

## SOME PROPOSALS FOR A POSSIBLE, EFFICIENT REGIONAL EMPLOYMENT POLICY

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### ABSTRACT

This study consists of three main themes: (1) An overview is given about the main findings of the economic theories associated with employment and labour / paid work; reinterpretation of the concept of labour is also provided, divided into pre-industrial, industrial and post-industrial periods, which the author aligns with the periods of the economic thought. The author interprets globalization as a factor influencing the transition between industrial and post-industrial periods; and she elaborately introduces its economic-social and labour market impacts. Among the potential alternatives of employment of the future, this thesis investigates the atypical forms of employment, public employment and social (solidarity) economy. (2) Central-Eastern European countries and regions are analyzed, as the territorial unit of the research, from labour market and employment aspects. Afterwards, the author evaluates the employment situation of her closer environment, Northern Hungary. (3) Afterwards, she contributes suggestions to the criteria of creating a more efficient regional employment policy. The aim of this research was analysed the regional labour market situation by the Central-Eastern European countries and regions, in particular by the North Hungarian region and was gave some proposals for a possible, efficient regional employment policy. Therefore through the multiple transformation of work concept, the demand for alternative employment forms has increased along with the significant change of the content. The author believes that these alternative fields and the regional employment policy can provide the answer for global labour market problems in the future. At the beginning of her research, she hypothesised that the position of the North Hungarian region is significantly determined by its special economic and social context which can be derived from the end of communism. The author used Hoover-index, tested the Okun's law in Central-Eastern European countries and regions, calculated the Markov-chain model and used factor analysis methods.

KEYWORDS: *globalization, regional employment, labour market.*

JEL CODES: J64, R10, R58

### Introduction

According to the author's opinion the labour market in Central-Eastern Europe has not efficient and has a lot of problem factors which could be solved using a regional employment policy. The author assumes that globalization and its regional and local impacts have an important role in nowadays' economics. Paradoxically, challenges arising from the unification of the world have made the necessity for regional and local answers stronger. The idea of an economy strengthening social inclusion and representing more solidarity increasingly appears in the concept of sustainable development. The transformation of the labour market calls for the revaluation of the notion of labour; it puts the issue of employment in another perspective. The solution for globally existing lack of employment is more and more frequently sought focusing on sustainability and social inclusion at regional and local levels. The following questions arise:

1. What are those global impacts that underpin the transformation of labour markets?
2. How does this transformation take place?

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3. What regional differences occur in the appearance of the challenges?
4. To what extent and how do they affect the economic and social processes of Northern Hungary?

This research focuses on the temporal and spatial regularities of the level and structure of employment, its interactions with the processes of globalization and the employment strategies seeking solution to the problems in the regions of Central-Eastern Europe and Hungary, with special attention to Northern Hungary.

## 1. Labour-paradigm shifts in economic theories

The purpose of the theoretical overview is to draw a complex picture of the development of the employment-related elements of the economic schools of thought, the main ideas and thoughts of the specific schools and their most significant representatives, their core element and factual statements, and, at the same time, the change of the labour concept. The author of this thesis has reviewed the following economic periods and labour-related theories.

### 1.1. Concept of work in pre-industrial societies

In prehistoric times people worked irregularly, 3 to 4 hours a day, necessary for their means of subsistence. Decent work at that time covered the range of useful social activities done voluntarily in and for the community. Ancient philosopher Aristotle posed the question as to what the essence of happiness was and what can be regarded as work. He argued that the essence of happiness was the actual work of man. “The specific work of man is nothing different from the sensible – or at least not insensible – activity of soul” (Aristotle, 1997: 19).

In ancient societies social status was not determined by work, that had no value. Goods come from ownership and not from work. Ancient philosophers (Plato and Aristotle) also claimed that citizens did not have to work, there was a distinct social stratus for that purpose. Work gained a double interpretation: on the one hand, classical work was what slaves did and, on the other hand, it was also a work what citizens did as intellectual activity (Aristotle, 1997: 25).

At the same time, one should not forget about the world of medieval guilds: assistants and workers working there also acted in a specific form of paid work Sewell calls this period “corporist world order” that determines the process-technical organization of production as the social organization of work. This world order regards craft as community property that provides employment only to the members of the community (Castel, 1998: 102).

In medieval time the value of work was totally insignificant, it was almost classified into the group of obligatory bad; however, at the same time, Calvin put forth another interpretation of labour, at the end of the “dark Middle Age”, according to which every form of doing work meant serving God.

### 1.2. Labour concept of the industrial societies

William Petty (1623–1687), living in the 17<sup>th</sup> century put forth view different from the mainstream approach of the mercantilist era; he suggested that land and labour are regarded as the source of wealth. Petty is considered to be the first creator of the labour theory of value; he argued that only specific types of labour can be seen as value creating work, such as that producing precious metal serving as the raw material of money (Mátyás, 1969: 44).

Classical economise Adam Smith (1723–1790) claims that a society’s economy depends on two factors: the proportion of population dealing with productive work and the productivity of labour determined by the division of labour. He linked the change of number of population to the amount of wage. He explains in his work: “In that early and rude state of society which precedes both the accumulation of stock and the appro-

priation of land, the proportion between the quantities of labour necessary for acquiring different objects, seems to be the only circumstance which can afford any rule for exchanging them for one another.” Somewhere he mentions that agricultural labour creates a larger value than industrial labour (Smith, 1959: 38).

David Ricardo (1772–1823) lived and worked in the period of the industrial revolution and studied, which made it possible to study the advanced capitalist conditions. He agreed with the Smithian natural order, however individual interest appeared as a class interest in his case. His theoretical system is pervaded by class antagonism that appeared between mainly between industrialists and landowners. He traced the categories of capitalist economy he studied back to the labour theory of value (Kaldor, 1955).

Thomas Malthus (1776–1834) agreed with the Smithian labour theory of value; however he claimed that labour cannot be regarded as the accurate and valid measure of the actual exchange value. He made difference between productive and unproductive labour, in his opinion both physiocrats and Smith agreed that productive labour results in wealthiness (Malthus, 1944: 32).

The problem of exchange of same value (refining the Smithian thoughts) was solved by Karl Marx (1818–1883), in his book titled *Capital*, by making distinction between the concepts ‘labour’ and ‘labour force’. He emphasized the useful nature of labour: “The value of labour force, as that of any other commodity, is determined by the working time necessary for the production, that is also the re-production, of this special commodity... which also means that the value of labour force is the value of means of subsistence necessary to maintain its owner” (Zalai, 1988: 41). The Marxian concept of labour placed an emphasis on use-value which did not appeared in the definition of subsequent researchers. Furthermore, he wrote down that the simple moments of labour process is the expedient activity that is the labour itself, the object of labour and the means of labour. The worker worked under the control of the capitalist whom his labour belonged to an the given time. He divided the society into three parts: landowners, capitalist and worker. According to Marx labour also becomes commodity in a completely developed capitalist system. That means, the worker markets his or her labour force and working ability the price of which is the wage; in this way same values are exchanged (Marx, 1955: 40–158).

Marx, in his letter written to Engels, made relatively new statements:

- he described the dual nature of labour (partly labour appearing in the value of the product and partly labour appearing in use-value) he investigated labour from both qualitative and quantitative perspectives;
- he considered labour force to be a commodity rather than labour;
- he investigated surplus value regardless of its forms of appearance (Mátyás, 1969: 51).

Alfred Marshall (1842–1924), among neo-classical economists came to the conclusion that labour creates surplus over wages the worn-out value of work-assisting tools; however, this surplus is not given to the worker, it is taken away from him – this is a problem of social distribution (Deane, 1997: 166).

John Maynard Keynes’ (1883–1946) approach contrasted Smith’s views. The theorems of the neoclassical theory completely overturned due to the global economic crisis of 1919–1933; therefore the development of a new economic paradigm became necessary. Many associate the notion of total employment with Keynes’ name, however, this category had appeared in the work of the neoclassical economists as well. In Keynes’ work total employment could occur only at the time of the disappearance of involuntary unemployment (Zboróvári, 1988: 14). Keynes’ ideas make state intervention necessary and possible in the labour market so that the level of unemployment can be kept low. “Even Keynes does not suggest that unemployment can totally be eliminated from developing economies. Structural and frictional unemployment are necessary products of healthy restructuring of the economy in Keynes’ school as well” (Bánfalvy, 1989: 51–52).

Social attitudes associated with work and the lack of work began changing in the 18<sup>th</sup> century. Work was interpreted as a way to achieve wealth, whereas the lack of work was seen as the medieval conviction related to the lack of work (that is, idleness is a sin) began to be replaced by the view that the lack of work causes an economic loss to both the individual and the society. Arendt properly gave a precise account of the development of paid work. “The sudden spectacular upward career of labour, that catapults it from the lowest row, the most disdained position to a precious one, so that it becomes the top-rated human activity, began when

Locke discovered the source of all property in labour. Its triumphant advance continued when Adam Smith explicitly made it clear that labour is the source of all wealth. It reached its climax in Marx's system where labour became the source of all productive activity, moreover the expression of the human nature of man" (Arendt, 1958: 114).

### 1.3. Labour concept of the post-industrial societies

Modern societies are rightly called the "society of paid work", however the term "labour society" also appears frequently in the literature. One can read about the crisis of paid work since the 1960s, its heyday was the first quarter century up until the first oil crisis. The crisis / change was not only about the change and transformation of the world of work, it was also about the atypical forms of employment becoming increasingly popular. Part of the society was excluded from the world of paid work after the period of industrialization, it can be regarded as nowadays' period as well. The beginning of the crisis of labour paradigm started with Arendt's (1958) statement: "What is ahead of us is a labour society that is running out of work that is from the only activity it is good at. What could be more terrible than that?" (Arendt, 1958: 54). He likens paid work to slave work and not to a voluntarily undertaken activity of free man. Gorz suggested that the socially useful activity should be placed at the centre of the society instead of paid work. Beck spoke of civic work done in favour of the community (Csoba, 2010: 58).

It can be seen that the concept of paid work is gradually losing that of labour, which is a considerable problem. The re-definition of paid work is necessary because a significant part of the society has been excluded from the classical paid work. A smaller proportion of people of working age works in one of the traditional forms of employment, atypical forms of employment can be regarded as typical in the developed European countries, since they dominate.

Thesis 1: It is necessary to re-define (paid) work in post-industrialist period, especially nowadays, because labour, interpreted as paid work is the privilege of a smaller social group in the transformation process accelerated by globalization; thus it is already not appropriate to completely fulfill its former social function.

## 2. Investigation of the labour market situation of the Central-Eastern European Region and Northern Hungary

The change in the mass of global labour force and the evolution of differences among continents and countries between 1991 and 2009 are illustrated by means of Hoover-index. It is one of the most widespread index to show regional disparities. "The index expresses in percentages as to how much percent of a social-economic phenomenon has to be transferred among regional units so that its regional distribution becomes that of another (e. g. population)" (Péter, 2010).

$$h = \frac{\sum_{i=1}^n |x_i - f_i|}{2} \quad (1)$$

$x_i$  and  $f_i$  are distribution ratios, to which the followings apply (Nemes Nagy, 2005):

$$\sum_{i=1}^n x_i = 100 \quad \sum_{i=1}^n f_i = 100$$

Krugman index, analogous with Hoover index, is appropriate to compare the employment structure of two regional units, which does not divide the absolute value of the differences of the distribution by two, in this way the maximum value of the index can be 200. Its disadvantage is that the interpretation of the results obtained from it is cumbersome; Nemes Nagy et al (2005) does not recommend its application.

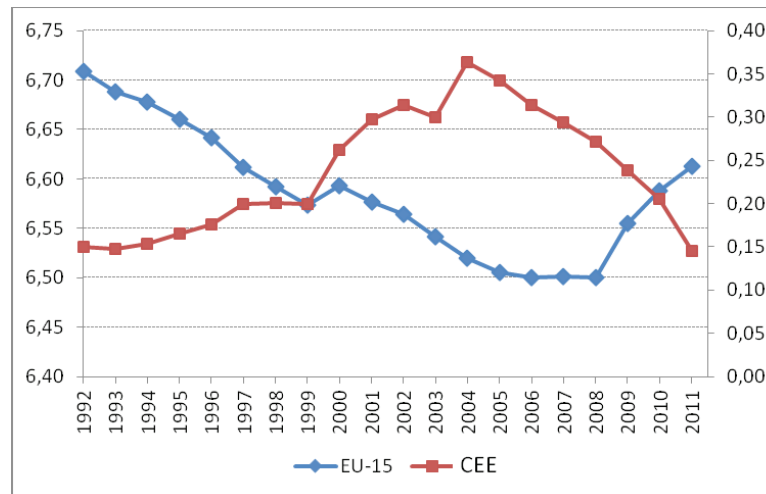


Figure 1. Evolution of Hoover index

Source: Own work based on World bank data

The author has strived to explore the regional peculiarities of Central-Eastern Europe in order to make the processes taking place in Northern Hungary more understandable. Having analyzed the Hoover index values between the population and the employed in EU-15 and Central-Eastern Europe, a special development path, that is lagging behind, of Eastern Bloc can be seen well, totally opposite processes take place (Figure 1). While competition is intensifying within EU-15 member states, the differences are apparently decreasing in Eastern countries; however it does not mean development or convergence, it rather means a joint divergence. A question arises here whether it is caused by the impact of the change of regime or the phase lag is of different nature.

Thesis 2: Labour market competition has intensifying since the expansion of the European Union in 2004, while an apparent equalization is taking place in Central-Eastern European countries; however this equalization is not coupled with convergence it rather results in a joint divergence.

### 3. Examination of Okun's Law

The author applied Okun's Law to explore regional differences and peculiarities. Okun's Law suggests that every 2 % decline of GDP compared to the potential GDP entails a 1 % increase of unemployment rate. Okun's Law expresses the basic connection between the commodity market and labour market; it describes the connection between the short-term movements of GDP and the changes of unemployment. This survey can reveal the presence of disparities in the labour market of the Central-Eastern European countries. The slowing-down of the economy entails increasing unemployment. This negative connection is shown by Okun's Law that was elaborated by Arthur Okun in 1960 (Boda, Scheiring, 2011: 76).

Okun's Law is true for the countries in almost each case, except for Poland where the processes does not correspond to Okun's Law since the value of the coefficient is not regular (Table 1).

Table 1. Proving Okun's Law for various countries (1996–2010)

	Okun's Law	Output gap (if unemployment rate is zero)	Natural unemployment rate (if output gap is zero)	Natural unemployment rate (is output gap is -2 %)
Czech Republic	$x = -1.853u + 13.328$	13.328	7.193	8.272
Estonia	$x = -1.958u + 19.207$	19.207	9.809	10.083
Latvia	$x = -1.740u + 20.057$	20.057	11.527	12.676
Lithuania	$x = -1.451u + 16.646$	16.646	11.472	12.850
Hungary	$x = -2.061u + 15.570$	15.570	7.555	8.525
<b>Poland</b>	<b><math>x = -0.582u + 8.107</math></b>	<b>8.107</b>	<b>13.930</b>	<b>17.367</b>
Slovenia	$x = -2.969u + 18.820$	18.820	6.339	7.012
Slovakia	$x = -1.218u + 18.603$	18.603	15.273	16.915

Source: Lipták, 2012, p. 38

The debate about the value of the Okun coefficient is unfinished in the literature (Fazekas, Ozsvald, 2000: 160–165). When Okun carried out his first calculation for the United States he accepted the value of the coefficient as around 2–3 %, which was valid in the 1960s as well, however it cannot be seen as generally accepted. In Japan, the value of the coefficient was 36.9 % as a result of the calculations for the period between 1960 and 1985, while in the Federal Republic of Germany at that time it was 3.6 % (Tachibanaki, Sakurai, 1991: 1575–1581). Researchers apply various econometric procedures to analyze the time series of natural unemployment rate and potential output. The calculations carried out to the same time series using different methods produce coefficient values of totally different order of magnitude (Máté, 2010: 1111–1114).

Okun's Law is not true in each case at regional level that is, this connection cannot be applied with complete confidence to investigate regional processes; however, it may lead to interesting results (the dissertation contains the results of the regional calculations). Okun's Law is true for three regions of Hungary and the whole area of Slovenia which has developed along a line reminiscent of a West-East slope.

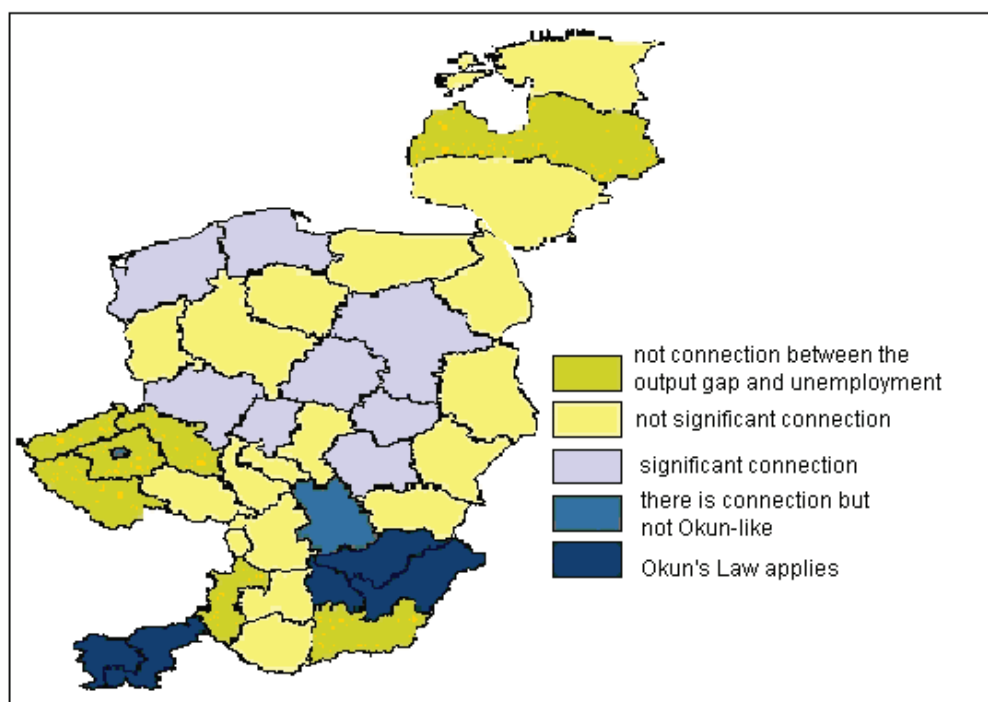


Figure 2. Evolution of Okun's Law in Central-Eastern European Regions

Source: Own work



Thesis 3: Okun's Law is true at the level of countries, however it does not apply at regional levels in each case – which means that this connection cannot be used to investigate regional processes with complete confidence. However, “anomalies” can be detected at regional level. The regions can be categorized into three groups:

- Okun's Law applies.
- There is a connection between the unemployment rate and the output gap, however it is not Okun-like (with a 2 % decrease of output gap the unemployment rate increases multiple times, approx. 6–10 %).
- There is no connection between the two indicators.

#### 4. Analysis of the labour market peculiarities of Northern Hungary

The author has carried out (factor analysis) for Hungary's micro-regions. She aimed to select indicators from as wide a range as possible; furthermore she attempted to apply the indicators used by Fazekas (1997) in his calculations. Fazekas sought answer to the labour market based regional fragmentation of Hungarian micro-regions, for the period after the change of regime; he used 14 indicators with data referring to the year 1995. He obtained three factor-groups named urbanization, distance and industrialization (Fazekas, 1997: 16–19). Dabasi Halász (2011) further expanded the range of indicators to explore the labour market situation after the change of regime (Dabasi Halász, 2011: 59). A criterion for the author of selecting indicators was that the freshest data series are analyzed, and that the indicators generally used in regional analyses are taken into consideration (Lukovics, 2007: 129–133; Kollár, 2012: 71–74); however, she placed the main emphasis on the evolution of the labour market, therefore, she aimed to minimize the number of indicators in other groups when setting up the set of indicators:

- economic indicators;
- infrastructural indicators;
- labour market indicators;
- social indicators.

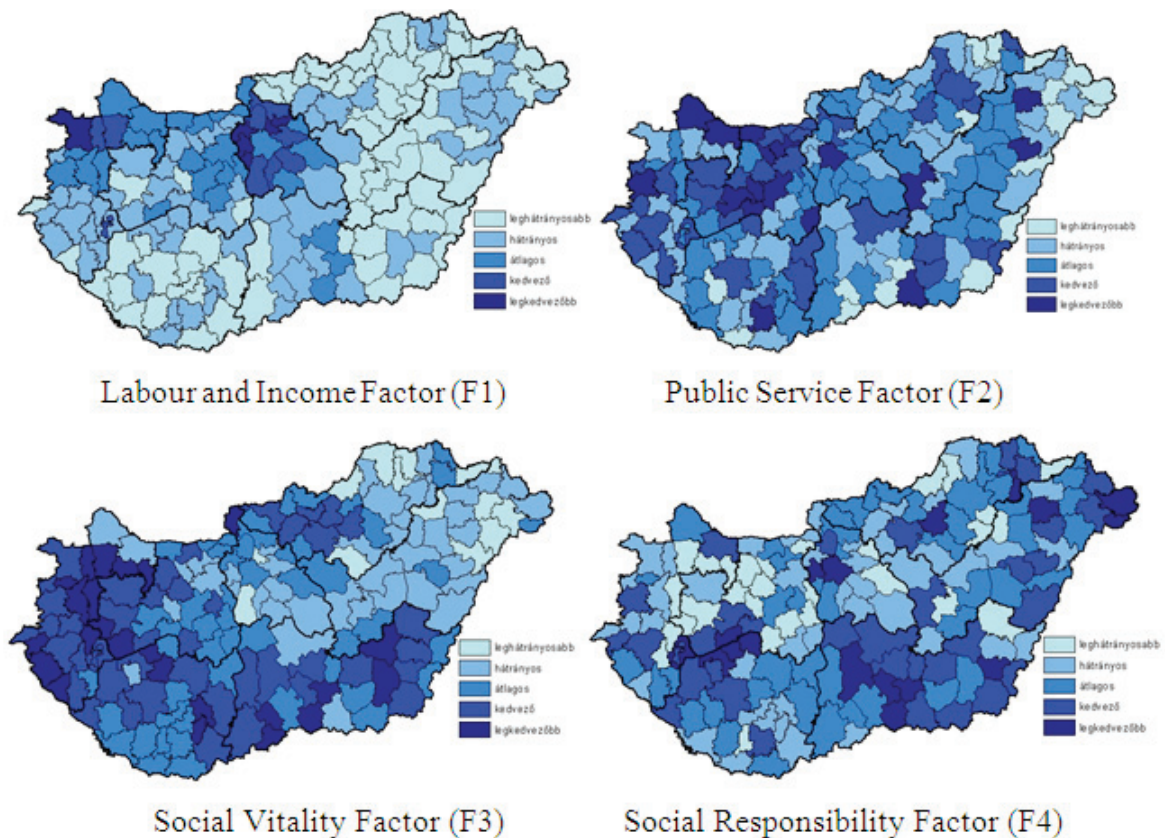


Figure 3. Results of the principal component analysis of year 2008 by factors

Source: Own work

The results of those calculation has been plotted on a map (Figure 3) which shows that Northern Hungary's position within the country proves the region's relative lagging behind the more developed regions of the country.

The complex labour market situation is the most unfavourable in the case of micro-regions belonging to the five groups of the Labour and Income Factor; the lowest values were attributed to Northern Hungary and Tiszántúl (Trans-Tisza) Region. The rank of regions from the most disadvantaged to the most advantaged position is reminiscent of the illustration of the unemployment rate on a map. The previously already applied classification into 5 group has been chosen for the Public Service Factor and others as well for the sake of the easier comparison of the results. The Public Service Factor explicitly shows the West-East slope and the difference between the two parts of the country. The Miskolc micro-region belongs to the favourable group on the basis of the calculations. The Social Vitality Factor makes the division of the country into two parts the most observable. The Social Vitality Factor comprises the demographical data into one factor; the Eastern part of the country has much weaker data. The power centers of the Social Responsibility Factor cut the country in the length; where the eigenvalues are strong the outward migration is low and the number of non-profit organizations is high.

The author did not think at this point that the result of the principal analysis is totally appropriate for making groups among micro-regions; therefore, she carried out a cluster analysis. Various types (K-Means and hierarchical) have been prepared for the basic data of years 2004 and 2008 and the eigenvalues of the four factors; each case produced similar results. Finally, the results of the K-Means cluster analysis were analyzed for the factors of the above principal component. It was investigated whether the variables used strongly correlate with each others; the value of the VIF indicator did not indicate disturbing multicollinearity in the model. Further calculations applied the squared Euclidean distance because the literature accepts it in most cases. The K-Means procedure was preferred over the hierarchical cluster analysis since the author has a large-number.

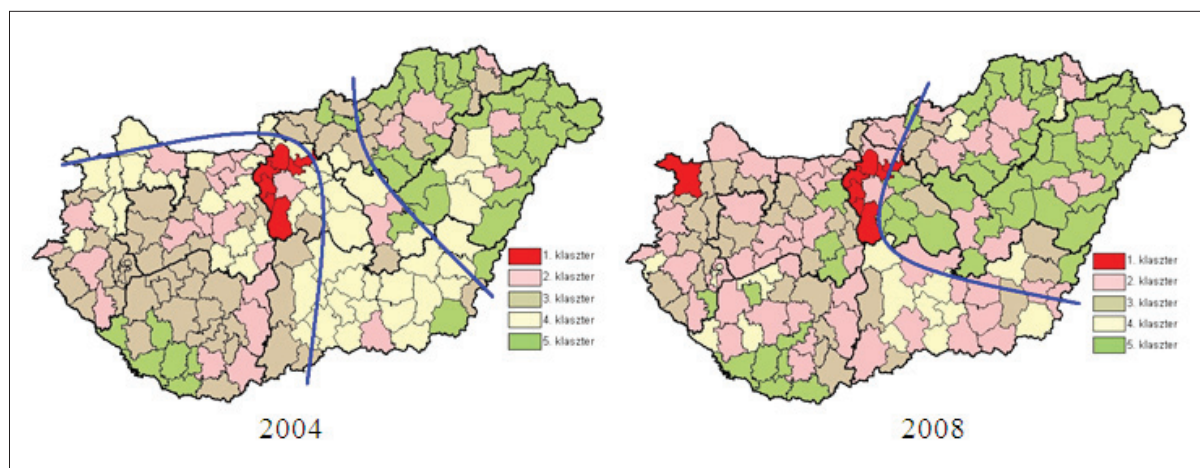


Figure 4. Result of the cluster relating regional differences analyses for years 2004 and 2008

Source: Own work

The author made 5 cluster-groups in each cross-sectional year; the change in the complex position of micro-regions is well perceivable (Figure 4). She did not name the cluster groups, she was interested in whether the degree of change was significant in the case of Northern Hungary. Unfortunately, the change was equal to stagnation, while the positions of Transdanubian regions strengthened during 4 years and the earlier axes of development intensified, a simultaneous improvement and decline was observable in certain North Hungarian micro-regions. Markov model is used in many disciplines of science; nevertheless, it cannot be regarded as a common analytical method. It is used to illustrate income inequality in regional economics (Major, 2007); to describe labour market dynamics of EU member states (Christodoulakis, Mamatzakis,



2009) and to investigate segmented labour market in labour market studies (Gabuert, Cottrell, 1999). Since the number of registered job-seekers is inappropriate for comparison, first the author corrected the number of job-seekers by constant population number and divided it by 1000 persons, so that the dataset can be handled with the help of weighting. Too many and too few classes do not yield appropriate results. The author established 4 classes for the number of registered job-seekers per thousand inhabitants. Then she investigated the existence of transition probabilities among the potential classes after the classification of micro-regions into the given states. She determined the transition from the initial state (year 2004) to the next one (year 2008), that is, the micro-regions in the absolutely low initial unemployment group stay in the same class for the next year or they take low or medium unemployment values.

*Table 2.* One-step transition matrix of North Hungarian micro-region according to the number of registered job-seekers (from year 2004 to year 2008)

(unit of measure: number of micro-regions)

Classes		2008				Total (2004)
		Low	Medium	High	Very high	
2004	low	3	4	0	0	7
	medium	0	3	3	1	7
	high	0	0	6	2	8
	very high	0	0	0	6	6
<b>Total (2008)</b>		3	7	9	9	28

*Source:* Own work based on own calculations

The re-alignments among particular classes are much more significant within Northern Hungary. The position of three out of those micro-regions in the low unemployment class did not change to year 2008, 4 micro-regions got into the medium unemployment class (these are Rétság, Tiszaújváros, Mezőkövesd and Balassagyarmat micro-regions). 3 micro-regions' position remained unchanged in the medium unemployment class, 3 got into the high and further 1 into higher unemployment group (Szécsény micro-region).

*Table 3.* Value of mobility index by regions from years 2004 to 2008

Region	Mobility index
Southern Great Plain	94.4%
Southern Transdanubia	72.2%
Northern Great Plain	76.2%
<b>Northern Hungary</b>	<b>46.4%</b>
Central Transdanubia	56.3%
Central Hungary	100.0%
Western Transdanubia	69.5%

*Source:* Own work based on own calculations

Belonging to the high unemployment group did not mean a realignment for 6 micro-regions; deterioration was observable in the case of two, these micro-regions (Ózd and Tokaj) shifted to the very high unemployment class). No change was observable in the case of micro-regions in the very high unemployment group, compared to other groups, from year 2004 to year 2008. The value of mobility index is 46.4 % in Northern Hungary.

Thesis 4: The results of principal component analysis, cluster analysis and transition matrices prove the regional realignment in the spatial structure of Hungary. The country's split into two parts, the growth of differences among and the homogenisation within the parts had become even more obvious by 2008. The further exclusion of Northern Hungary can be experienced having analysed the complex indicators. The region cannot capitalize on the Gerschenkron effect, that is, the "advantage of latecomers".

Table 4. One-step transition matrix of North Hungarian micro-region according to the number of registered job-seekers (from year 2008 to year 2010)

(unit of measure: number of micro-regions)

Classes		2010				Total (2008)
		Low	Medium	High	Very high	
2008	low	4	3	0	0	7
	medium	0	3	3	1	7
	high	0	1	2	4	7
	very high	0	0	0	7	7
<b>Total (2010)</b>		<b>4</b>	<b>7</b>	<b>5</b>	<b>12</b>	<b>28</b>

Source: Own work based on own calculations

The re-alignments among particular classes are much more significant within Northern Hungary. No change was observable in the case of micro-regions in the very high unemployment group, compared to other groups, from year 2008 to year 2010 (naturally, there were intra-group realignments in each micro-region but the transition matrix does not examine them). The value of mobility index is 57 % in Northern Hungary. The author calculated mobility indices for the rest of the regions as well, trying to find evidence as to whether the realignment among groups was the lowest in Northern Hungary (Table 7).

Table 5. Value of mobility index by regions from years 2008 to 2010

Region	Mobility index
Southern Great Plain	61.1%
Southern Transdanubia	55.5%
Northern Great Plain	66.7%
<b>Northern Hungary</b>	<b>57.0%</b>
Central Transdanubia	54.7%
Central Hungary	91.6%
Western Transdanubia	65.8%

Source: Own work based on own calculations

In summary, the realignment of micro-regions among classes is of much lower degree within Northern Hungary than in the rest of Hungarian regions, except for Southern Transdanubia and Central Transdanubia.

The intra-country realignment was 47.8 % from years 2004 to 2008, and it was 53.7 % from 2008 to 2010. At the same time, the intra-regional realignment from 2008 to 2010 was of lower degree than in the previous period; that is, a process of inter-regional equalization began in terms of the number of registered job-seekers.

Thesis 5: The realignment of the number of registered job-seekers among groups (so called classes) in Northern Hungary was not as significant as in the rest of the regions in Hungary since the economic crisis. The reason for that is that the crisis shook less developed regions to a lesser extent also from labour market perspective. The least realignment in Northern Hungary took place among the least favourable (very high unemployment) and the unfavourable labour market (high unemployment) classes.

## 5. Recommendations for developing an efficient regional employment policy

There is no experience of regionally differentiated employment policy in Hungary. No examples can be found to this in Europe either, however, the existence of a regional employment policy will be reasonable. The summary of the author's recommendations for the establishment of a system of criteria to underpin a regional employment policy are listed below:

- *A multi-channel employment policy would be reasonable in the long term that combines the traditional forms of employment and alternative solutions.* A regional level decision is not sufficient for its realization, rather macro-level social-economic conditions have to be ensured, moreover an attitudinal change is essential. An increasing focus is placed on the application of non-traditional forms of employment due to the changing meaning of work-concept and also along with the change in the way of doing work. Future employment policies have to treat traditional and alternative forms of employment together.
- *Regions having similar characteristics and similar labour market features should cooperate and act jointly in the European Union; joint asserting of interests and joint representation would bring significant results.* The basis for the classification of regions into same types can be similar economic-social situation and same labour market conditions. The results of proving Okun's law have been plotted on a map, which could serve as a system of criteria for the classification. A synergy among similar regions could be created in Hungary as well. The results of principal component analysis, cluster analysis and transition matrices well illustrate which regions should cooperate, which regions are in similar situation. The economic crisis shook disadvantaged regions less than those in more favourable situation. The values of the mobility indices explicitly prove the degree of realignment within regions from labour market aspect. The special (unfavourable) situation of Northern Hungary was observed when calculating both 2004–2008 and 2008–2010 transition matrices.
- *The flow of sectoral labour force may exert less and less influential power for regional employment policy in the future.*
- *Regional employment policy should give priority to the supporting of human potential by way of, within the active employment policy tools, increasing the amount spent on labour market trainings; it requires taking the demands and emerging needs of employers.*
- *Various labour market forecasting models are available to support regional employment policy.*
- *A strategy capitalizing on internal features and naturally taking external processes into account should be formulated instead of continuously eliminating the European Union's employment policy.*
- *The issue of employment has to be addressed in a complex manner; it is necessary to coordinate tax-policy, educational policy and other sub-policies for enhancing efficiency.*
- *Developing an independent regional employment policy that sets up regional objectives and has independent measures and institutional system would be reasonable.*

## Conclusions

At the beginning of the research, the author hypothesised that the position of the North Hungarian region is significantly determined by its special economic and social context which can be derived from the end of communism.

Hungary is not significantly separated in the Central-Eastern European space; unfavourable labour market position characterises all of the transitional countries. She carried out some calculations at different territorial levels. First, she compared the labour markets of Central-Eastern European and Western European countries. She demonstrated territorial inequalities with the use of Hoover-index. She analysed Okun role at the regional level: in some regions, there is relationship between output gap and unemployment, while there is no such relationship in other regions. The regional estimation of HDI shows the territorial realignment of labour market. The extent to which Hungary lags behind the Central-Eastern European area is getting more and more significant and in the meantime, the Central-Eastern European area lags behind the European Union. She examined the variables explaining the labour market position of the North Hungarian region with principal component analysis and cluster analysis. The results confirm the territorial realignment in

the spatial structure of Hungary. While the development axes strengthened in the Transdanubian areas from 2004 to 2008 and therefore the spatial structure became more balanced, the North Hungarian region lagged behind to a greater extent based on complex measures. Because of this cumulative phase lag, the economic crisis still has an effect on the domestic labour market, and to a greater extent on the labour market of the North Hungarian region. To examine the extent of realignment, she applied Markov chain model and transition matrices. The results show that the smallest realignment among the classes was realised in the North Hungarian region.

The North Hungarian region has a special position within Central-Eastern Europe, therefore regional employment policy should be special, too. Such a special regional employment policy can be found neither in the European Union, nor in the Central-Eastern European area even if it would be justified. A condition of the function of efficient policies is the coordinated function of the aims, means, priorities and institutions. Currently a centrally distributed, deconcentrated employment policy is realised. It is difficult to imagine that a regional employment policy takes shape within a reasonable time frame taking into account that only the institution system is available out of the above listed four functions in the case of the regions.

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## PASIŪLYMAI KURTI VEIKSMINGĄ REGIONINIO UŽIMTUMO POLITIKĄ

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### Santrauka

Šiame straipsnyje nagrinėjamos trys pagrindinės temos: (1) apžvelgiamos visos pagrindinės su įdarbinimu susijusios ekonominės teorijos, pateikiama nauja *darbo* sąvokos interpretacija, aptariami ikiindustrialinis, industrinis ir poindustrinis periodai. Autorė įvertina globalizacijos poveikį pereinant nuo industrinio prie poindustrinio laikotarpio, pristato jos poveikį darbo rinkai. Kaip potencialias įdarbinimo alternatyvas autorė analizuoja atipines darbo formas, tokias kaip viešas užimtumas ir socialinė (solidarumo) ekonomika; (2) analizuojamos Vidurio ir Rytų Europos šalių darbo rinkos, detaliau aptariama šiaurinės Vengrijos darbo rinka; (3) pateikiama pasiūlymų, kaip kurti veiksmingesnę regioninę užimtumo politiką. Transformuojantis *darbo* sąvokai, atsiranda alternatyvių įdarbinimo formų poreikis. Autorė įsitikinusi, kad šios alternatyvos ir regioninė užimtumo politika gali padėti išspręsti ateities darbo rinkos problemas. Keliami hipotezė, kad šiaurinės Vengrijos regiono situacija nulemta socioekonominio konteksto, kuris susijęs su komunizmo pabaiga. Autorė taikė *Hoover* indeksą, tikrino *Okuno* dėsnį Vidurio Rytų Europos šalyse ir regionuose, skaičiavo *Markovo* grandinės modelį ir taikė faktoriinės analizės metodą.

PAGRINDINIAI ŽODŽIAI: *globalizacija, regioninis užimtumas, darbo rinka.*

JEL KLASIFIKACIJA: J64, R10, R58