220	72,663	74,218
31:Algeria	22,018	17,013	17,533	19,456	33,758	23,465	15,625	14,233
32:Egypt	27,229	28,859	26,840	27,578	39,813	33,879	27,392	20,377

Case	Table-4-4-12: Continued: Squared Euclidean Distance EU-28 and MENA-4, Countries 17-24, in 2005-2014 in %							
	17:Hungary	18:Malta	19:Netherlands	20:Austria	21:Poland	22:Portugal	23:Romania	24:Slovenia
1:Belgium	,639	5,686	4,549	1,293	4,010	21,332	5,716	7,527
2:Bulgaria	4,183	7,544	8,148	4,147	3,613	15,749	5,765	13,464
3:Czech Republic	6,924	14,310	5,423	6,736	5,930	21,459	7,130	10,874
4:Denmark	2,296	4,390	5,640	2,019	9,203	15,946	5,787	5,963
5:Germany (until	1,101	5,096	5,660	1,257	2,744	20,753	6,378	10,673
6:Estonia	6,931	6,958	6,811	4,792	12,217	15,024	2,486	7,047
7:Ireland	33,540	33,026	27,374	29,511	45,857	30,880	18,638	16,148
8:Greece	18,614	25,379	17,749	19,998	29,814	28,173	20,485	11,086
9:Spain	13,932	16,048	11,089	11,779	23,997	14,415	12,583	7,324
10:France	11,327	9,094	12,349	8,743	13,347	11,685	9,141	17,935
11:Croatia	4,274	12,228	2,847	4,435	8,853	20,661	4,999	2,082
12:Italy	5,900	13,401	3,480	5,795	12,631	19,848	11,190	4,498
13:Cyprus	20,068	24,952	15,184	18,416	29,655	18,738	22,535	13,584
14:Latvia	11,019	17,439	13,861	11,895	13,541	25,430	2,734	6,964
15:Lithuania	5,975	9,662	7,857	5,498	7,731	16,732	3,262	8,894
16:Luxembourg	8,669	10,781	9,431	7,714	15,199	20,925	2,059	4,655
17:Hungary	0,000	4,561	6,144	1,147	3,845	20,741	6,700	8,337
18:Malta	4,561	0,000	12,834	3,136	11,433	14,019	9,069	15,309
19:Netherlands	6,144	12,834	0,000	3,768	9,715	21,180	9,037	6,422
20:Austria	1,147	3,136	3,768	0,000	5,476	15,912	5,853	8,164
21:Poland	3,845	11,433	9,715	5,476	0,000	25,629	9,661	17,309
22:Portugal	20,741	14,019	21,180	15,912	25,629	0,000	18,599	24,330
23:Romania	6,700	9,069	9,037	5,853	9,661	18,599	0,000	6,443
24:Slovenia	8,337	15,309	6,422	8,164	17,309	24,330	6,443	0,000
25:Slovakia	2,879	11,216	6,875	4,515	2,038	25,700	5,291	9,839
26:Finland	4,582	11,766	,704	3,193	6,914	20,568	7,087	6,081
27:Sweden	1,889	5,514	6,775	2,489	3,469	18,109	6,240	11,315
28:United Kingdom	2,444	6,211	5,243	1,983	7,004	22,593	3,710	6,085
29:Turkey	9,118	4,540	12,918	6,184	10,956	12,956	8,240	20,293
30:Saudi Arabia	65,419	55,918	63,574	57,029	63,350	59,584	74,825	89,136
31:Algeria	9,864	3,530	15,675	6,815	19,388	25,373	12,840	18,636
32:Egypt	19,691	12,251	24,185	16,202	36,102	40,066	24,098	23,576

Source: Data are own calculated based on the SPSS

Case Countries 25-32	**Table-4-4-12**: Continued: Squared Euclidean Distance EU-28 and MENA-4, in 2005-2014 in %							
	25:Slovakia	26:Finland	27:Sweden	28: United Kingdom	29: Turkey	30:Saudi Arabia	31: Algeria	32:Egypt
1:Belgium	1,909	2,793	1,684	1,963	8,418	71,176	9,816	20,688
2:Bulgaria	2,521	5,781	2,252	5,152	5,046	69,243	14,659	30,453
3:Czech Republic	4,437	2,971	3,516	8,948	10,174	73,416	21,300	36,530
4:Denmark	5,381	4,982	3,214	2,706	7,422	71,076	8,740	16,444
5:Germany (until	2,910	3,623	1,957	3,219	7,709	61,945	9,493	21,966
6:Estonia	8,144	5,935	4,489	5,545	4,711	67,203	10,315	19,105
7:Ireland	31,300	27,360	35,519	22,407	33,727	130,140	32,338	38,887
8:Greece	20,865	17,177	17,126	20,770	26,873	110,674	33,986	38,597
9:Spain	16,469	12,308	15,525	11,195	18,595	84,572	22,018	27,229
10:France	13,711	11,257	5,089	14,201	2,963	51,718	17,013	28,859
11:Croatia	4,047	1,799	5,155	4,060	13,959	79,974	17,533	26,840
12:Italy	7,982	3,083	6,887	7,591	16,446	81,511	19,456	27,578
13:Cyprus	22,222	16,767	21,124	19,257	26,858	93,824	33,758	39,813
14:Latvia	7,398	11,989	11,712	7,095	17,152	88,220	23,465	33,879
15:Lithuania	3,835	6,719	4,847	3,970	7,174	72,663	15,625	27,392
16:Luxembourg	9,676	8,587	7,434	6,544	10,236	74,218	14,233	20,377
17:Hungary	2,879	4,582	1,889	2,444	9,118	65,419	9,864	19,691
18:Malta	11,216	11,766	5,514	6,211	4,540	55,918	3,530	12,251
19:Netherlands	6,875	,704	6,775	5,243	12,918	63,574	15,675	24,185
20:Austria	4,515	3,193	2,489	1,983	6,184	57,029	6,815	16,202
21:Poland	2,038	6,914	3,469	7,004	10,956	63,350	19,388	36,102
22:Portugal	25,700	20,568	18,109	22,593	12,956	59,584	25,373	40,066
23:Romania	5,291	7,087	6,240	3,710	8,240	74,825	12,840	24,098
24:Slovenia	9,839	6,081	11,315	6,085	20,293	89,136	18,636	23,576
25:Slovakia	0,000	4,200	3,417	3,223	11,493	78,142	16,928	31,463
26:Finland	4,200	0,000	4,984	4,346	11,973	69,884	15,514	26,865
27:Sweden	3,417	4,984	0,000	5,268	4,914	60,238	12,542	24,205
28:United Kingdom	3,223	4,346	5,268	0,000	9,770	71,853	7,551	16,431
29:Turkey	11,493	11,973	4,914	9,770	0,000	49,468	9,256	21,404
30:Saudi Arabia	78,142	69,884	60,238	71,853	49,468	0,000	64,271	67,393
31:Algeria	16,928	15,514	12,542	7,551	9,256	64,271	0,000	5,395
32:Egypt	31,463	26,865	24,205	16,431	21,404	67,393	5,395	0,000

This is a dissimilarity matrix, *Source*: Data are own calculated based on the SPSS

Ward Linkage

Table-4-4-13: Agglomeration Schedule for EU-28 and MENA-4, in 2005-2014 in %

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	1	17	,320	0	0	3
2	19	26	,672	0	0	17
3	1	5	1,288	1	0	4
4	1	20	1,979	3	0	11
5	6	16	2,822	0	0	10
6	11	12	3,717	0	0	15
7	21	25	4,736	0	0	18
8	2	15	5,841	0	0	18
9	9	13	6,990	0	0	21
10	6	23	8,224	5	0	19
11	1	27	9,503	4	0	16
12	4	28	10,855	0	0	16
13	10	29	12,337	0	0	24
14	18	31	14,102	0	0	23
15	11	24	15,997	6	0	20
16	1	4	18,313	11	12	22
17	3	19	20,994	0	2	20
18	2	21	24,357	8	7	22
19	6	14	27,855	10	0	26
20	3	11	32,487	17	15	26
21	8	9	37,766	0	9	25
22	1	2	43,054	16	18	27
23	18	32	48,347	14	0	28
24	10	22	56,067	13	0	28
25	7	8	67,294	0	21	30
26	3	6	79,453	20	19	27
27	1	3	92,964	22	26	29
28	10	18	113,104	24	23	29
29	1	10	141,687	27	28	30
30	1	7	182,721	29	25	31
31	1	30	248,000	30	0	0

Source: Data are own calculated based on the SPSS

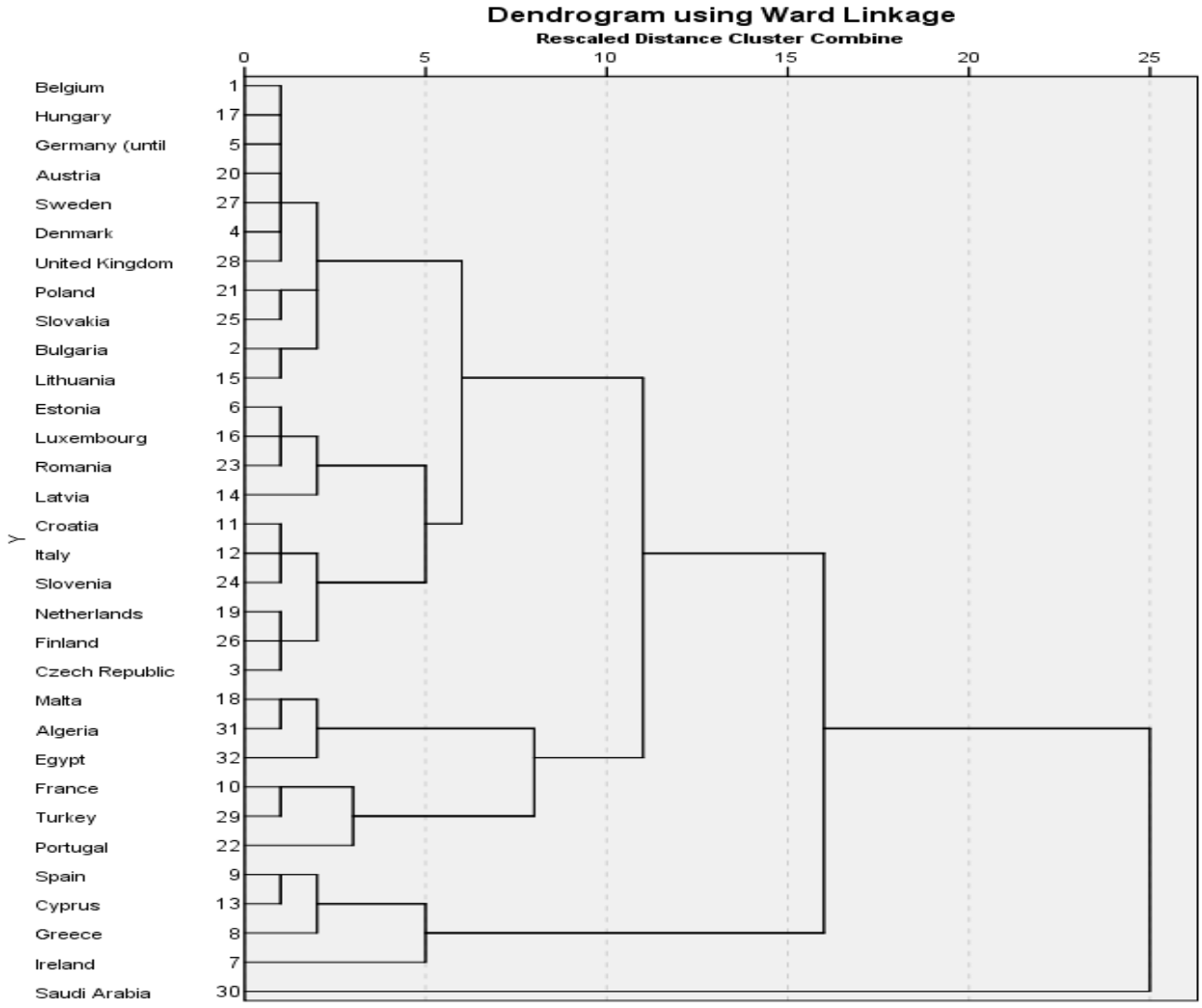


Figure-4-4-4: **Dendrogram for EU-28 and MENA-4 in 2005-2014 in %**

Source: Data are own calculated based on the SPSS

Summarize

Table-4-4-14: Case Processing Summary[a] for EU-28 and MENA-4 in 2005-2014 in %

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Countries * Ward Method	32	100,0%	0	0,0%	32	100,0%

a. Limited to first 100 cases.

Source: Data are own calculated based on the SPSS

b.

Table-4-4-15: Case Summaries[a] for EU-28 and MENA-4 in 2005-2014 in %

			Countries
Ward Method	1	1	Belgium
		2	Bulgaria
		3	Czech Republic
		4	Denmark
		5	Germany (until
		6	Estonia
		7	Croatia
		8	Italy
		9	Latvia
		10	Lithuania
		11	Luxembourg
		12	Hungary
		13	Netherlands
		14	Austria
		15	Poland
		16	Romania
		17	Slovenia
		18	Slovakia
		19	Finland
		20	Sweden
		21	United Kingdom
		Total N	21
	2	1	Ireland
		2	Greece
		3	Spain
		4	Cyprus
		Total N	4
	3	1	France
		2	Malta
		3	Portugal
		4	Turkey
		5	Algeria
		6	Egypt
		Total N	6
	4	1	Saudi Arabia
		Total N	1
	Total	N	32

Source: Data are own calculated based on the SPSS

The Table-4-4-16: ***Case Processing Summary for EU-28 and MENA-4*** the Ward Method was implemented in all of the variances in 100% for cases of 32 countries including EU-28 and MENA-4. Also the Table-4-4-17: Case Summaries for EU-28 and MENA-4 shows the Ward Method in all cases of the 4 country groups according to the Dendrograms in Figure-4-4-4, where each variance has been described by Mean and Std. Deviation for each country group. The values of the Mean are the general average values among countries of each country group, while the Std. Deviation is the distance between the minimum and maximum values within each country group. Finally the Table-4-4-16 also provides average value of four country groups and the average distance (Std. Deviation) between the minimum and maximum values in case of each variance. The fourth country group includes only one country, namely Saudi Arabia which does not have "average" value and naturally this country does not have distance between the minimum and maximum values, because these values only are existing among countries' values.

The average value of UnEmploy2014 is high by 296,0 in case of the second country group including Spain, Cyprus, Greece and Ireland, but Ireland is responsible for the average value of this variance, because value of Ireland is very high, as it is shown in Figure-4-4-4 (Dendrograms). Also the other highest value for the Mean (average value in all of the variances is 266,6 in variance of GovDebt2014 in case of the second country group, where Ireland also is responsible for the high level of this variance. Also the GDPVol2014 is very highly decreasing by -159,4 in the second country group. Based on the economic performance the second country group implemented the worst results from all of four country groups. The SocProt2014 had considerable increasing growth rate by 140,7 in the second country group, which mostly stimulated the GovDebt2014 to increase in the period researched between 2005 and 2014.

The performance of Saudi Arabia is somehow favourable, because the GDPVol2014 has increased by 217,0 for this period, which was higher by 1,5 times than the unemployment growing rate. But the UnEmploy2014 has considerably increased by 137,0 since 2005 and also HICPan2014 increased by 580,0 in this period, also the inactive share of the population was considerable and increasing growing rate of the population number, partly foreign employed people came into Saudi Arabia, which led to the mainly low level of the

GDPcap2014 (GDP growth rate per capita) by 112,4 in this period. The growing rate of SocProt2014 was kept back very strongly by increasing growing rate as 12,5, which also contributed to the mostly zero level of the growing rate of the GovDebt2014 (See Table-4-4-17).

The economic growth rate of the third country group is not favourable, but it is not the worst. The GDPVol2014 and the GDPcap2014 (per capita) were at low level in this country group (France, Portugal, Turkey, Malta, Algeria and Egypt). The UnEmploy2014, HICPan2014 (consumer price level) and RisPov2014 were considerable in this group, which needed for increasing the SocProt2014, which stimulated the GovDebt2014 to increase. These economic conditions stimulated the inflation to increase and decrease value of the national currencies. The stability of Euro also could be depending on the wronging performance of France. Unfortunately the GDPcap2014 was more wrong in the first and second country groups to decrease the future possibility of prosperity of the EU-28.

This chapter overviewed the most important economic variances of EU-28 and MENA-4 main country groups concerning three main components and by their correlating analyses. The prosperity of economic performance should be better mainly in field of GDPcap2014 and to decrease the unemployment rate and strengthen the social network by increasing moderately the SocProt2014.

Table-4-4-16: Case Processing Summary for EU-28 and MENA-4 in 2005-2014 in %

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
UnEmploy 2005-2014 * Ward Method	32	100,0%	0	0,0%	32	100,0%
GDPVol2014 * Ward Method	32	100,0%	0	0,0%	32	100,0%
HICPan2014 * Ward Method	32	100,0%	0	0,0%	32	100,0%
GovDebt2014 * Ward Method	32	100,0%	0	0,0%	32	100,0%
SocProt2014 * Ward Method	32	100,0%	0	0,0%	32	100,0%
LLeran2014 * Ward Method	32	100,0%	0	0,0%	32	100,0%
RiskPov2014 * Ward Method	32	100,0%	0	0,0%	32	100,0%
GDPcap2014 * Ward Method	32	100,0%	0	0,0%	32	100,0%

Source: Data are own calculated based on the SPSS

Table-4-4-17: Case Summaries for EU-28 and MENA-4 in 2005-2014 in %

		Ward Method				
		1	2	3	4	Total
UnEmploy 2005-2014	Mean	122,7	**296,0**	111,4	**137,0**	142,7
	Std. Deviation	36,7	40,8	34,5		68,7
GDPVol2014	Mean	-18,4	**-159,4**	87,8	**217,0**	-8,8
	Std. Deviation	76,0	55,5	**167,9**		122,5
HICPan2014	Mean	69,8	-12,1	93,2	**580,0**	79,9
	Std. Deviation	54,7	77,4	79,7		113,1
GovDebt2014	Mean	190,4	**266,6**	135,9	0,1	183,8
	Std. Deviation	87,9	**131,2**	29,8		96,2
SocProt2014	Mean	112,9	**140,7**	118,3	12,5	114,3
	Std. Deviation	**9,0**	30,0	10,6		24,2
LLeran2014	Mean	114,1	112,6	180,9	323,0	133,0
	Std. Deviation	35,4	25,1	71,6		60,0
RiskPov2014	Mean	98,8	123,9	127,9	100,0	107,5
	Std. Deviation	16,0	6,7	31,1		22,2
GDPcap2014	Mean	37,4	46,0	68,6	**112,4**	46,7
	Std. Deviation	10,1	24,2	21,9		22,1

Source: Data are own calculated based on the SPSS

4.5 Some aspects of economic conditions of Middle East Region

Introduction

This chapter emphasizes the importance of setting up diversified economic structure in Middle East region including Saudi Arabia in order that these economies could decrease the vulnerable level of their economies. Over the mining sector the other one should be developed to create manufacturing capacity in field of phosphate fertilizers, alumina and aluminium. The Saudi Arabian Government focuses on increasing the national economic growth by the decreasing the foreign direct investments abroad. This means to increase the growth of GDP by through of extending national – local investments focusing on the developing the mining and service sectors accompanying with water management at the same time.

Economic structure and economic growth of Middle East Region

Middle East region is very famous and important for petrol export for the world market. In spite that this region has very considerable connection with the world market, this region could not almost be isolated from the negative impacts of the world economic crisis. The study analyses the employment issue concerning the impacts of global crisis on its changes in countries of Middle East region.

The regional economic growth was 3,6% in 2010, comparably it was 4,8% in 2008, and annual average growth was 6,0% during the pre-crisis period between 2003 and 2008. Also the economic growth made influences on the employment issues. The *economic growth of ME region (Middle East) in GDP* has annually averagely been closed to 6,0% for the pre-crisis period between 2003 and 2007, but this growth decreased to level of 4,8% in 2008, and lowest level of growth was 1,3% in 2009 in consequence of the world economic crisis. Fortunately the favourable economic growth started to increase to level of 3,6% in 2010 comparably to 1,3% in 2008 (IMF, 2010a; IMF, 2010b; see Table-4-5-1).

The estimation of IMF the further economic growth could be more favourable because of the possible increasing world economic activity by 4,8% in 2010, which stimulates crude oil mining sector production to supply the world market. In spite that the Developed Economies

and European Union had a very sharply declined in their GDP namely 0,3% in 2008 and -3,4% in 2008, these economies could realise about 2-3% growth after two year crisis period, which was enough for Middle East region to increase their economic growth based on the increasing petrol demand on the world market. At present in middle of 2010s the crude oil price stopped at moderately lower level price, because crude oil market became relatively full.

Also the world economic growth had favourable economic conditions resulted by increasing trend of economic activities of East Asia including Chine with 7,8% in 2008 and 7,0% in 2009 and South Asia including India with 5,9% in 2008 and 5,5% in 2009. In spite of decline occurred in other parts of the world economy, these Asian regions kept a quite highly level of growth rate with increasing consumption of crude oil, which stimulated the oil exporting countries to increase soon their petrol production. Chine continuously became more increasing petrol importing economy (IMF, 2010a).

In general based on the statistical data of the IMF and different international organizations the annual growth of Middle East and Saudi Arabia did not make more serious influences on the *unemployment conditions.* This can be explained that considerable foreign workers were employed in crude oil mining industry of these economies, mainly in Saudi Arabia. Many foreign workers came from the neighbour mostly Arab countries, namely Yemen, Iraq, Egypt and Sudan, also from India and Pakistan. Many foreign companies worked from highly developed countries. When the world economic crisis has started since 2008, almost foreign workers coming from Arab and other developing countries lost their jobs, but the national domestic workers employed in other economic sectors, first in services, still they were employed in their workplaces. This is the main reason, why the unemployment level did not change so sharply in Middle East region and also in Saudi Arabia, which mainly has not decreased under the level of 10% (ILO, 2010; see Table-4-5-2).

In Saudi Arabia the economic plans decided that the increasing rate of annual growth could be 4-5% till the end of 2010. Also the petroleum sector could increase its growth annual averagely by 2,5-3,0%, while the increasing growth of value added products generated by the non-oil mining sector would be by 30% till the beginning of 2010s. Mostly the Saudi government wants to develop manufacturing sector for crude oil, chemical industry, acid production, phosphate fertilizers, alumina and aluminium, also finally the infrastructure background for the mining and manufacturing industry, mainly in field of setting up logistic

system from mining fields to manufacturing places and the biggest Saudi Arab seaports, as exporting supply areas. According to official report of Government that state mining company realised about 7 billion dollar US valued investments, which led Saudi Arabia to be leader of phosphate fertilizers, alumina and aluminium by the end of 2010 (Saudi Arabian Monetary Agency, 2011).

Table-4-5-1: Annual real GDP growth rates, world and regions in 2005-2011 (%)

Region	**2005**	**2006**	**2007**	**2008**	**2009**	**2010***	**2011***
World	4,6	5,2	5,3	2,8	-0,6	4,8	4,2
Developed economies, and EU	2,6	2,9	2,6	0,3	-3,4	2,3	2,0
Middle East	5,4	5,6	6,1	4,8	1,3	3,6	5,1
North Africa	5,0	6,1	5,8	5,3	3,5	5,1	5,1

** 2010 are preliminary estimates, 2011 are projection*

Source: IMF, World Economic Outlook, October, 2010

Table-4-5-2: Unemployment rate by sex, world and regions in 2005-2011 in %

Region	**2000**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2011***
World	6,3	6,4	6,2	5,9	5,6	5,7	6,3	6,2
Developed economies, and EU	6,7	7,2	6,9	6,3	5,8	6,1	8,4	8,8
Middle East	10,6	11,2	11,2	10,7	10,5	10,2	10,3	10,3
North Africa	14,1	11,9	11,6	10,5	10,2	9,6	9,9	9,8
	Males							
Middle East	8,8	9,4	9,1	8,8	8,5	8,1	8,2	8,2
North Africa	11,9	9,7	9,3	8,4	8,4	7,7	7,8	7,8
	Females							
Middle East	17,4	17,4	18,4	17,2	17,3	17,4	17,3	17,0
North Africa	20,5	18,1	18,0	16,2	14,9	14,8	15,3	15,0

** 2011 are preliminary estimates, 2011 are projection*

Source: ILO, Trends Econometric Models, October, 2010

SWOT Analysis concerning the economic growth of Middle East and Saudi Arabia

Strengthen

The considerable incomes of the Arab crude oil exporting economies are useful for the economic growth of the Arab world. The considerable revenues coming from crude oil mining sectors provides enough financial possibility for Arab oil exporting economies to realise investments in Arab world or in other highly developed economies, either EU or US within scheme of Foreign Direct Investments based on their business plan (see in detailed in importance of business plan structure in Laskai, A – Zéman, Z, 2013). The investments implemented in the Arab economies provide job possibility for the national Arab labour forces. Also the cheap human resources can provide competitiveness for Arab exporting companies.
By the end of 2009 in Saudi Arabia there were many foreign workers, about 4,7 million one, which proofed that the intensive economic growth needs more human resources than Saudi national economy could supply.

Weakness

Solution can be to increase investments in different sectors of economies by through harmonized investments activities, emphasizing on growing service sector like tourism, which can provides more jobs for the local inhabitants to avoid of emigration from villages or small towns to large cities. The diversified economic growth in either Middle East region or in Saudi Arabia is absent, which can lead in future those national economies of this region including Saudi Arab one will be very vulnerable and depend on fluctuating prices of some raw materials, energy resources and couple of manufactured products on the world market.

The difficulties of economic growth of Middle East and Saudi Arab economies concern their narrow national markets, which are not meeting demands of creating large economic measures at enterprise level. This situation makes backwardness for their economies mostly continuously. The other some economies in Middle East and also North-Africa, where there are some Arab and crude oil exporting economies have large national markets based on increasing population, but the inhabitants have less purchase power parity (PPP), which

cannot stimulate considerable investment activities for interest of their economic growth. The narrow national markets of Middle East from point of view either less number of population or less PPP, the Arab oil revenues are stimulated to flow out of the Arab world to realise investments in highly developed economies.

Optimal

Increasing world market demands for the crude oil stimulate to increase price level of crude oil on the world market. The increasing world market price level of the crude oil provides enough international background for economic growth and jobs for Arab labour forces in the Arab world. Also the highly developed economies provide possibility for the Arab capital to realise investments by increasing employment in highly developed economies.

Threaten

The dependence of Middle East and Saudi Arabia in very considerably on the world market prices, at first the one of crud petrol, which makes possibility to fluctuate the export revenues of these economies and their economic growth. The Foreign Direct Investment (FDI) coming from Arab oil exporting countries to other Arab countries with lack of capital resulted in so separated and concentrated investments only in several sectors, which investment structure often remains the developed and backwardness gap between different regions even in one country. This situation is also described in case of Hungary (see in Zbida, et al, 2011, p. 63.)

Some economic sectors should be developed in Middle East region and Saudi Arabia, which directly provide jobs for local population based on increasing their skill level to keep the competitiveness conditions against foreign employees. Also the national *Arab employees* should be employed previously first, and after that the foreigner. This economic growth can lead to create wider *diversified economic structure,* which can be more flexible for the changing demands of the world market. The other economic difficulty of Middle East is that *balance of foreign trade,* which is mostly negative for non-crude oil exporting economies, and the other crude oil economies has foreign trade depending on one side export structure mainly based on the crude oil energy resources.

4. 6 Employment conditions in Middle East Region

Introduction

Middle East region is very famous and important for petrol export on the world market. In spite that this region has very considerable connection with the world market, this region could almost be isolated from the impacts of the world economic changes and crisis in field of national Arab employment issues. The study analyses the employment issue concerning the impacts of global crisis on employment changes in countries of Middle East region. Also case-study emphasizes the possible investments in Arab economies and its favourable influences on their employment conditions.

There are considerable issues in employment conditions in field of differences between number of male, female and youth-under-25 employees in Arab countries. These possible solutions are for these difficulties to increase investments in different sectors of economies by through harmonized investment activities and increase the skill and knowledge level of employees, decrease the share of vulnerable, working poverty and working poor employment, increase the labour productivity and also strengthen the integration of women in labour markets.

The employment issue by international comparing

The case study analyses the employment issue by comparing its conditions before economic global crisis and after that in Middle East region, and also using SWOT analyses for covering the economic-social relations. The possible solutions are needed for decreasing youth-age, female unemployment, increasing the skills of workers and labour productivity growth rates. There is a problem, that the value added production and the vertically integrated product channel can not often provide jobs and increasing level of employment in Middle East. The more efficient work by using advanced technology resulted in less number of employees. Some experts emphasize the favourable conditions for the vertically integrated product channel and export oriented strategy, which focuses on using efficient labour force and not to increase level of employment in any way either (Neszmélyi, et al, 2007; Rust – Zeithaml, 2004; Rodrik, 2007).

In general the unemployment rate was at lowest level, namely 5,8% in 2007, before the year of crisis, 2008, but 6,1% in 2008 and 8,4% in 2009 in highly developed countries, but in Middle East the lowest level of unemployment rate was 10,2% in 2008, and almost their unemployment rate did not change so much, as 10,3% in 2009, and about 10,3% in 2010 in this region. This means, that the economic crisis started originally in 2007 in highly developed countries, and its influences only arrived the some parts of world economy, for example Middle East later by one year. But in this region the unemployment rate has not changed so much more than 1% by for period of 2000-2010 (see ILO, 2010b). In North – Africa the largest difference in unemployment rate has been changed maximum by 4,5% for period of 2000-2010. This shows that in the other parts of the Arab world, namely in the North – Africa the employment was more vulnerable and dependence on the world economic crisis than Middle East in the first decade of 2000s.

Males and Females Unemployment

In Middle East the unemployment rate was the highest in cases of women and youth generation, as it can be experienced based on the data of ILO, 2010b. In general as the unemployment rate has moderately been decreasing for one decade, and only there was within 1% decreasing from the level of 2000 to the estimated level of 2011 in unemployment issue, this trend was somehow the same as in case of unemployment rate of males. In Middle-East unemployment rate decreased only by 0,3% between 2000 and 2011, and males unemployment decreased by 0,6% during the same time, which was little higher than in North-Africa by the end of 2011 (ILO, 2010b; IMF, 2010a; IMF, 2010b). But the males unemployment rate has decreased by about 1,2% from level of 9,4% in 2004 approximately to the level of 8,2% in 2011, which means that the male unemployment rate was high in 2004, because of falling economic activities concerning the world market demands for crude oil. Here also the same reasons can be accepted as point of view of general unemployment conditions. Since the world economic crisis occurred in 2008, the males unemployment rate has increased from 8,1% in 2006 to 8,2% in 2009-2011. This decline of males-unemployment has not been considerable for the period of the world economic crisis.

The unemployment rate and males unemployment of North Africa as also considerable part of the Arab world was higher than in Middle East in period of 2000-2004. In North-Africa the

decline of unemployment rate was 4,3% between 2000 and 2011, and males unemployment was 4,1% during the same time, which was more decline in North-Africa than in Middle East. In Middle East the females unemployment has been quite fixed between 17,4-17,0% for period of 2000 and 2011 and the decline was not more than about 0,4%. While the females unemployment rate of North Africa had a considerable decline from level of 20,5% in 2000 to the level of 15,0% in 2011, which decline was equally with 5,5% during the same period.

The reason of difference in unemployment rate of two regions was the stronger national employment in North Africa than in Middle East, so the world economic crisis or any world economic changes could make influences more for the unemployment conditions in North Africa, than in Middle East. The number of foreign workers was higher in Middle East than in North-Africa. In Middle East the national unemployment rate has generally been mainly fixed for either crisis or increasing economic growth periods of 2000-2011, because the considerable fluctuation was in case of foreign employees (ILO, 2010a; 2010b). In North-Africa the role of foreign employees was less considerable than in Middle East, because the national domestic employees had priority on national labour force markets. They continuously kept the low level of foreign workers in North-Africa, which resulted in higher fluctuating unemployment rate of domestic labour forces than in Middle East.

The Table-4-5-1 shows, that how much share of males employment in field of employment-to-population rate in different regions, and share of male employment was mostly three times more than the one of female employment in field of employment-to-population rate in Middle East. Also in North-Africa share of males' employment in field of employment-to-population rate was about three times more than share of females' employment. This means that the female labour force has not been integrated yet in two regions for the latest decade.

The youth under 25 year unemployment rate was less in the world economy than in highly developed economies. In general the youth unemployment rate has been between 12,8-12,6% for period of 2000-2011, almost double times more than the general unemployment rate in the world economy in the same time (see ILO, 2010a; ILO, 2010b). But the youth unemployment rate was higher between 13,5-18,2% in period of 2000-2011 in highly developed economies and EU, than the average level of youth unemployment rate in the world economy.

Employment conditions in Middle East based on the SWOT analyse

Strengthen

The Arab crude oil exporting economies have considerable price income coming from crude oil export for the world market, which provides financial resources to introduce serious investment activities to create workplaces, jobs for wider domestic population, therefore to increase employment level in the Middle East region. The important financial resources provide considerable infrastructure investment– like education and logistic systems including highly developed transport network for mining sector and manufacturing industries. The education system creates possibility to increase the skilled level of knowledge for human resources in Middle East region.

Weakness

In Middle East the vulnerable employment and working poverty are considerable. Vulnerable employment was at level of third of all employed workers in 2009-2010 years. By the one hand the share of working poor 1,25 US dollar per a day is not so considerable, by the other hand the share of working poverty 2,0 US dollar per a day is very common, almost about one fifth of the whole employees (IMF, 2010a).

Opportunity

The continuous world market demand for the crude oil, as fossil energy resource creates a favourable background for Middle East region including first crude oil exporting economies to increase their investment in different economic branches to increase the employment level.

Threaten

This one-side investment structure does not help to increase considerably the employment level (see Table-4-5-2). Also the same negative or unfavourable conditions became created, when FDIs of highly developed economies are realised in less capital force in Arab economies. This situation is described in cases of Romania and Bulgaria (see Káposzta J. et

al, 2008). Also there is a considerable problem for economies of Middle East, namely lack of deep economic and financial cooperation, which could help them based on any even financial supports. According to EU Cohesion Policy, this cooperation scheme provides wide-side financial background to decrease gap among the different developed level member states in EU-27.

Table 4-6-1: Employment-to-population rate by sex, world and regions in 2000-2011 in %

Region	**2000**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2011***
World	61,5	61,4	61,4	61,6	61,7	61,6	61,2	61,1
Developed economies, and EU	56,7	55,9	56,2	56,7	57,1	57,1	55,5	54,7
Middle East	44,8	44,9	45,1	45,3	45,3	45,1	45,2	45,4
North Africa	43,9	45,2	45,4	46,0	46,1	46,5	46,4	46,6
	Males							
Middle East	68,5	67,7	68,1	68,0	67,9	67,5	67,7	68,0
North Africa	67,1	68,5	68,7	69,4	69,1	69,7	69,7	69,8
	Females							
Middle East	18,6	19,6	19,7	20,1	20,2	20,3	20,5	20,7
North Africa	20,8	22,1	22,3	22,8	23,2	23,4	23,4	23,6

* 2011 are preliminary estimates, 2011 are projection

Middle East countries: Saudi Arabia, Qatar, Bahrain, United Arab Emirates, Oman, Yemen, Kuwait, Jordanian, Syria, Iraq, Lebanon

North Africa countries: Egypt, Sudan, Somalia, Libya, Tunisia, Algeria, Morocco, Mauritania

Source: ILO, Trends Econometric Models, October, 2010

Table 4-6-2: Annual employment growth, world and regions in 2008-2011 in %

Region	2001-06	2007	2008	2009	2011*
World	1,9	1,8	1,5	0,7	1,3
Developed economies, and EU	0,9	1,4	0,6	-2,2	-0,9
Middle East	3,6	2,9	2,3	3,0	2,9
North Africa	3,5	2,6	3,1	2,1	2,5

* 2011 are preliminary estimates, 2011 are projection

Source: ILO, Trends Econometric Models, October, 2010

Middle East- countries: Saudi Arabia, Qatar, Bahrain, United Arab Emirates, Oman, Yemen, Kuwait, Jordanian, Syria, Iraq, Lebanon

North Africa-countries: Egypt, Sudan, Somalia, Libya, Tunisia, Algeria, Morocco, Mauritania

Source: ILO, Trends Econometric Models, October, 2010

In general there is a large gap between males, females and youth employment ratio in Middle East and North-Africa, also not enough supports for SME-s to extent their employment. The solution that this gap should be decreased and increase the support for small and medium scale enterprises to increase the employment possibilities for wider social groups including women and youth under 25 year old. The solution of employment issue needs for important financial resources providing considerable infrastructure investments in order to create wide-side educational and logistic systems. The logistic system ensures the technical and physical background of product channel for highly developed transport network, mining sector and manufacturing industries. The educational system can ensure the increasing educated level of labour force in Middle East and North Africa, in order that the efficiency of labour force can be realised and to be competitive. The educational system is not unified in countries of Middle East. Unfortunately the advisory services frequently does not have considerable role for increasing the skilled level of middle managers in companies and SME-s in Middle East region. Because the continuous advisory system could ensure more knowledge in up-today economic activities of firms for example in fields of submitting applications to obtain financial supports, creating business plan and financial accountancy. Therefore the supervisory can complete the knowledge after the regular study program.

Both of logistic and educational systems are needed for future considerable economic development. The national labour force market of Middle East does not so flexibly adapt to

the changing trend of world economy, crisis periods and skill-knowledge level demanded by the world economy. The transnational corporations use their owned experts, managers and highly educated workers in field of human resource management and mainly they don't use such labour force from the national-local labour force market. Also the crude oil exporting countries of Middle East do not ensure any social security for foreign visitor workers, and they send back foreign visitor workers to their homeland, when the employment decreases in case of economic crisis. This leads that the employment level of domestic national labour force does not considerably change based on the world economic fluctuation.

4.7 Economic structure changes in Saudi Arabia

Introduction

The economic structure changes are overviewed from point of employment conditions in Saudi Arabia, because the economic growth is based on skilled level of labour forces and in the same time on the innovation development. The mining sector of fossil energy in Saudi Arabia is basic principle sector, but the Saudi economy needs to extent its economic structure in order that most of population of the country can obtain jobs for employment. In general the *mining sector is very efficient* and productive in Saudi Arabia, which means based on the innovation development this sector provides considerable share of the GDP and export-price income for the country. The study uses analyse methods based on the statistical data and their compares, which emphasizes the economic structure of Saudi Arabia concerning different economic sectors. The data can provide overview on shares of some main economic branches and their roles in employment issues and GDP production.

The mining and quarrying sector provided jobs for 1,78% of all employees in 2000 and 1,6% of them in middle of 2000s in Saudi Arabia. In the same time the mineral products had 88,3% share of all export of Saudi Arabia in 2000-2002 and 88,0% of all export by middle 2000s in million riyals. This means that the export price income after selling crude oils and other mining products ensured 2354 riyal per employee of this sector in 2000-2002 and 4357,4 riyal per employee of this sector in middle 2000s.

In general in Saudi Arabia the *mining sector based on the crude oil withdraw could be efficient* and productive, because of the high world market price can provide enough highly export-price income for the country with using less number of employees in this sector than in the other one. Less than 2% of all employees produced 88% of all export of Saudi Arabia in 2000s. Even the share of employees in the mining and quarrying sector has decreased since 2000s, but its share of export value remained at almost same level in Saudi Arabia. Even the share of employees in the mining and quarrying sector has decreased since 2000s, but its share of export value remained at almost same level in Saudi Arabia. The Saudi Arabia should develop the manufacturing industries in order *to produce highly value added products* leading to higher export price income, than to sell only crude oil to the world market. Also

manufacturing value added production helps Saudi Arabia to become diversified economy less sensitive from effects of the world economy.

The economic structure changes are overviewed from point of employment conditions in Saudi Arabia, because the economic growth is based on skilled level of labour forces and in the same time on the innovation development. The economic structure changes should meet the market demands and the labour force should be changed to follow demands of the economic structure changes. In this case the market demands, the economic structure changes, and the labour force structure changes have very strong correlations among themselves.

Naturally the economic growth or the economic structure changes are appearing in the economic activities of companies based on the general economic background at national and international economic levels. At national level the governmental, fiscal policy and also the monetary policy help or stimulate companies to follow the needed trends of economic growth. At the international level governments create the cross border economic co-operations to extent possibilities of economic activities for private companies. Saudi Arabia plays important role in field of supplying fossil energy resources on the world market.

The mining sector of fossil energy in Saudi Arabia is basic principle sector, but the Saudi economy needs to extent its economic structure in order that most of population of the country can obtain jobs for employment. In general the *mining sector is very efficient* and productive in Saudi Arabia, which means based on the innovation development this sector provides considerable share of the GDP and export-price income for the country. But fewer amounts of labour force or workers are employed in this mining sector, and even the number of employees in fossil energy resource sector continuously decreases from year to year. But the other part of employees should get works to keep satisfactory standard of their life. This economic process emphasizes the importance of economic structure changes for interest of economic growth.

Economic Structure of Saudi Arabia

This chapter uses analyse methods based on the statistical data and their compares, which emphasizes the economic structure of Saudi Arabia concerning different economic sectors. The data can provide overview on shares of some main economic branches and their roles in

employment issues and GDP production. For development of Saudi Arab economy there are some important essential scientific ideas, namely, ...labour markets are not only impacted by but can also impact outcomes related to global economic rebalancing. In countries that have historically relied on consumption for growth and which are seeking to expand exports, enhancing productivity will be essential as this reduces unit labour cost and can increase competitiveness in the global economy (ILO, 2011).

This emphasizes the international economic influences for economies, including also Saudi Arabia, how the national economies are impacted by the global economic processes. Also role of education for employees became skilled workers in order that any national economy can get competitiveness on the world market. The cooperation is between producers even in agricultural sector with using advisory system to keep the competitiveness of producers on national- domestic and international markets.

In general in Saudi Arabia the *mining sector based on the crude oil withdraw could be efficient* and productive, because of the high world market price can provide enough highly export-price income for the country with using less number of employees in this sector than in the other one. The mining and quarrying sector provided jobs for 1,78% of all employees in 2000 and 1,6% of them in middle of 2000s in Saudi Arabia. In the same time the mineral products had 88,3% share of all export of Saudi Arabia in 2000-2002 and 88,0% of all export by middle 2000s in million riyals. This means that the export price income after selling crude oils and other mining products ensured 2354 riyal per employee of this sector in 2000-2002 and 4357,4 riyal per employee in middle 2000s.

The other sectors had only several % share of the export value, for example chemical products had 5,0% in 2000-2002 and 3,9% in middle 2000s, plastic products had only 3,9% in 2000-2002 and 2,6% in middle 2000s. From point of view of the export capacity of Saudi Arabia one employee in Saudi mining and quarrying sector was very efficient in 2000s, and the other sectors' employees worked less efficient, because 47,6 riyal export value was per one employee of all of the sectors in 2000-2002 and 79,7 riyal export value was per one employee in middle 2000s in Saudi Arabia. It should be mentioned that not every economic sector played important role in export value or volume, and also not only crude oil production or other products of mining and quarrying sector participated in export of Saudi Arabia. In general it can be mentioned that less than 2% of all employees produced 88% of all export of

Saudi Arabia in 2000s. Even the share of employees in the mining and quarrying sector has decreased since 2000s, but its share of export value remained at almost same level in Saudi Arabia see Table-4-7-1.

Table 4-7-1. Employment conditions based on sectors in Saudi Arabia between 2000 and middle 2000s (1000 persons aged years and over)

Sectors	2000	Middle of 2000s
Agriculture, hunting and forestry	341,5	263,4
Fishing	7,9	12,2
Mining and quarrying	101,9	95,4
Manufacturing	440,7	448,3
Electricity, gas and water	76,0	65,6
Construction	515,9	629,6
Wholesale and retail trade	901,5	861,7
Restaurant and hotels	164,6	170,3
Transport and communications	242,3	265,3
Financial intermediation	42,5	49,8
Real estate, renting and business	139,5	143,2
Public administration and defence	1116,2	1212,9
Education	713,0	751,5
Health and social work	217,6	224,0
Other community and personal services	133,0	115,4
Private households with employed persons	551,0	595,9
Extra territorial organizations	5,3	8,4
Other activities	3,0	12,5
Total employed	5713,4	5925,4

Source: ILO, 2010, Report of Ministry of Economy and Planning, Saudi Arabia, Riyadh.

The Saudi Arabia has favourable possibilities in its foreign trade, namely all export value was higher than the import value, which means that the export value was 100%, but its import value only 50,9% of the export value in 2000-2002, and its import value only 47,2% of the export value in middle 2000s. This means that the share of import value has decreased in

value of export since the beginning of 2000 in Saudi Arabia. The foreign exchange rate was very favourable in 2000s. The positive foreign exchange rate can be remained by the continuous innovation development process in the mining and quarrying sector having the biggest share of Saudi export value. This innovation development of the mining and quarrying sector can ensure the competitiveness of this sector on the world market for the future (see Table-4-7-1 and Table-4-7-2; Report 2010; Yergin, 2008; EIA, 2008).

Also it can be mentioned that one side character of economic and consequently export structure resulted in not flexible and unfavourable conditions for structure of labour force in Saudi Arabia. *The import volume is generally very considerable for volume of demands of the domestic Saudi market*, but for the volume of export capacity is very favourable. Also the domestic market volume generally is not so large comparably for other large economies' one. *The considerable import volume* is resulted by unfavourable economic structure based on the non-diversified economic structure, which stimulates continuously highly level of import in fields of different kinds of products, for example electrical machines, equipment, tools; transport equipment and spare parts, base metal and articles of base metal, also chemical products.

Table 4-7-2. Export structure for main products in Saudi Arabia between 2000 and middle 2000s, in million riyals

Sectors	2002	Middle of 2000s
Mineral products	239,973	415,696
Chemical products	13,704	18,673
Plastic products	5,717	12,455
Total export including others	271,741	472,491

Source: Report of Ministry of Economy and Planning, Saudi Arabia, Riyadh, 2010
and NBSA (National Bank of Saudi Arabia) [2010]: Report. Riyadh, Saudi Arabia and Saudi Arabian Monetary Agency (2011), *Annual Report and Statistical Summary*, Riyadh

In general it can be declared that the as much as the export value was higher than the value of import the Saudi Government could use over plus crude oil export price incomes to cover costs of: 1- reconstructing highly developed infrastructure network for the industrial production, civil social life; 2- social-family supports, increasing standard of life for people of Saudi Arabia; 3- Foreign Direct Investments (FDI) provided by the Saudi Government and national corporations abroad, including bank deposits into international banks.

On the hand also the highly costly administration, governmental office network should be covered by the over plus crude oil export price incomes, which kind of costs can be titled as improductive, but important service sector. This service sector can provides large amount of people of the Saudi economy. On the other hand the FDIs invested by Saudi corporations are often very successful and effective, because these investments were realised mostly in highly developed economies, as US, European Union and some other important economies, as Switzerland and Japan.

The non-diversified economic structure is determined mostly by the unfavourable geographical background, for example drought, scarcity water, lack of many kinds of mining materials over the crude oil, lack of basic metal material in nature, less amount of natural resources over crude oil. These natural conditions led to very expensively agricultural production in Saudi Arabia, for example cost of the milk production is three times more than the world marker price of milk, and cereal production cost is four times more than the world market price of cereals. Even that the food, agricultural production and food manufacture production are needed for every-day life for Saudi population; these are not productive and efficient because of the unfavourable natural conditions. Therefore the import of these kinds of products is more cheaply than it is to be produced based on the food self-sufficiency strategy.

Also the agricultural production needs additional costs to direct production costs, for example infrastructure one, transport, road network, storing capacity, information network based on the computer techniques, feed supply for animals, veterinary service, frequently water irrigation supply and system-network, water storing. Any kinds of costs are to cover expenditures of agricultural production make agricultural production is non-competitive sector in Saudi Arabia based on the international compare.

Naturally in the highly developed economies, in US or in EU, the agricultural production is very highly costly. Even the cost level of farmers' life standard in these economies is by several times higher than the average level of farmers' life standard in the world economy. The agro-business including the costs of industrial inputs and manufacturing agricultural outputs with building up irrigation system has about 18% of GDP in the USA. The Saudi Arabia should develop the manufacturing industries in order *to produce highly value added products* leading to higher export price income, than to sell only crude oil to the world market. Also manufacturing value added production helps Saudi Arabia to become diversified economy less sensitive from the effects of the world economy.

4. 8 Energy resources in Saudi Arabia at the beginning of 2010s

Introduction

The energy strategy of Saudi Arabia can set up to increase its energy supply and secure the future investments at national economic level. This strategy can also be strengthened on the changing energy consumption structure of the USA. In USA primary energy consumption was 75 708 364 billion of Btu, in which the share of petroleum and natural gas was 46% and 30% in 1973, and their share was 62% of primary energy consumption, as totally 99 872 921 billion of Btu by the end of 2010. The MENA region has important considerable petroleum and gas resources of the world economy, their share of the world net oil export was about 37%, of which Saudi Arabia provide 43,8% by the middle of 2000. The study analyses how the importance of fossil energy resources can be strengthened in spite that the renewal energy resources have started to introduced in energy consumption of the world economy.

The energy strategy of Saudi Arabia can set up to increase its energy supply and secure the future investments at national economic level. This strategy can also be strengthened by the changing energy consumption structure of the USA. The study analyses how the importance of fossil energy resources can be strengthened in spite that the renewal energy resources have started to introduced in energy consumption of the world economy.

The Saudi Arab leaders want to increase importance of the strategic value added product production for example refining the crude oil in Saudi Arabia, which can be sold in USA, where the refining capacity is at very low concerning the demand level of fossil and petrol energy resources. In USA the refining capacity was about only 81,4% in 2007, but sometimes when natural catastrophe happened, for example Hurricans Rita and Katrina caused decreasing the refining capacity by 23% less, which means that almost less than half of demanded crud oil (EIA, 2008).

This strategic conception of Saudi Arabia needs for restructuring the production structure meeting better for the demands of the world economy including highly developed economies. Also to ensure the increasing supply of fossil energy resources and securing this supply need more investment activities in the Saudi Kingdom either to increase the value added products

in fossil energy sector or in non-fossil energy resource sector in order to diversify the economic structure to supply more industrial products for households. This diversified structure of economy provides more jobs and more products for domestic consumers and possible export.

Energy resource management in Saudi Arabia

The case study provides some statistical overviews of the energy supply of Saudi Arabia as considerable part of the Middle East region for possible integrating into the world economy and obtaining the revenues coming from crude oil export to possible efficient use in the Saudi domestic economic growth. The study wants to compare two sides, namely the energy demands of US and possible supply of Saudi Arabia from crude oil or refined oil for the world market. Also the study used SWOT analyse to get overview what the problems are the supply side of crude oil and using the revenues coming from oil export. Also main problems of the considerable oil revenues to be used based on the one-side targets concerning almost oil sector and main investments frequently are absent in other non-oil sectors. Yergin (2008) declared that in spite that sometimes the USA could have slightly declined the oil use for economic growth the US remained considerable or even the first biggest importer of oil in the world economy.

The MENA region has important considerable petroleum and gas resources of the world economy, their share of the world net oil export was about 37%, of which Saudi Arabia provide 43,8% by the middle of 2000. For the Middle East and Saudi Arabia there is an important crud oil importer is namely the USA. In USA primary energy consumption was 75 708 364 billion of Btu, in which the share of petroleum was 46% and natural gas was 30% in 1973, and their share became 62% of primary energy consumption, as totally 99 872 921 billion of Btu by the end of 2006. The considerable increase in primary energy resource using of the USA has become 32% for 33 year period.

The data (see Table-4-8-1 and Figure-4-8-1) show that in USA in spite that the shares of the fossil energy resources decreased in 2006 comparably in 1973, the total energy resource consumption increased very considerably, and also the real fossil energy consumption have not decreased yet. In case of petroleum in 1973 its share was 46%, as 34 825 847,44 Billion of Btu, but in 2006 share of petroleum was 39%, as 38 950 439,19 Billion of Btu, which

means that its consumption has been increased by 11,84% for the period more than three decades.

This fossil energy consumption structure provides proof that the US will increase its fossil energy consumption for the future. The economies of MENA region including Saudi Arabia will be able to export their crude oil resource. Also the US has a very scarcity refining capacity for crude oil, which frequently is depending on the unfavourable natural changes. It can be suggested that Saudi Arabia should increase its crude oil mining as much as US increases its crude oil consumption, also the crude oil refining of Saudi Arabia should be increased as much as US needs for this. In this case Saudi Arabia can increase somehow its refined oil for US, therefore the refined oil can be concerned as little more value added oil products providing more export price income for the Saudi Kingdom. This surplus export price income provides more economic growth for Saudi Kingdom or even more purchasing power capacity to buy more shares of the international corporations See Table—4-8-1; Figure-4-8-1).

Table 4-8-1: Primary energy consumption by sources in US in 1973 and in 2006 in %

	1973 *Energy: 75 708 364 Billion of Btu*	*2006* *Energy: 99 872 921 Billion of Btu*
Coal	17	23
Natural Gas	30	23
Petroleum	46	39
Nuclear energy	1	8
Renewal energy	6	7
Total	**100,0**	**100,0**

Source: EIA (Energy Information Administration), Washington, 2008

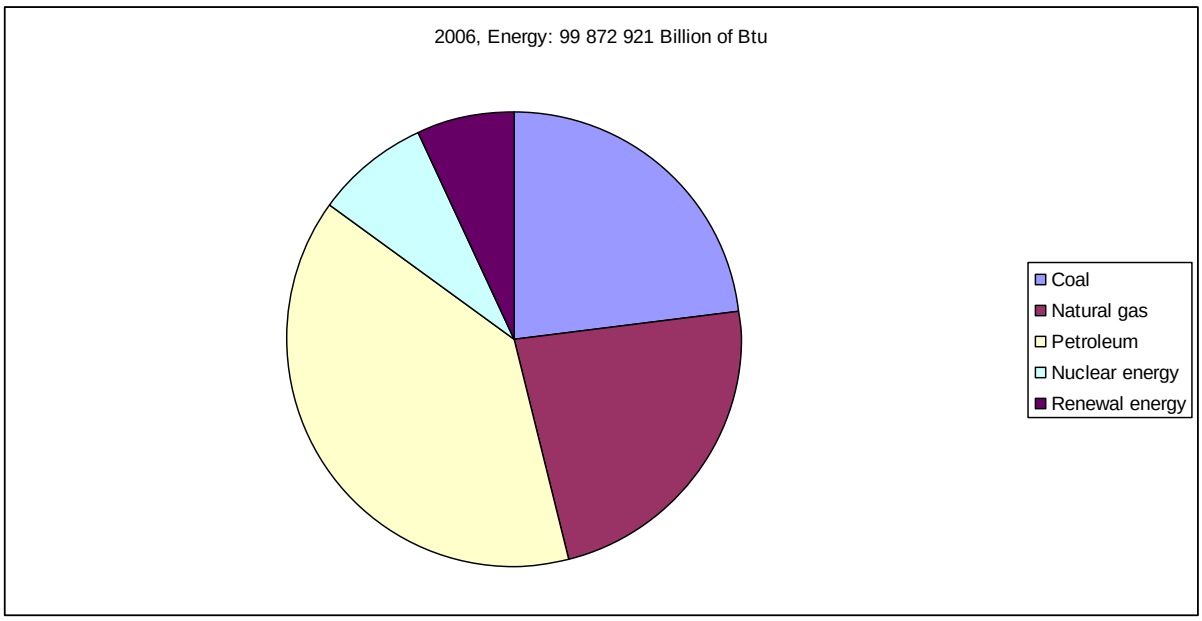


Figure-4-8-1: Primary energy consumption by sources in US in 1973 and in 2006 in %
Source: Energy Information Administration (EIA, 2006)

Also there is an important strategic aim for Saudi Arabia for its future energy supply to make cooperation with North-America and European Union in field of developing nuclear energy resource use, as the data show in case of US possible future conception (see 1. Table; 4-8-1. Figure). Economies of MENA region should be ready for period without fossil energy resources. There is another economic issue of Saudi Arabia, namely a contradiction employment conditions, which mean that by the end of 2009-2010 there was 30,2% unemployment of Saudi youth under 25 year, as almost three times more than Saudi nationals' one. At the same time 4,7 million foreign workers are employed in Saudi Kingdom. For the future strategic plan the domestic national employees should be employed instead of foreigners in domestic human resource. When the foreign workers send some parts of their salaries to homelands, as India, Pakistan or Bangladesh, this is also a kind of capital outflow from Saudi Kingdom. This capital outflow makes domestic market be narrower for possible future investments, as domestic light industrial factories supplying products for national consumers (ILO, 2011, p. 49).

Also the other international economic experiences, namely the vertically integrated product channel from beginning of crude-oil mining, refining, sub-manufactured oil products,

transport by national Arab ships until the consuming countries. Naturally this product channel cannot be completely, because the product channel finally includes the network supplying the fossil energy resource to the companies using motor techniques and other machines, also the cars used by population of highly developed economies. Naturally additionally to fossil mining sector some light industrial branches should be set up in Saudi Arabia in order to create the vertically integrated product channel for example in food industry. The vertically integrated product channel system is working very successfully in the European Union.

SWOT Analyses for energy resources in Saudi Arabia

Strengthen

The Saudi companies have highly developed technical setting up and equipment for mining crude oil and somehow they have owned network and logistic systems also with ship transport capacity for crude oil to the world market. These companies have well organizing managers with quite wide side international experiences in fields of finance, marketing and operation management. They have good qualified knowledge to set up business plan and financial plan (at firm level see in detailed in Laskai, A, Zéman, Z. (2013).

Weakness

In Saudi Arabia there are 4,7 million foreign workers, who are working in such jobs, in which the national Saudi Arab workers can be employed. In spite that the Saudi authorities can ensure highly level subsidies for Arab national population in fields of mostly education and health-care, these social support system cannot be connected in all the time with employment issues for national Saudi Arab population. The capital out-flow also connects with foreign workers employed in Saudi Arabia and the social supports connect with considerable parts of non-employed Saudi Arab population, for example youth people and female human resources. The problem, when economic crisis occurs, and large part of the foreign non-Saudi Arab workers become unemployed, the social support system is continuously given for national population, which is very costly for governmental budget.

In this case this can be suggested that the governmental budget should cut less the highly *financial social supports*, and should be given in connected with employment conditions for

Saudi Arab population. Instead of using foreigners, the Saudi Arab inhabitants employed can accumulate such capital, as part of their salaries, which foreigners send these one to their homelands, as capital-outflow for the Saudi Kingdom.

Optimal

The continuous demand of the world market for fossil energy is given for the MENA region and Saudi Arabia; the crude oil revenues provide enough possibilities for strong national economic growth.

Threaten

The economic crisis is frequently results in changing oil revenues for governments and economies of MENA region, which is threaten for the continuous economic growth.
The US dollar currency rate changes sometimes, which decreases the dollar currency reserves of crude oil exporting countries. This economic processes weak the economic stability of the region's economies.

The Saudi Arabia should follow a new energy using system based on renewal energy resources instead of fossil one. The renewal energy resources are environment friendly and for the future these one can be more given all over the world. Saudi Arabia uses more Saudi employees in homeland instead of foreigners, because this can decrease the other kind of capital outflow from the Saudi Kingdom and decreases the unemployment rate of Saudi youth people and female human resources.
The cooperation is very useful among the economies of Gulf Cooperation Council, because they can help each-other against the negative influences of the world economic crisis. Also they can create a common Arab currency to reserve their oil revenues instead of US dollar. The currency rate of US dollar is going on based on interests of US government and companies and not Arab oil exporting countries' one.

4.9 Human resource management in Saudi Arabia

Introduction

The youth unemployment has been about 28-30% for period of 2006-2009, which was with three times more than the Saudi nationals' unemployment rate. The youth under 25 unemployment rate was the less in the world economy than in Saudi Arabia. In general the youth unemployment rate has been between 12,8-12,6% for period of 2000-2011, in Saudi Arabia this was almost double times more than the general unemployment rate in the world economy in the same time. In Middle East the youth unemployment rate has been between 23,7-25,1% for the period of 2000 – 2011 (see Table -4-9-1).

Human resource management conditions in Saudi Arabia

In Saudi Arabia this youth unemployment trend was not seriously impacted by the world economic crisis. In Saudi-Arabia the youth unemployment rate was about 28-30% in period of 2006-2009, with three times more than the Saudi nationals' unemployment rate. This had reason that the Saudi-Arab companies used foreign workers more than the national Saudi Arab one. In Saudi Arabia at the same time a large number of foreign workers, namely 4,7 million one outnumber; and the nationals was 4,3 million on the labour force market.

In Middle East, Saudi Arabia is the economic leader country in fields of several aspects, for example the crude oil sector, trade, education branches and financial activities. The considerable incomes coming from mining sector ensure one of the most important economic development trends in the world economy in fields of investment activities and stimulating the foreign direct investments (FDI) in Saudi Arabia. Naturally this ambition economic growth aimed by the economic planning focused on increasing the employment level for the Saudi nationals, because of the unemployment rate was 7,04% in 2004. The governmental economic plan decided that this unemployment rate should fall to 2,8% in 2009. Therefore the plan also declared to increase the governmental expenditure for developing educational level, which also should decrease unemployment rate for youth from 15 year old inhabitants (Eighth Development Plan, 2004-2009).

The chapter was prepared based on using statistical data given by governmental offices in Saudi Arabia about the economic growth of the country. The youth unemployment generally is considerable issue on the world market, and also this is more difficult in Middle East, where the growth rate of population is very high, and youth people cannot find jobs for themselves. Naturally this youth unemployment also connects with education and training for increasing level of skill for them. Educational level should be increased in order that the youth unemployment rate can decrease. In general the rate of youth employment is based on more employee supply than needed on the market and youth people cannot obtain higher educated level.

From point of view of educational issues the government of Saudi Arabia wanted to increase the employment level of youth people and decrease the foreign workers' share on the domestic market. The SWOT analyses the main actual youth unemployment issues, the possible solutions of its and accompanying with some international compares based on youth unemployment conditions of Middle East and youth unemployment conditions of some parts of the world economy.

In Middle East the youth unemployment rate has been changing between 23,7-25,1% for the period of 2000 – 2011. This youth unemployment trend was not seriously impacted by the world economic crisis. In North-Africa the youth unemployment rate has been between 29,5% in 2000 and 23,6% in 2011 for the period of 2000-2011. This youth unemployment rate was more flexible to labour force market demands, because in this region mostly the national human resources were used instead of foreign workers, who were employed by the national and sometimes foreign companies.

In Saudi-Arabia the youth unemployment rate has been about 28-30% for period of 2006-2009, with three times more than the Saudi nationals' unemployment rate. This had reason that the Saudi-Arab companies used foreign workers more than the national Saudi Arab one. In Saudi Arabia at the same time a large number of foreign workers, namely 4,7 million one outnumber; and the nationals was 4,3 million on the labour force market.

In Saudi Arabia the foreign workers are employed at very highly level, as it can be followed by the youth unemployment rate. Saudi Arabia should be able to continue to absorb the

employment impact of the crisis on its national one, provided private sector generates in large numbers the types of jobs in adequate number, which could be a challenge, given that past efforts to Saudi Arab inhabitants, the labour force have produced only limited results (see in detailed in ILO, 2010b; ILO, 2010b and Table-4-9-2).

In Saudi Arabia the development plan aimed at increasing the national GDP by annual growth rate 4,6% between 2004-2010. Within this average annual growth rate Saudi Arabia wanted to grow the crude-oil sector by 2,7%, and non-oil-mining sectors 5,2% in the same time. This means the government wanted to focus on the development of economic branches producing added value to increase by mostly 30% in the second half of 2000s. These non-oil-mining economic sectors should develop to reach level of 677,2 billion SR (Saudi Riyal – national currency) by 1999-2010. The plan also declared that the hydrocarbons sector should develop considerably to 225,0 billion SR by the same time. Also the Saudi Arabian Government wanted to reach national saving ratio two fifths of GDP, namely 40% by the end of 2009, comparably this ratio was 39,8% in 2004 (National Bank of Saudi Arabia, 2010).

Naturally while Saudi Arabia has wanted to create new jobs in amount of 1,2 million one for period of 2004-2009, they wanted to decrease the national unemployment rate of Saudi Arab and the youth unemployment in the same time. The governmental budget aimed at increasing jobs in educational sectors at almost all levels of educational institutions. This means that government wanted to increase the educational level and skill of youth in order to decrease sharply the youth unemployment level. The considerable youth unemployment level was consequence of negative balance of human resources on the national labour market, namely mare labour force supply than demanded and also the non-educated and skilled youth potential employees.

Table-4-9-1: Unemployment rate for youth, world and regions in 2000-2011 in %

Region	**2000**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2011***
World	12,8	13,0	12,9	12,4	11,8	11,9	12,8	12,6
Developed economies, and EU	13,5	14,6	14,2	13,3	12,4	13,3	17,4	18,2
Middle East	23,7	24,9	25,3	24,4	24,5	24,5	24,9	25,1
North Africa	29,5	26,0	26,7	24,4	24,3	22,6	23,4	23,6

** 2011 are preliminary estimates, 2011 are projection*

Source: ILO, Trends Econometric Models, October, 2010

Table-4-9-2: Output per worker, in world and regions in US Dollar, level and annual growth in % in 2001-2009 and 2011

Region	Output per worker	2001-06	2007	2008	2009	2011*
		Annual growth in %				
World	21 180	2,2	3,3	1,3	-1,4	3,1
Developed economies, and EU	70 946	1,5	1,1	-0,1	-1,2	3,1
Middle East	35 822	1,6	3,0	2,8	-1,3	0,3
North Africa	16 235	1,3	2,9	2,1	1,6	2,4

** 2011 are preliminary estimates, 2011 are projection*

Note: Output calculated on the basis of constant 2005 PPP (Purchase Power Parity)-adjusted international US Dollar

Source: ILO, Trends Econometric Models, October, 2010

ILO, Global employment trends for youth, August, 2010 – Special issue on the impact of global economic crisis on youth, Geneva

In field of employment issue there was a problem, namely the mostly lack of advisory as a kind of educational program for extending knowledge for employees working in agricultural and manufacturing industrial branches. In same foreign examples the advisory system and such educational training have considerable role to keep the competitive level of human resources' knowledge and skill. There are two countries, namely Finland and Denmark, where the supervisory and its network for agricultural producers, small and medium scale enterprises have a long historical tradition (see in detailed in Zsarnóczai, 2003 in case of Denmark).

SWOT analyse for human resource in Saudi Arabia

Strengthen

As the Table-4-8-2 shows that in Middle East output per worker 35822 US Dollar is very high, and this highly value is stimulated also by Saudi Arabia. Originally the output per worker, as labour force efficiency is connecting with crud oil mining sector, which provides enough price income to strengthen the purchase power capacity of Saudi Arabia to cover costs to buy imported products. Also this financing capacity can ensure development program to

extent jobs and educational level of Saudi Arab national employees and decrease the youth unemployment rate.

Weakness

The considerable share of working poverty emphasizes the importance of increasing the labour productivity in Middle East, but naturally the low level of labour productivity is usually common in the developing economies of the world economy (WEF, 2010; IMF, 2010a; IMF, 2010b; see Table-4-9-2). Also in Middle East the difficulties were that the large amount of crude oil price income did not provide such diversified structure of employed human resources, which could decrease the employment gap between males and females, also male and youth employment under 25 year, gap between developed economic levels of different regions.

Opportunity

Also the world economy can provide enough highly educated and skilled managers and employees from abroad for Middle East region to keep competitiveness of crude oil mining sector. The skilled managers create successful business plan for the companies interested in crude oil sector (see Laskai – Zéman, 2013).

Threaten

In spite that the output per worker 35822 US Dollar is very high in Middle East, and also Saudi Arabia contributes to this highly value of output per worker, this is coming from the crude-oil price incomes. This means that the efficiency of human resource, the future economic development of Saudi Arabia and decreasing youth unemployment mainly are based on the crude-oil sector, which are very depending on the actual world price level of crude-oil in the world economy.

The basic aim of the Saudi Arabian Government is to strengthen its economic developing trend in spite that this development sharply is depending on one economic factor, namely the world price level of crude-oil. The Government would like to extent economic activities of the country based on stimulating the national private sector and the foreign capital to invest into the country within the foreign direct investment (FDI) scheme. The economic growth can increase the employment conditions either for national Saudi Arab employees and including youth employment. In the same time they increase the educational and skill levels for even youth employees to be competitive on the world market and national market.

5 CONCLUSIONS AND SUGGESTIONS

5.1 Some conclusions

The 1. Hypothesis, namely about the importance of the *diversified economic growth*, which can ensure more advanced technologies and highly skilled *human resources*, because diversified economic growth becomes base for the highly value added products, therefore the deeply *specialization* is for the industrial production by the general economic development. On one hand the highly developed economies, for example the EU-27 could create the *diversified economic structure* based on the specialization in direction to meeting the demands of the world market. On the other hand the developing countries for example economies of Middle East Region including Saudi Arabia based on one or only very cup of economic sectors, which cannot provide enough diversified many kinds of products to supply market demands of national economies. In Arab economies the specialization is connecting only with one-two economic sectors from point of view of the world economy, but this diversification does not connect with diversified economic structure at national economic level. Therefore Saudi Arabia and other Arab crude oil exporting economies are one-side depend on the fluctuating world price level of the crude oil in the world market and many other economic sectors are absent in this country-group.

Also in consequence of the increasing population of the world economy, the consumption increases at level of national economics, firms and households or family units, which can leads to increasing state debt based on the emerging spiral later on with decreasing consumption of population. Mostly the increase of population is very considerably in the developing economies, which stimulates to increase their state debt accompanying with non-diversified economic structure resulting the increasing import volume. Also the considerable personal and profit tax burdens on tax payers, as named consumers, therefore the production and consumption decrease and the producers should decrease their import from the EU-27. The regional development can be implemented by through of decreasing gap among developed levels of different regions based on the increasing employment level. The governments should also help the small and medium enterprises (SMEs) to create better and

more favourable work separation among the SMEs and corporations owning and using high-tech and research-development (R&D) based on education and financial supports.
But the problem that the developing economies cannot create the balance of economic growth of the different regions, because the crude oil sector is geographically concentrating only or mostly on crude oil mining fields in any oil exporting countries.

Hypothesis according to the *employment issues* analysed at levels of *national labour forces (NLF)* and *foreign guest labour forces (FGLF) in case of economies of Middle East Region emphasizing the Saudi Arabia' one*. The statistical data concerning the employment issues strengthen that for the period of economic growth and the economic prosperity the number of the FGLF has increased mostly in Middle East and Saudi Arabia. Also the data provide bases that but the economic decline of the economic growth in general the level of employed NLF is not so fluctuating either in developing economic trends or crisis period in case of Saudi Arabia or in any Arab countries, mostly crude oil exporting economies.

Also it can be declared that generally the *world economic crisis of 2008-2009 caused significant economic decrease of EU-27 in fields of RLP and GDP growth*, but number of FGLF coming from out of EU-27 did not change considerably. In the same time the world economic crisis affected the economic development of the highest developed economies of EU-27 and by these strongest EU member states also affected other less developed member states of EU. The EU-27 could not avoid the world economic crisis, because this was started by US, as the first foreign economic partner of EU-27. This world economic crisis was first bank-financial crisis, which extended to other economic sectors and the employment conditions.

Also the RLP growth can not affect automatically on the real GDP growth rate volume, because influences of RLP are determined by the foreign economic contacts and foreign trade of the EU-27, which can consequently realise results of the RLP growth for GDP growth. The spirit of the RLP growth is the *development of innovation*, as the final basic element for the competitiveness of EU member states on the world market. In spite that increasing unemployment rate in EU also after the world economic crisis, the EU can remain its competitiveness because of increasing of its RLP growth (Table-4-3-2). The Real Labour Productivity growth per hour worked in % change was analysed over previous year, index 2000 = 100, Percentage change on previous period geo\time. Also the *RLP growth* decreased,

when the production generally decreased during the crisis periods in 2008-2009. To develop the labour forces, RLP and the management of firms the role of the *advisory services* frequently should increase the skilled level of middle managers in companies and SME-s. Because the continuous advisory system could ensure more knowledge in up-today economic activities of firms for example in fields of submitting applications to obtain financial supports, creating business plan and financial accountancy. Therefore the supervisory can complete the knowledge after the regular study program.

According the data concerning the employment issues and changing number of NLF and FGLF the national labour force market of Middle East does not so flexibly adapt to the changing trend of world economy, crisis periods and *skill-knowledge level* demanded by the world economy. The transnational corporations use their owned experts, managers and highly educated workers in field of human resource management and mainly they don't use such labour force from the national-local labour force market. Also the crude oil exporting countries of Middle East do not ensure any social security for foreign visitor workers, and they send back foreign visitor workers to their homeland, when the employment decreases in case of economic crisis. This leads that the employment level of domestic national labour force does not considerably change based on the world economic fluctuation.

Some economic sectors should be developed, which directly provided *jobs for local population* based on increasing their skill level to keep the competitiveness conditions against foreign employees. Both of logistic and *educational systems* are needed for future considerable economic development. And in order that the Arab economies can be developed also the national *Arab employees* should be employed previously first, and after that the foreigner. This economic growth can lead to create wider *diversified economic structure*, which can be more flexible for the changing demands of the world market. The other economic difficulty of Middle East is that *balance of foreign trade*, which is mostly negative for non-crude-oil exporting economies, and the other crude oil economies has foreign trade depending on one side export structure mainly based on the crude oil energy resources.

The 2. Hypothesis namely that in the world market the *price level of the fossil energy resources* is continuously decreasing in its future trends, when the price level is calculated in the *Purchase Power Parity (PPP)* based on the international compares from point of view of nominal price level increase. The highly level of nominal price level belonging to fossil

energy resources contributing to extend using *rational renewable energy resources* to decrease leading role of fossil energy resources.

According to the sustainable employment the economic conditions of EU need for increasing investment activities to meet market demand, to increase highly value added products and to increase the AIC of population and strengthening the PPS of population of the EU-27 based on the extending employment rate in order to increase the highly value added products. The strategic plan of the economic growth is to increasing the employment and in the same time to decreasing the poverty.

The more price income of more volume of the exported crude oil *therefore the Saudi Government* could use over plus crude oil export price incomes to cover costs of: 1- reconstructing highly developed infrastructure network for the industrial production, civil social life; 2- social-family supports, increasing standard of life for people of Saudi Arabia; 3- Foreign Direct Investments (FDI) provided by the Saudi Government and national corporations abroad, including bank deposits into international banks.

On the hand also the highly costly administration, governmental office network should be covered by the over plus crude oil export price incomes, which kind of costs can be titled as improductive, but important service sector. This service sector can provides large amount of people of the Saudi economy. On the other hand the FDIs invested by Saudi corporations are often very successful and effective, because these investments were realised mostly in highly developed economies, as US, European Union and some other important economies, as Switzerland and Japan.

The basic aim of the Saudi Arabian Government is to strengthen its economic developing trend in spite that this development sharply is depending on one economic factor, namely the *world price level of crude oil*. The Government would like to extent economic activities of the country based on stimulating the national private sector and the foreign capital to invest into the country within the foreign direct investment (FDI) scheme. The economic growth can increase the employment conditions either for national Saudi Arab employees and including youth employment. In the same time they increase the educational and skill levels for even youth employees to be competitive on the world market and national market.

The Saudi Arabia should follow a *new energy using system* to decrease the expenditures of energy production either renewal energy resources or fossil one. The renewal energy resources are environment friendly and for the future these one can be more given all over the world. Saudi Arabia uses more Saudi employees in homeland instead of foreigners, because this can decrease the other kind of capital outflow from the Saudi Kingdom and decreases the unemployment rate of Saudi youth people and female human resources. The cooperation is very useful among the economies of Gulf Cooperation Council, because they can help each other against the negative influences of the world economic crisis. Also they can create a common Arab currency to reserve their oil revenues instead of US dollar. The currency rate of US dollar is going on based on interests of US government and companies and not *Arab oil exporting countries'* one.

For this Hypothesis the *balance of foreign trade exchange rate* is going wrong for *economies exporting fossil energy* resources based on their calculated in PPP. This means that the *price level of imported products increases more than the price level of exported domestic products*. The exported products are not highly value added products than imported products including the machines, technical equipment and chemical materials.

The export of the Arab countries selling crude oil to the world market is depend on the every minute price level of the oil and the fast changing demands of the world market. Sometimes the world market price of crude oil can relatively be at the highly level therefore the value of crude oil price income is also high, but *this world high price level of fossil energy resources is built into the world price of value added products made in highly developed economies.* The value added products made in highly developed economies will be imported by developing countries including the crude oil exporting economies, which originally should pay back the high crude oil world price to the highly developed economies. Therefore the majority of price income crude oil returned to the home economies after purchasing value added products by developing economies. This foreign trade structure makes negative balance of their one.

The *negative balance of foreign trade* can appear in case of both of country groups, *but its origin is not the same*, because case of the EU-27 it comes from relative comparative advantages of *Chine and US* based on cheaper world prices. But in case of developing economies including fossil energy exporter countries *one-side economic structure and lack of*

several economic sectors result the large measure of the import burden from the highly developed economies, because *their economic structure are diversified*.

The 3. Hypothesis also namely by the foreign trade among the Middle East economies and EU member states, *the strong mutual dependence is between two country groups, namely developed and developing economies,* in spite that the one side dependence of developing countries is dominate in their economic connects with highly developed economies. *Finally from point of view of the EU-27 balance of trade in goods* this balance has been negative for the last years, which could increase EU-27 current account deficit leading to devaluate the common currency Euro, but the internal EU-27 trade in goods is very strongly considerable, namely over 60% either in export or in import.

Also the EU-27 balance of trade in services has continuously been very active for long time, which balances not too considerable negative balance of EU-27 trade in goods. This foreign trade deficit of EU-27 in goods is resulted by not the EU economic weakness, but the EU's one side dependence on foreign imported fossil energy resource and the cheap Chinese light industrial products. The fossil energy import does not impact on the employment issue in EU, but cheap Chinese light industrial products make dangerous for the light industry of EU and its employment conditions (see Table-4-1-2).

This *negative balance of foreign trade of the EU-27* proofs that the consumers of the EU-27 would like to purchase the cheaper light industrial manufactured products at lower world price level than their domestic price level in EU. These cheaper value added industrial products can be sold by developing countries, first the Chinese People's Republic and other developed economies, like US.

Also naturally two country groups, developing and highly developed economies are mutually depending from each other, because the developed economies need to purchase fossil energy resources from developing economies, but the *negative balance of foreign trade* belonging to developing economies provides proof for the considerable measure of one-side dependence of developing countries from the other country group. Also in this case it is throw the *one-side economic structure and lack of several economic sectors* result the large measure of the import burden from the highly developed economies, because *their economic structure are diversified*.

The solution for these economic difficulties of developing countries to improve the technological development and skilled works based on the diversified economic structure by domestic and foreign direct investment meeting the domestic and world market demands.

Principle analysis, Factor analysis and Cluster analysis provide clear overview for the economic conditions and growing rates and trends for EU-28 member states and MENA-4 countries and the differences between themselves. The answer is for *the **sixth Hypothesis***, namely when the GDPVol2014 (GDP volume) has increasing growing rate and accompanying with decreasing UnEmploy2014 growing rate in EU-28 member states, and these economic conditions can be contradict to one of Saudi Arabia.

The cluster analysis show that the majority of EU-28, of which 22 member states are included in the first cluster and only France and Portugal are included in the second cluster, and Spain, Cyprus, Greece and Ireland accord to the third cluster. This overview shows that the differences are quite clear among EU-28 member states, but the main variances of the principle and factor analyses and their correlations show the strong similarity among the EU member states within each cluster. Also 22 EU member states as majority of the EU-28 is included in one cluster.
Also the performance of Saudi Arabia is different from performance of EU-28 based on the Factor analyses. *The performance of Saudi Arabia is somehow favourable, because the GDPVol2014 has increased by 217,0 for this period, which was higher by 1,5 times than the unemployment growing rate. But the UnEmploy2014 has considerably increased by 137,0 since 2005.* While in some part of EU-28, where the increasing GDPVol2014 connects with decreasing growth rate of UnEmploy2014, but in Saudi Arabia the UnEmploy2014 also increased in this period, between 2005.-2014.

Answer for the ***4. Hypothesis***, namely It is proofed, that the developing trend of UnEmploy2014 follows the developing trend of RisPov2014 in case of the EU-28, and also this is not as same as in Saudi Arabia.

According to the coordinate system (score) in **Left-Upper-Side Sector** in case of those countries, which are upper side of "Y" reference line in PLUS sector - they have highly level increase of GovDebt2014 and SocProt2014. Also from the earlier analysed conditions at "X"

line the GDPvol2014 is also high. But the UnEmploy2014 and the RiskPov2014 are at low level. In the **Left-Down-Side Sector** at "X" line the GDPVol2014 is high, the UnEmploy2014 is low, because of the consequence of high GDPVol2014, and also the RisPov2014 is low. In the **Right-Down Side Sector** at "X" line the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. But the GovDebt2014 and SocProt2014 are at low level. In the **Right-Up-Side Sector** at "X" line the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level.

Also the above mentioned analysis provide proof for the ***Hypothesis***, namely it is proofed that the GovDebt2014 and SocProt2014 can be strongly affected by GDPVol2014, UnEmploy2014 and RisPov2014 they have common strong influences on the economic growth of the EU-28. Also it is proofed that the developing trend of the GovDebt2014 is somehow can be the same trend with one of SocProt2014 in case of EU-28. This means that the when the SocProt2014 increased this resulted the increase of the GovDebt2014 in EU-28.
In Saudi Arabia in spite that the GDPVol2014 increased by the highly level, the UnEmploy2014 increased considerably not at the same as GDPVol2014, therefore the SocProt2014 should have been increasing, but the Saudi Government sharply decreased the growing rate of the SocProt2014 in order to keep the GovDebt2014 closed to "0" growing rate during the period of 2005 and 2014, in spite that the SocProt2014 remained at highly level. This process is opposite to the experience of the EU-28, where the SocProt2014 increased when the UnEmploy2014 increased, but also the SocProt2014 cold increase or decrease in spite that the GDPVol2014 was growing and UnEmploy2014 was decreasing (**Left-Down-Side Sector, Left-Upper-Side Sector,** see in Figure-4-4-1).

It is proofed that the clustering for EU-28 and MENA-4 generally emphasizes the similarities for majority of the EU-28 and the main differences between EU-28 and Saudi Arabia in their economic conditions. As earlier it was mentioned that in *Saudi Arabia the HICPan2014 increased by 580,0 in this period, while the HICPan2014 decreased in most of EU-28.* In Saudi Arabia also the inactive share of the population was considerable and increasing growing rate of the population number, partly foreign employed people came into Saudi Arabia, which led to the mainly low level of the GDPcap2014 (GDP growth rate per capita) by 112,4 in this period. In Saudi Arabia the SocProt2014 was kept back very strongly by increasing growing rate as 12,5, which also contributed to the mostly zero level of the growing rate of the GovDebt2014 (See Table-4-4-17). It is important to mention that in Saudi

Arabia, when the HICPan2014 increased by 580,0, this means that the purchase power parity (PPP) of population is very considerable, because of the SocProt2014 is very strong and considerable, in spite of its decreasing growing rate from 2005. *Exactly the 580,0 increasing growing rate of the HICPan2014 provided proof for the serious PPP of Saudi population.* Also the considerable imported products resulted increase of domestic price level. Naturally this considerable growing rate of the HICPan2014 could not have been realised if the earlier SocProt2014 had not been considerable in Saudi Arabia.

Also as it is mentioned earlier the economic growth rate of the third country group is not favourable, but it is not the worst. The GDPVol2014 and the GDPcap2014 (per capita) were at low level in this country group (France, Portugal, Turkey, Malta, Algeria, Egypt). The UnEmploy2014, HICPan2014 (consumer price level) and RisPov2014 were considerable in this group, which needed for increasing the SocProt2014, which stimulated the GovDebt2014 to increase. These economic conditions of the third country group stimulated the inflation to increase and decrease value of the national currencies. The stability of Euro also could be depending on the wronging performance of France. Unfortunately the GDPcap2014 was more wrong in the first and second country groups to decrease the future possibility of prosperity of the EU-28.

The other countries of MENA-4 from this region Algeria and Egypt were similar to Malta, and Turkey similar to France and Portugal in growing rates of variances of the principle components, but economic developed level of MENA-4 are considerably lower than one of EU-28.

Also it is proofed that in spite that the economic growing rate of the MENA-4 can be considerable, but it does not mean to create the diversified economic structure in these economies. For this hypothesis the experience of Saudi Arabia shows the best proof. Because *in Saudi Arabia the considerable increasing rate of the GDPVol2014 is accompanying with considerable increasing rate of UnEmply2014.* This means that the mining sector of crude oil and chemical industry developed at highly level and also they produced large considerable share of the GDP, and other sectors were not developed enough, therefore the economic structure of this country remained as non-diversified economic one. Also this reason, why Saudi Arabia became alone country in a “country-group” in the dendrogram (see Figure -4-4-4).

5.2 New scientific results

1- Using the different database and different statistical methods I justified that effects of economic crisis were different scale and form by countries and regions. The economic crisis in EU-28 was deeper comparing with Middle East region; especially the labour market was much more affected. In Saudi Arabia the crisis stared one year later and official unemployment rate much lower, but that is mainly because of large share of foreign workers missing from official statistics. I also justified responses to the challenges created by crisis were different as well, but the change the structure of economy driven by innovation, the balance of foreign trade, the balance of payment, and economic growth combined with adjustment of labour market, which is in the focus of sustainable development strategies. I declare that the *sustainability* can be strengthened by the positive balance of foreign trade and the foreign exchange rate, when the export oriented foreign trading policy of the country can ensure more export price income for next developing phase of the economic growth in Middle East Region. Therefore I can state that this *plus export price income over import cost* can ensure the financial resources for the possible future of the economic growth. Any credit and their interest burden and press the borrowing countries to pay back these one, but only by export oriented strategy with export price income over import cost.

2- Based on my research I clearly declare that the *low price level of exported products* of any country can ensure its *real competitiveness* for the future only by *advanced technological background* for the production based on the efficient resource using, economic measure for the production to produce more advanced products for qualified demands of the world, regional and local markets but less cost per each product unit. I emphasize that the *export-import structure* and their structural connections with the *capital outflow* from Middle East Region including Saudi Arabia show the *measure of absorption capacity* of this region to integrate their own capital and foreign advanced technology into their economies.

3- Based on the changes of the different variances used in my researches I implemented the factor analyses in a coordinate system, by the other name score. Therefore I created the coordinate system for the FACT1 (“X” as reference line) and FACT2 (“Y” reference line) in case of EU-28 in the coordinate system in **Left-Upper-Side Sector** in case of those countries, which are upper side of “Y” reference line in PLUS sector -

they have highly level increase of GovDebt2014 and SocProt2014. Also from the earlier analysed conditions at "X" line the GDPvol2014 is also high. But the UnEmploy2014 and the RiskPov2014 are at low level. In the **Left-Down-Side Sector** at "Y" line the GovDebt2014 and the SocProt2014 are at low level, at "X" line the GDPVol2014 is high, the UnEmploy2014 is low, because of the consequence of high GDPVol2014, also the RisPov2014 is low. In the **Right-Down Side Sector** at "X" line the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. But the GovDebt2014 and SocProt2014 are at low level. In the **Right-Up-Side Sector** at "X" line the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. Also the GovDebt2014 and SocProt2014 are at high level.

4- Also I implemented again the factor analyses but with other component (FACT3), namely the third one with other variances. Naturally the FACT1 is also remains in these factor analyses, as this was before. According to the FACT1 ("X") and FACT3 ("Y") in case of EU-28 ***i***n **Left-Upper-Side Sector** in case of those countries, which are upper side of "Y" reference line in PLUS sector - they have highly level increase of LLearn2014 and GDPcap2014. Also from the earlier analysed conditions "X" reference line the GDPvol2014 is also at high level. But the UnEmploy2014 and the RiskPov2014 are at low level. In the **Left-Down-Side Sector** the "Y" reference line the GovDebt2014 and the SocProt2014 are at low level, at "X" reference line the GDPVol2014 is high, the UnEmploy2014 is low, because of the consequence of high GDPVol2014, also the RisPov2014 is low. But the LLearn2014 and GDPcap2014 are at low level. In the **Right-Down Side Sector** "X" reference line the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. But at "Y" reference line the GovDebt2014 and SocProt2014 are at low level. But also at "Y" reference line the LLearn2014 and GDPcap2014 are at low level. In the **Right-Up-Side Sector** at "X" reference line the GDPVol2014 is at low level and the UnEmploy2014 and RiskPov2014 are at highly level. At "Y" reference line the GovDebt2014 and SocProt2014 are at high level. Also the LLearn2014 and GDPcap2014 are at highly level.

6. SUMMARY

The importance of the *diversified economic growth* can ensure more advanced technologies and highly skilled *human resources*, because diversified economic growth becomes base for the highly value added products, therefore the deeply *specialization* is for the industrial production by the general economic development. On one hand the highly developed economies, for example the EU-27 could create the *diversified economic structure* based on the specialization in direction to meeting the demands of the world market. On the other hand the developing countries for example economies of Middle East Region including Saudi Arabia based on one or only very cup of economic sectors, which cannot provide enough diversified many kinds of products to supply market demands of national economies.

The employment issues are analysed at levels of *national labour forces (NLF)* and *foreign guest labour forces (FGLF) in case of economies of Middle East Region emphasizing the Saudi Arabia' one*. The statistical data concerning the employment issues strengthen that for the period of economic growth and the economic prosperity the number of the FGLF has increased mostly in Middle East and Saudi Arabia. Also the data provide bases that but the economic decline of the economic growth in general the level of employed NLF is not so fluctuating either in developing economic trends or crisis period in case of Saudi Arabia or in any Arab countries, mostly crude oil exporting economies.

Also the RLP growth can not affect automatically on the real GDP growth rate volume, because influences of RLP are determined by the foreign economic contacts and foreign trade of the EU-27, which can consequently realise results of the RLP growth for GDP growth. The spirit of the RLP growth is the *development of innovation*, as the final basic element for the competitiveness of EU member states on the world market. In spite that increasing unemployment rate in EU also after the world economic crisis, the EU can remain its competitiveness because of increasing of its RLP growth. The Real Labour Productivity growth per hour worked in % change was analysed over previous year. The *RLP growth* decreased, when the production generally decreased during the crisis periods in 2008-2009. To develop the labour forces, RLP and the management of firms the role of the *advisory services* frequently should increase the skilled level of middle managers in companies and SME-s. Therefore the supervisory can complete the knowledge after the regular study program.

The dissertation also overviewed the EU-28 member states and MENA-4 Middle East and North Africa, Turkey, Saudi Arabia, Egypt and Algeria countries in eight variances of principle components within coordinate – score – system based on the principle analyses, factor analyses and cluster analyses. There are eight variances as follows: GDPVol2014, UnEmploy2014, RisPov2014, GovDebt2014, SocProt2014, LLearn2014, GDPcap2014 and HICPan2014.

The SPSS analyses started from the matrix of the ***KMO and Bartlett's Test***, which shows the significance as ,000 for 28 EU member states and the significance explained by 82,330%. The Table-4 of ***Total Variance Explained*** shows that three main components provide 72,550 % of Cumulative Initial Eigenvalues of which the first THREE components. The first component has 39,918%, mostly 40,0%, the second component has 17,689% and the third components has 14,943% of Cumulative from Extraction Sums of Squared Loadings.

The analyses described the set up the strong coefficient and correlations among the variances, which clear how the variances of the principle components are connecting with themselves. In case of the factor 1 and 2 analyses, when the GDPvol2014 was high, and in the same time the UnEmploy2014 and the RiskPov2014 were at low level, the GovDebt2014 and SocProt2014 could be either low or high. In case of the factor 3 and 2 analyses, when the GDPvol2014 was high, and in the same time the UnEmploy2014 and the RiskPov2014 were at low level, the GDPcap2014 and LLearn2014 could be either low or high. In these cases the EU-28 member states had different economic conditions, but in spite that their conditions were different majority of them, 22 member states of EU-28 were in a cluster as first one from three clusters in case of EU-28. In the other case of the EU-28 and MENA-4, also 21 member states of EU-28 were in one cluster as the first one, which means strong economic similarity among EU member states. Saudi Arabia was completely different from EU-28 and other MENA-3, because Saudi Arabia was in one singly cluster, because this Arab country implemented considerable contradict performance, namely highly GDPVol2014 growing rate with large increasing UnEmploy2014, while the country decreased SocProt2014 and make the GovDebt2014 to direction of "zero", also they increased the HICPan2014 as considerable burden on the population and consumers.

The possible future solution can be for the EU-28 to increase the competitive investments to create more jobs to increase the level of employment. In Saudi Arabia they have to create more diversified economic structure to become more flexible country for to demands of the world market.

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