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**INFLUENCES OF CHANGING ECONOMIC STRUCTURE ON THE
ECONOMIC GROWTH**

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INTRODUCTION AND AIMS OF THE DISSERTATION

As the title of the dissertation, namely: Influences of changing economic structure on the economic growth, determines the main aim of research, that changing economic structure has considerable influences on the all economic growth, so in this case the study focuses on the changing economic structure based on the separation of human resource and other production inputs among the economic sectors.

The study emphasizes the examples, which are as follows:

- .- in the European Union (EU) and country-group in Middle East and North Africa (MENA) including Gulf Cooperation Council (GCC) economies;
- .- people at-risk-of-poverty or social exclusion in EU;
- .- economic growth in field of GDP;
- .- efficiency of labour force;
- .- capacity for investments to increase workplaces, jobs at first for local national human resources to extent the national internal markets and to increase the import and create the export capacity based on the export orientated economic growth.
- .- by through of investment activities to achieve to change the economic structure in order to realize economic growth.

Sometimes the question can emerge that how the increase of investment can be efficient for interest of the economic growth measured in GDP (Gross Domestic Product) and also these investments can result in increasing the jobs or workplaces for human resources or these investments only increase the use of modern advanced technology and techniques without increasing the number of the workplaces? Naturally the investments can result in developing technology and technique without increasing employment level. In spite that the investment activities can increase the GDP growth; it does not mean that the number of workplace increases, too. Also there is a difficult for the research that how this economic correlation between the GDP growth and changing number of workplace can be followed in case of the EU, as an international regional economic integration or in case of the MENA (Middle East and North Africa) region, which cannot be so regional economic integration, in spite that the Arab countries of the Arab-Gulf region have reached considerable results in their economic cooperation and integration, too.

The other question can emerge that how the increasing employment level resulted by the investment can be efficient concerning the changing wages, the inflation at national level or level of country-group, as the EU or MENA region including the most important Arab economies in OAPEC (Organization of Arab Petrol Exporting Countries) or OPEC (Organization of Petrol Exporting Countries), for example Saudi Arabia, Kuwait, State of Qatar or United Arab Emirates (UAE).

Also the other question can emerge that how much investment activities can increase the *comparative advantages or the competitive advantages* or both of them can be increasing? Comparative advantages are based on the comparing the production cost or expenditures of inputs, and the competitive advantages are based on the using the advanced technology. Naturally in case of most of the economics in the world economy comparative advantages can be resulted by low cost level of the human resource. The problem is that it cannot remain for longer time. For the future the best advantage for any economy can be resulted by developing technologies and techniques. Any way the comparative advantages or the competitive advantages can make influences on the increasing export capacity.

The question can emerge that how the investment activities can increase the export possibility for any country or by which kind of advantages from both of them can dominate for increasing export?

The other issue, as question can also emerge that which kind of *changing economic structure* can be resulted by these investment activities, for example either to develop the mining industrial sector or manufacturing sector. During the long economic development it is clear that the increasing manufacturing sector can result in highly value added products, which can ensure more export income for exporting countries or can decrease the import volume from the world market in order to make more positive or less negative balance of foreign trade, which can result better favourable balance of payment to decrease the future state debt. Otherwise the increase of investment activities in field of mining sector or basic product sectors can ensure more export income, which does not means that the import can decrease, because the economy / country should increase import of highly value added products to ensure demands of internal market demands. In this case this cannot decrease the import volume, but this can only decrease the possible negative balance of payment.

Also the other question coming from the previous one is that *how much the absorption capability of the Arab countries* to realise investment into their owned economic life, which means that how much the Arab petrol capital can invest into own economies or flow to the other Arab countries of MENA region by through of the Arab petrol capital flow coming from Arab petrol exporting countries to the other Arab non petrol exporting countries?

In case of OPEC and OAPEC countries the mining industry has almost share of 50-80% from GDP, namely the crude oil mining industry. Recently the manufacturing sector has more and more share from GDP, namely 10-20%, which cannot be considerable. The Arab capital inflow from OAPEC countries is also considerable highly; because of their absorption capability is at very low level, this means that

- .- the investment possibility is very low based on the reasons coming from their economic conditions, namely
- .- the human power resource supply is at low level on the human resource market,
- .- very narrow the internal consuming market, the
- .- the given geographical situations are very unfavourable,
- .- the mining fields are very far from the using fields of manufacturing industry and from the internal consuming market,
- .- mining fields are often placing very far from the road-transport network of the world economy and world trade,
- .- the large distinction increase the cost of transports.

Also the question can emerge that how changing economic structure is depending on the branch separation of human power and resource and labour productivity of human resource? Naturally it is difficult to reply for all of these questions emerged and written above, but in this study I can try to reply some of them.

Within the dissertation there some hypothesis, which are as follows:

- .1- It would be proofed that the *GDP grow is not depend directly on increasing the employment level.*
- .2- Mainly the *investment capacity* of Arab crude oil export countries depends on real export price-income coming from crude oil export and it's Purchasing Power Parity (PPP) for export countries.

.3- The *investment* form of the Arab capital flow in the Arab world or in the OAPEC Arab countries *in field of mining industry can be successful*.

.4- The *Arab capital outflow* from the Arab world can be realised most successful in forms of *transnational corporations* based on the private management, but like as state owned corporations within the scheme of Foreign Direct Investment.

.5- *Islamic Arab Bank (IAB)* is the most important Arab financial organization, which in a fact as Arab transnational corporation can be responsible for the Arab capital flow within the Arab world or out of its to the rest of the world economy.

Additionally to the IAB, there are many Arab national funds responsible for the Arab capital flow.

1. MATERIALS AND METHODS

According to methods of research analysis the *comparative advantages* and mercantilism theorem are the basic principles for the understanding and deeply analysing the movements of products or commodities among economies of different regions of the world economy.

The comparative advantages can explain the reasons of foreign trade directions from country to the other county based on their economic, social and natural characters influencing on the production costs. The economic characters consisting of several elements, for example highly developed techniques and technologies. The social characters can be set up on employment and unemployment issues based on the kinds of human resources, like skilled consequently of educated level. Also natural characters of economies, for example how much natural energy resource or basic raw materials concentrate in any country or region.

In some ways, the unemployment that arises from efficiency wages is similar to the unemployment that arises from minimum wage laws and unions. In three cases, unemployment is the result of wages above the level that balances the quantity of labour supplied and the quantity of labour demanded. Yet there is also an important difference. Minimum wage laws and unions prevent firms from lowering wages in the presence of a surplus of workers. *Efficiency wage theory* constraints firms are unnecessary in many cases because firms may be better off keeping wages above the equilibrium level.

Why should firms want to keep wages high? This decision may seem odd at first, for wages are a large part of firms' costs. Normally, we expect profit maximizing firms to want to keep costs - and therefore wages - as low as possible. The novel insight of efficiency wage theory is *that paying high wages might be profitable because they might raise the efficiency of a firm's workers*. (Mankiw, N. G. - Taylor, M. P, 2011, p. 219).

The other important *Heckscher-Ohlin (H-O) theorem*, as Salvatore, Dominic (Salvatore, Dominic, 2011, p. 85 – 86.) definite:

“The Heckscher-Ohlin (H-O) theorem postulates that a nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's

relatively scarce and expensive factor. In short, the relatively labour-rich nation exports the relatively labour-intensive commodity and imports the relatively capital-intensive commodity. Of all the possible reasons for differences in relative commodity prices and comparative advantage among nations, the *Heckscher-Ohlin* (H-O) theorem isolates the difference in relative factor abundance, or *factor endowments*, among nations as the basic cause or determinant of comparative advantage and international trade. For this reason, the H-O theory is often referred to as the factor proportions or factor-endowment theory. That is, each nation specializes in the production of and exports the commodity intensive in its relatively abundant and cheap factor and imports the commodity intensive in its relatively scarce and expensive factor (Salvatore, D. 2011).

Also he provided some meanings of the theorem: “Thus, the *Heckscher-Ohlin* (H-O) theorem *explains* comparative advantage rather than assuming it (as was the case for classical economists). The H-O theorem postulates that the difference in relative *factor* abundance and relative *factor* prices is the *cause* of the pre-trade difference in relative commodity prices between two nations. This difference in *relative* factor and *relative* commodity prices is then translated into a difference in *absolute* factor and commodity prices between the two nations (as outlined in Section 2.6). It is this difference in absolute commodity prices in the two nations that is the *immediate* cause of trade.”

2. RESULTS AND DISCUSSION

2.1 Employment conditions in EU

In general the employment issue is one of the most important economic indicators, which also can characterise the economic growth of any country additionally to other statistical data, like GDP growth, unemployment rate, investment, trade and private consumption rates.

In point of view of employment conditions in the European Union there are very different levels of employment concerning the special economic situation of each EU member state. Naturally this situation depends on the actual financial, marketing and social positions of countries and their competitiveness on the world market. To analyse economic conditions of the EU, considerable issue of this international economic integration is the employment one of all EU and each member state within age group between 15-64, employment rate by gender.

This gap was resulted by that the strongest economic developed EU member states could realise more economic growth than the other rest part of the EU. The economic leader member states are the first Germany, United Kingdom as the largest national economies in EU, also there are some less economies, namely Denmark, Netherlands, Austria, Finland and Sweden. In spite that the last five member states are not so large economies, they could realise significant economic growth by the highly level of employment and they could make large influences with Germany and United Kingdom on the increasing the average economic results of all of the EU-25 or EU-27.

There is no any significant difference between Euro-Area-16 and Euro-Area-17 in field of employment issue, but the *difference between the Euro-Area-16-17* became considerable with the level of employment belonging to the *EU-15*, as same as *between EU-27 and EU-15* concerning the employment rate by gender, age group 15-64. there data concerning the employment rate by gender, age group 15-64, eleven highly developed member states in EU, between 2000 - 2010, total, in %, which member states play considerable role either in economic growth or marketing strategy to create conditions of the basic single market in EU.

For all of the period of 2000-2010 only two countries/member states, namely *Czech Republic* and *Slovenia* has continuously and stably reached employment level more than 60% in reasons of the more favourable capital supply and more active foreign direct investments than in other EU-10 countries. Czech Republic has continuously reached 65-66% of employment level for all of the period of 2000-2010. The more favourable financial conditions ensured better employment positions for two countries in spite that the global economic crisis. Even these two countries could keep adequate high level of employment after breaking crisis in 2010.

For the period of between 2000-2010 the employment rate in Hungary has been fluctuating over 50%, but less than 60%, by which result Hungary realised the lowest level of employment rate, which also signed the low level rate of the economic growth. For period of between 2000 and 2006 Hungary has realised little higher level of employment than in Poland, but his trend turned to the negative way, when Poland in spite of the economic crisis could increase its employment rate nearest to 50% in 2003 to the level of employment, namely closed to 60%. This almost 8-10% increasing rate of employment could be resulted by the increasing foreign and German direct investments and the active export trend almost to direction into East-European markets. It can be declared that the main EU-member Poland in East and Central European Region remained the low level of employment rate and could not increase Polish employment rate over its 60%.

2.2 The people at-risk-of-poverty or social exclusion in the world economy

The difference concerning the *people at-risk-of-poverty or social exclusion* was about 4,1% in 2005 and about 1,8% in 2010 between levels of EU-27 and EU-15. In general there were only several EU member states, which had large gap in field of people at-risk-of-poverty or social exclusion in both of two EU member state groups. The highly developed member states have about 15-20% share of a people at-risk-poverty. This data shows that the risk of poverty in EU-27 decreased by about half of 2005 level until the end of 2010, and their average level of this people risk decreased in consequence of improving some data of the worst member states in this field early in 2005, for example in Bulgaria, Poland, Slovakia, Latvia and Lithuania.

Every each EU member state group – *EU-27, EU-25, EU-15; and the Euro Zone-17 and Euro Zone-16* has reached employment level little more than the world's one. There are several difficulties of the EU that 20 EU member states have employment rate of 60%, or little more or less than 60%, which in a fact led to somehow the world economic average employment rate. These member states were majority of the EU.

There were EU member states, which could reach level of 60% or between 60-70% of employment rate, which are as follows: *France, Belgium, Czech Republic, Ireland, Estonia, Latvia, Lithuania, Luxembourg, Portugal, Slovenia and Spain*. Naturally from this country group there were one or two countries, which sometimes had employment rate below 60% within this age group between 15-64.

This gap was resulted by that the strongest economic developed EU member states could realise more economic growth than the other rest part of the EU. The economic leader member states are the first Germany, United Kingdom as the largest national economies in EU, also there are some less economies, namely Denmark, Netherlands, Austria, Finland and Sweden. In spite that the last five member states are not so large economies, they could realise significant economic growth by the highly level of employment and they could make large influences with Germany and United Kingdom on the increasing the average economic results of all of the EU-25 or EU-27.

The reasons of the lower level of people at-risk-of-poverty come from favourable economic and social conditions, which are as follows:

- highly level of employment;
- low level of unemployment rate;
- better income positions for workers employed in industrial sectors;
- less share of small and medium scale enterprises in highly developed EU member states;
- strong social network with adequate pension purchasing power and health ensure and care system;
- foreign direct investment activity at highly or higher level.

2.3. The annual real GDP growth rates, in the world and in several regions

In order to put place of the EU-27 into the world economy this needs some international compares concerning the *annual real GDP growth rates, in the world and in several regions* (%), between 2005 and 2011.

The world annual real GDP growth rate suddenly has declined since 2008 in consequence of global economic crisis and economic recession followed the crisis, and its deepest decline was from 5,3% in 2007 to -0,6% in 2009. The world annual real GDP growth rate fortunately increased from -0,6% in 2009 to 4,8% in 2010, and also it seems as a good ambition growth perspective with growth rate as 4,2% in 2011. The hope of world economy is to develop in the future in order to finish the negative influences of the world economic crisis. In general the highly developed economies including EU-27 achieved a considerable decline in their economic growth, and in real GDP growth, from level of 2,9% in 2006 to -3,4% in 2009 during the economic crisis.

In general it can be mentioned that the decline was almost the same rate at the world economic level and at level of the highly developed countries, but the decrease occurred from highly developing trend of the world economy to the less deeper level, but the highly developed economies had lower level economic growth in field of real GDP and this resulted in much deeper decrease than the world economy's one. In general after the economic crisis the world economic developing trend was higher level than the highly developed economies' one, which was resulted by the ambition economic growth of some developing countries, for example Chine, India and Brasilia. After 2009 the annual real GDP growth rate of highly developed economies including the EU was closed to the growth rate of previous years of the global economic crisis, but this growth rate could not reach the rate before the crisis of 2008, namely by 2,3% in 2010 and by 2% in 2011.

In spite that the countries of Middle East (ME = Middle East) and North Africa (NA = North Africa) were concerned and influenced by the world global economic crisis, also their economic growth did not decline as well as the highly developed countries' one and Central and South-Eastern Europe (non-EU) and CIS's one. Middle East and North Africa could realise the annual real GDP growth by 5,1% until the end of 2011, which closed to the level of 2005 before crisis. Their economic growth rate was higher than the world's and the highly developed countries' one by the end of 2011.

In ME and NA region there are several petrol exporting countries, which are also OPEC member states, so their economic growth was caused by their increasing petrol income based on increasing petrol demands on the world market. The annual growth rate of GDP connects with the unemployment rate based on the correlation between both of them. From time to time the annual growth rate of GDP can increase by decreasing unemployment rate, but sometimes the GDP growth realise in spite of increasing unemployment rate depending on the world economic conditions or trends. According to data *the unemployment rate* by sex, world and regions (%), both of sexes becomes clearly concerning the country groups, namely Developed Economies and European Union, Central and South-Eastern Europe (non-EU), Middle East and North Africa between 2000 – 2010.

The unemployment rate has moderately changed in the world economy since 2000 by the end of 2010. In consequence of global economic crisis and longer recession followed by the crisis the unemployment rate has increased by 0,5% for period of 2008-2010. The Developed Economies and European Union has realised increasing unemployment rate by 3% from the level of 5,8% in 2007, and to 8,8% by the end of 2010. The increasing unemployment rate shows how the economic recession extents during this time period. Also the unemployment rate of 2010 was higher than it was in 2004, namely 7,2%.

In case of Middle East the unemployment rate has moderately been changing for the last decade from 2000 to 2010, when only unemployment rate increased by little 0,6% in 2004 and 2005. This moderate unemployment rate has several reasons, which are as follows:

.- First this unemployment rate was in consequent of its highly average level, and in spite that the female frequently did not work, more other several human resource workers or labour force were employed in countries of Middle East region, of which number could fluctuate depending on the economic crisis, the actual world, national and local market demands based on the market supply-demand balance. But in general this fluctual employed and unemployed workers are mainly foreign.

.- Second generally the *foreign employed workers* are not registries in the national Arab statistical offices as employed human resources. So their number cannot change the unemployment conditions, but their considerable economic role on national labour force

market results a highly continuous national Arab unemployment level for period of longer time in Middle East.

If the national Arab economic growth decreases, this leads to decreasing number of foreign workers, which does not appear on the national Arab registration for human resource. So the national Arab unemployment rate remains constant at the level of about 10% in Middle East or moderately changes, which this last one also depends on the foreign direct investment employing national Arab human resources. Also it is realised that Arab human resources can be employed in some other mainly crude oil exporting Arab countries. It means that foreign workers also can Arab national one, but their origin is in other Arab countries.

In North-Africa (NA) there are mostly Arab countries including crude oil exporting countries, for example Algeria and Libya, the unemployment level continuously decreased from level of 14,1% in 2000 to the level of 9,8% in 2010. This means that the number of foreign non Arab and first the Arab unemployed workers decreased, which also resulted in decreasing the unemployment level of the national local – regional Arab human resources in North -Africa. In case of global economic crisis decreasing number of foreign workers employed in North-Africa became more considerable, which lead to possibility to remain continuous decreasing national Arab unemployment level, even in 2008 as year of the global economic crisis and during the period followed by years after crisis.

There is a difference between Middle East and North-Africa in field of the employment and unemployment issues concerning the conditions of human resource management. In the first Arab region (ME) the unemployment rate has been continuous for period of 2000-2010, because the fluctuation of employment conditions is concerned by the non-Arab foreign human resource workers. In the second Arab region (NE) the unemployment rate has considerably decreased for the period of 2000 and 2010, because the employment issue is directly concerned by the national Arab human resource workers in direction to decline of their number.

2.4 The employment issue, investment and consumption with energy using based on the international compare

The *unemployment rates*, seasonally adjusted can be analysed, which it can be emphasized based on, that the unemployment rate has increased from 8,8% in developed economies including EU an Euro-Area-17 (EA) in 2010 and to 9,9% in EU-27 and 10,4% in 2010 for even one year in EU-27 and E-A-17.

The unemployment rate was considerable in developed countries and also it had somehow increasing trends in EU-27 and more increasing trend in E-A-17, than average level of EU-27. This data also emphasize that the Mediterranean region of the E-A-17, including Spain, Italy, Portugal, Malta and Greek, has considerable unfavourable economic background which provide less future economic development trend for E-A-17, than all of EU-27. Additionally to data concerning the people at-risk-of-poverty or social exclusion in EU-27, the other data according to the unfavourable economic background of this E-A-17 can also be characterised by highly level of unemployment rate, for example 22,9% in Spain, 19,2% in Greek, 13,6% in Portugal and 8,9% in Italy. Their high level of unemployment rate signs less investment activities, highly cost to finance the production and service activities by high interest rates provided by banks, no such adequate diversified economic structure and many regions of Mediterranean area have economic backwardness below of the average economic developed level of EU.

The employment-to-population rate has continuously been stable in the world economy at level of employment 61-62 percent for the period of 2000- and 2010. The Middle East and North-Africa regions the level of employment-to-population rate was lower by about 16-17% than the world's level. The highly developed countries and EU-27 have hardly higher level of their employment-to-population rate by 8-10% than one of ME and NE (Middle East and North-Africa) regions. In spite that in EU-27 there were some member states, namely Denmark and Netherlands, Germany Sweden, Finland, Austria and USA, Japan also have higher rate of employment-to-population rate in field of group age between 15-64; finally the other EU member states and some OECD countries, namely Baltic, Mediterranean and Central East European countries have a considerable low level of employment-to-population

rate in this group age, which can impact on decreasing trends for the averagely possible future low level of employment-to-population rate in developed countries.

The Middle East and North-Africa (ME-NA) have more favourable position in field of employment growth, because in spite that the world economic crisis pressed employment growth to decline in most of the world, the ME and NA regions could remain the considerable highly growth rate of the employment trend. This could be based on the earlier significant increasing crude oil price-income and financial reserves of oil exporting countries in these regions. Also crude oil exporting countries of ME and NA regions could decrease the employment level of foreign workers instead of national Arab human resources.

But here there is another problem, that some Arab oil exporting countries withdrawer the Arab labour forces coming from neighbour Arab countries, as titled “foreign” one during the world economic crisis. For example in Libya and Saudi Arabia many Arab visiting labour workers lost their jobs and should return to neighbour Arab countries, for example Egypt, Tunisia, Algeria and Yemen. The jobs lost by Arab “visiting” workers coming from neighbour Arab countries weakened the Arab economic cooperation in field of flow of the Arab labour force between countries of MENA region, and also capital flow as salary were sent by Arab “visiting” workers to their original Arab home land. For example there was statistical data, that salary sent by Arab “visiting” workers to their original Arab home land was about seven billion US dollar annually at the end of 1980s. Now there is no exact data about this kind of Arab capital flow in the Arab World.

By growing the employment countries of ME and NA regions could be successful to create economic growth, social stabilization for their economies avoiding their internal economic situation from most of influences of the world economic crisis. The North-Africa had little less annual employment growth than in Middle East in 2009 and 2010, but also this annual employment growth followed the continuous developing trends based on the continuous crude oil selling for the world market. If I would like to answer that the GDP growth can be realised independently of increasing employment we can understand that the GDP should be kept at 6% level in order to ensure jobs for growing young population based on the optimal exploitation of crude oil field according to economic situation in Saudi Arabia from 2006 (IMF, 2008).

Based on the data it is clear that the economic decline has mostly been resulted by the considerable increasing demographic tendency in all of the MENA region for three decades from 1975 to 2005, namely the growing rate of the population was 2,1 per cent, as annual average in MEAN oil exporting economies, while the average population growth of the world was moderately, namely 1,2 per cent. This data emphasizes that the countries of Middle East reached the level of growing population rate, which was among the highest population growth level countries in the world.

The average population growth rates between 1985 and 2006 were 5,4 per cent for the United Arab Emirates and 3,6 per cent for Kuwait (excluding 1991-1995 Kuwait). The population growth of Saudi Arabia has far outpaced the growth of its economy, and the level of oil reserves relative to population dropped from 16,000 barrels in 1983 to 11,000 in 2006. Disappointing growth performances reveal the failure of many oil-rich governments to promote long-term economic policies that support these dynamic demographic trends.

2.5 The gas emission in environmental pollutions and as externalities in point of view of economy

At present economic and social development the environmental conservation strategy and principles became leader conceptions for economic growth of the economies at macro-economic level and for the corporate governance and business management of firms and corporations at micro-economic level. The environmental conservation strategy and principles from sides of the world economy and national individual economies should be integrated and harmonized in order that the mankind decreases the negative influences of human activities based on the international organizations, like UN (United Nations), regional economic integrations, like EU (European Union), individual economies' growth, international economic co-operations or economic activities of transnational corporations. This last one is also important, because first they develop new highly advanced technologies, know-how, licences, which later on will extent into the whole world economy, and their new technologies become basis for the new qualified assurance system for the production should be followed by all companies, and finally these one will be built in the law of economies and law harmonization of international integrations.

I with some other professors analysed gas emission problems within research works, which emission resulted in increasing global warming at more highly level. Actually more developing countries can only realise their economic growth by through of increasing gas emission because of using more volume of fossil energy resources. In the Dissertation I can show some main results of the gas emission difficulties by through a trend from beginning of 1970. This trend also emphasizes how the human activities can increase the pollution for natural background environment with increasing gas emission.

To study the CO₂ gas emissions of separated special regions of the world we have applied *Principal Component/Factor Analysis*. The main questions of the investigations were as follows:

- are there similarities/correlations in the trend of the CO₂ gas emissions of the regions,
- which are the similar regions and how can we cluster them,
- what are the trends of the CO₂ gas emissions of the clusters of the regions,
- are there significant differences in the quantity of the CO₂ gas emissions between the clusters?

Results of *Principal Component/Factor Analysis* can be seen below.

In case of *Principal Component/Factor Analysis* we calculate the *eigenvalues* (λ) and *eigenvectors* (\mathbf{u}) of the \mathbf{R} correlation matrix according to the equation

$$\mathbf{R}\mathbf{u} = \lambda\mathbf{u}.$$

The *eigenvalues* are the *variances of the common factors* in fact.

The elements of the *eigenvectors* are the *coefficients of the factors* giving the value of the influence on the original variables.

In our case therefore the *variance* of F1 is $\lambda_1=7,2362$ and the *coefficients* of F1 (the elements of \mathbf{u}_1) can be found under F1 in the table. Consequently the *variance* of F2 is $\lambda_2=1,4757$ and the *coefficients* of F2 (the elements of \mathbf{u}_2) can be found under F2 in the table etc.

The factors having variances greater than 1 are only significant, others can be left away. Therefore we have now the first two variables significant. Cumulative percentage of the first two factors in the third row now 96,8% (0,968), which means that the first two variables together explain 96,8% of the total variance.

By the help of the coefficients we can conclude that F1 has a relatively great influence on OECD total, Middle East, China, Other Asia, Latin America and Caribbean, Africa and Bunkers, this fact can be seen on *Figure 3.5-1* of loadings too. These regions of countries form a similar or in other words correlating group (cluster) of regions as for CO₂ gas emission. They are similar in the sense that the trend of the CO₂ gas emissions is the same for them. As it can be seen from *Table 3.5- 1* of raw data it has an *increasing* tendency. But it is important to see that the speed of this increasing is rather different!

By the help of the coefficients for F2 we can conclude that it has a great influence on Former USSR and on Non-OECD Europe regions of the countries, consequentially these regions of countries form another similar or in other words correlating group (cluster) of regions as for CO₂ gas emissions. We can call this group (cluster) of regions and the corresponding factor *Soviet Block Factor*, and then the former one can be called *Non Soviet Block Factor*.

The two factors and consequentially the trend of the CO₂ gas emissions in the two different groups (clusters) of regions are independent from each other.

The existence of these two different groups (clusters) of regions can be proved by the help of *hierarchical clustering* of the variables (regions) as well. (see *Figure 3.5 - 2*). By the help of the *Principal Component/Factor Scores* (see *Table 3.5 - 3*) we can observe the trend of the CO₂ gas emissions in the two different groups (clusters) of regions. This can be seen on *Figure 3.5 - 3*.

First of all we can recognize an unambiguous and continuous *increasing* of the CO₂ gas emissions in the *Non Soviet Bloc* countries (see also original raw data). However the *rate* of this increasing tendency is *different* region by region!

Remember the first factor on the horizontal axis is the *Non Soviet Block Factor*!

It is more interesting the trend of the gas emissions in the so called *Soviet Bloc* country regions. On *Figure 3.5- 3* one can recognize that *till the collapse* of the communist world (1989) the CO₂ gas emission is *increasing*, but after the *Soviet Block* going to pieces this was changed into *decreasing* tendency till more or less 1999. It needed exactly *ten years to turn back* this tendency again. Remember the second factor on the vertical axis is the *Soviet Block Factor*.

3. CONCLUSIONS AND SUGGESTIONS

3.1 Some conclusions for influences of changing economic structure on the economic growth of MENA region

Analysing the *influences of changing economic structure on the economic growth of MENA region* is concerning the several economic conditions, which are as follows:

- .1- *Comparative advantages* from point of view of low level for the production cost in order to obtain competition position against the other participants, producers or suppliers on the world market.
- .2- *Competitive advantages* should play considerable role from point of view of using advanced technology based on the qualified demands of the world market.
- .3- *Production structure* concerning the economic structure consists of economic branches meeting:
 - first the world market demands and then
 - the local market demands.

The difficulties for the MENA region that their economic structure is very simply one side based on the mining sector mostly and there is no diversified economic structure. The diversified economic structure means that this should also include such other manufacturing industrial branches, which can supply completely the demands of local national markets, their inhabitants.

Also there are two kinds of other difficulties for the Arab World or MENA region including GCC, which are as follows:

- .1- From inside of MENA region, that there is a one side economic structure. Countries of MENA region cannot create integrated economic units either at national economic level or at level of economic cooperation within the international economic work separation, as a form of the international regional economic integration for example in fields of production, final product creation, financial and bank sector, create advanced technology and techniques,

know-how, license and human resource development. The lack of economic integration means that the highly advanced technology is used only in one or two economic branches isolated from the whole national economic structure, and there is not work separation among sectors within economic co-operations.

Also the MENA region including crude oil exporting countries cannot have possibility to use or adapt the advanced technology created by the highly developed economies or OECD member states in wide side economic structure, because of MENA region including the GCC countries have one side economic structure, by the other name "*lack of economy*". It means that they do not have diversified economic structure with different economic branches, which can ensure to supply the wide-side local market demands, local people's needs.

Also the problem that the Arab World's market – in spite that this can be titled as "large" one, but originally it is very isolated to many national markets, which in this case became real small one. Therefore the small Arab national markets are not adequate economic measure for using and adapting highly developed techniques and technologies, because this needs large production measure, but this cannot be used because of no large unified integrated measured national market.

Also in GCC to built factories for supplying local market demands is more costly than to buy imported products. In general the domestic production for suitable import products has not solved yet in the Arab World. This situation emerges the relative highly level of unemployment in the Arab World, MENA region, even in GCC and crude oil export countries. But these economies can balance this considerable unemployment level to pay quite high level of salaries for employed people, employees, and ensure fixed social network by for example *pension*, *scholarship* and *health care*. Almost this last one, the health care service is free of charge in most of the crude oil exporting countries. This financial issue can make social tension resulted by high level of unemployment be moderate.

Also there is a difficulty concerning *capital accumulation*, namely means that the domestic price level of the imported products is very high relatively of which world price level. This impact of the capital accumulation resulted by the economic situation, which are as follows: Large amount of financial capital comes from crude oil selling, but the relatively less consumers, population living in crude oil Arab exporting countries result in that consequently

each product has higher price, and almost the domestic price level can be higher than in Hungary. The higher cost labour force cannot be efficient because the highly cost labour force accompanies generally with high domestic price level in the Arab crude oil and oil product exporting countries. The general highly consuming price level of products make the every-day life be expensively.

.2- From outside of the MENA region from point of view of the world economy strengthening the world economic dependence of the MENA region, which consists of several elements, which are as follows, as main trends:

.-1- Export dependence for crude oil based on the one side export structure;

.-2- Import dependence, because of the luck economic structure;

.-3- Capital dependence, because of the Arab capital outflow, not vertically integrated product channel in non unified Arab national ownership from field of crude oil to consumers living in highly developed economies.

Arab capital out flow from the Arab World, MENA region, because of

.- import press results in increasing large import cost, imported products mainly come from highly developed economies;

.- luck of elements for industrial development;

.- Arab capital out flow for buying share of international corporations on the world share market to obtain ownership of the international corporations, mainly working out of the MENA region.

.-4- Technology dependence, namely highly developed technology is produced only in highly developed economies. Highly developed technology is needed for the crude oil mining sector, and only alone this sector and sub – manufacturing industry for crude oil sector can pay cost of highly developed technology and techniques, because this sector produces crude oil first for the world market and only after this the local national markets. The measure of crude oil production can be large as much as the world market needs.

What are the solutions for these above mentioned economic difficulties? What are the solutions for these difficulties? Some possible economic solutions can summarize:

.- Wide side cooperation among the crude oil exporting Arab countries.

.- Alternative energy resources .

.- Financial cooperation strengthened by the GCC by through of the OPEC, the Islam Arab Bank; and different national Arab Funds owned by Arab companies.

.- Infrastructure development for MENA region

.- Extent the Arab national ownership in companies using highly developed technology and techniques.

Also there are difficulties for the MENA region, that the continuous economic development cannot be adapted only based on the crude oil income, because the international estimation the crude oil energy resource depletion will be about 30- 50 years dependently on each crude oil export country. The other difficulty is for the MENA region, which the sustainable economic growth needs to decrease the fossil energy resources to decrease the gas emission from point of view of environmental strategy.

The analyse of the Dissertation use data collection concerning the EU member states in order to show how the economic development trend of them as a possible example for the developing trends of MENA region. Also how the economic development difficulties can be managed in the EU, and how the compare can be realised between EU and MENA regions.

3.2 New scientific results

.1- The *GDP grow is not depend directly on increasing the employment level*. The GDP can grow in result of the crude oil world price, which can increase the annual value of GDP in case of OAPEC Arab countries. Also some Arab crude oil exporting countries introduced the advanced new technology into the crude oil mining industry, which ensures productivity production at higher profit level with less number of employees.

From one side the highly advanced technology ensures the increasing valued production without increasing number of employees, but from the other side the service sector cannot develop enough in order to get the plus human resources withdrawing from the mining sector. Finally the use of new technology is not accompanying with increasing the employed workers in the economy.

Also by the other hand the skills, knowledge, experiences of human power is not so highly developed, which result in some difficulties to extent the modern technology and techniques. But these unfavourable employment conditions also backward the technological development.

.2 – Because of the *inflation*, as general price increase in an economy gives the difference between the nominal and real prices of crude oil. The nominal price increase does not mean that the real price-income of crude oil also increases. So the nominal price increase cannot ensure real price-income and real export price-income for crude oil export in any case based on the purchasing power capacity for export countries. Mainly the *investment capacity* of Arab crude oil export countries depends on real export price-income for crude oil export and its purchasing power capacity for export countries.

.3- Based on the increase of the absorption capacity of the Arab national economies, *the positive balance of Arab capital outflow and foreign capital inflow-outflow* in MENA regions should be realised by extending infrastructure improvement, because the infrastructure wholly is background of production development of the Arab national economies with increasing share of highly developed *value added products* in GDP of Arab economies and *the positive balance of their foreign trade*.

.3.1 - Therefore the most successful and profitable or productively use and *investment* form of the Arab capital flow are in the Arab World or in the OAPEC Arab countries *in field of mining and manufacturing industries*.

.3.2 - The *Arab capital outflow* from the Arab world can be realised most successful in forms of

.- *transnational corporations* within the scheme of Foreign Direct Investment and

.- by through of *international financial organizations*, for example: International Monetary Found (IMF), World Bank (WB).

Also the more share of Arab capital should be used in the domestic economies.

.4- *Islamic Arab Bank (IAB)* is the most important Arab financial organization, which in a fact as Arab transnational corporation can work, responsible for the Arab capital flow within the Arab world or out of it's to the rest of the world economy. The *Islamic Arab Bank* is responsible for the successful Arab capital flow and successful using one within a *transnational corporation* system in field of investments mostly in mining industry.

Based on the cooperation and law harmonization among the Arab countries the IAB mostly does not calculate interests for the credit of IAB, in order that the IAB can decrease the expenditure of its investments in the Arab world by through of mostly detailed interest of Arab capital credit.

4. SUMMARY

As the title of the dissertation, namely: Influences of changing economic structure on the economic growth, determines the main aim of research, that changing economic structure has considerable influences on the all economic growth, so in this case the study focuses on the changing economic structure based on the separation of human resource and other production inputs among the economic sectors.

The dissertation overviews first the EU economic developing trend concerning the describing performance of EU economic and using international analyse the main country groups including MENA region. Also the study emphasizes for example people at-risk-of-poverty or social exclusion in EU; economic growth in field of GDP; efficiency of labour force; capacity for investments to increase workplaces, jobs at first for local national human resources to extent the national internal markets and to increase the import and create the export capacity based on the export orientated economic growth.

The study provides some exact examples in case of regional and rural development conditions in Czech Republic and in case of gas emission issues accompanying with the economic development trend in the world economy.

Also the MENA region in their economic development trend should follow the *Comparative advantages* from point of view of low level for the production cost in order to obtain competition position again the other participants, producers or suppliers on the world market; the *Competitive advantages* should play considerable role from point of view of using advanced technology based on the qualified demands of the world market; and creating such *Production structure* concerning the economic structure consists of economic branches meeting: first the world market demands and then the local market demands based on the sustainable economic growth with using alternative energy resources and following the environmental conservation strategy by using less energy resources resulting gas emission. Any way the MENA region with creating diversified economic structure should be integrated into the world economy wholly.

5. LIST OF PUBLICATION OF MUBARAK RASHID AL-BOAININ, PHD STUDENT

Scientific Book part in Foreign language (Credits: 8)

Széles, Ivett – **Mubarak Rashid Al-Boainin** - Zsarnóczai. J. Sándor, (2010): Territorial differences or territorial similarities? – The analysis of regional competitiveness examining the 8 statistical regions of Bohemia. In Economics of Sustainable Agriculture, Scientific Book Series edited by Szűcs, I. et al. Volume III, Szent István University, Faculty of Economic and Social Sciences, Doctoral School of Management and Business Administration, pp. 139- 169; ISBN 978-963-269-145-9 Credit: 8

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